

**Reference No. QCI/PPID/1120/014**

**Request for Proposal  
for  
Data Collection & Data Processing  
of geotagged images captured using  
Professional Survey Grade Drones**



**QUALITY COUNCIL OF INDIA**

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## QUALITY COUNCIL OF INDIA (QCI):

The Quality Council of India (QCI) is a pioneering experiment of the Government of India in setting up organizations in partnership with the Indian industry. The mandate of QCI is to lead nationwide quality movement in India by involving all stakeholders for emphasis on adherence to quality standards in all spheres of activities primarily for promoting and protecting interests of the nation and its citizens.

To achieve this, QCI is playing a pivotal role in propagating, adoption and adherence to quality standards in all important spheres of activities including education, healthcare, environment protection, governance, social sectors, infrastructure sector and such other areas of organized activities that have significant bearing in improving the quality of life and well-being of the citizens of India.

### BACKGROUND:

Quality Council of India (QCI) has been awarded with the contract for conducting study of water bodies in Ganga basin to get an awareness about the current status of the water bodies. The study includes 100% mapping of all water bodies in Ganga districts for improvement/rejuvenation of water bodies which are either dried up or working at less than full efficiency. The study would revolve around the following objectives:

- Geo-mapping of water bodies
- Coding of water bodies
- Category description of water bodies like Size/ Circumference
- Current status of water bodies (Functional/ Non-functional)

### ABOUT PROJECT

QCI is going to conduct a survey under which the water bodies in 5 states will be mapped using drones covering the given number of villages. The distribution among the states is as mentioned below:

State	District	Block	GP	Villages
Bihar	6	28	119	220
Jharkhand	1	6	26	66
Uttar Pradesh	11	50	435	691
Uttarakhand	7	30	130	222
West Bengal	6	44	211	1990
<b>Total</b>	<b>31</b>	<b>158</b>	<b>921</b>	<b>3189</b>

It is expected that each village will have 2-3 waterbodies for which survey shall be conducted. The total number of waterbodies are subject to variation of 10% (increase or decrease)

## OBJECTIVE

The purpose of this Survey is to do a 100% mapping of all water bodies in the 31 identified districts for improvement/ rejuvenation of water bodies (including dried up water bodies).

Through the drone assessment, the aim is to get the contour mapping and topography of the water body which will determine its size and condition. The drone will be operated on a pre-planned path which will hover over the water body to collect multiple geo-tagged images.

### Key Responsibilities of the shortlisted bidder(s):

1. Drone Operator must have the OAN no. prior to flying the drone and the drones used in the services shall comply with the DGCA regulation(s) / should be DAN approved.
2. The bidder selected shall mobilize enough number of processing units required to successfully complete the project within the specified deadline. It is expected:
  - a. The bidder is expected to deploy 4-5 teams per state and nominate one SPOC per district
  - b. Each team is expected to cover around 5-6 villages per day (each village is expected to have 2-3 waterbodies)
  - c. The bidder is expected to conduct aerial survey of around 40-80 waterbodies per day
3. Planning the most optimal state-wise survey plan for carrying out the drone survey at the desired locations (waterbodies) provided by QCI so as to meet the above per day expectations
4. On the basis of the overall operation plan provided by QCI, the bidder is required to provide detailed on-ground execution plan (site-wise) along with a comprehensive list of approvals required to conduct the aerial surveillance
5. Data acquisition of waterbodies using certified survey grade drones (details of the drone are as mentioned in the following sections of the RFP)
6. Validating the data acquired on ground by the drone operator
7. Carry out the processing in parallel to the data acquisition so that the deliverable shall be followed
8. Maintaining the repository of geo-tagged images indexed into QCI cloud server for future use
9. Processing the images and videos to generate the desired deliverables as per the QCI requirement
10. Generating the Final aerial survey report in line with QCI expectations. (Sample of the final survey report with desired features will be provided by QCI)
11. Provide the processed images within 2 working days' post completion of survey per site to QCI by hosting on QCI cloud/ API. The raw images and other files of the site survey to be provided within 01 week of completion of site survey.
12. Bidder should make sure that every pilot is carrying sufficient batteries (minimum 4), battery-charger, extra propeller set and safety equipment (safety jacket, medical kit, etc.)
13. The bidder needs to furnish a self-declaration of "Make in India" for all the Drones to be used for the survey purpose.

## Deliverables:

1. Optimized daily survey plan one week before the start of a state for 6-8 villages per day ensuring to meet the target of 5-6 villages per day. (On the basis of the submitted plan, QCI will provide required approvals from the respective DC for conducting the aerial survey)
2. High resolution Geo-tagged images in RAW format
3. Contours at 0.5 m interval with spot heights.
4. Top view of the final scaled geopositioned & Orthophoto mosaic with demarcation and contours mapping (for each water body in a village) with clear visibility of all features in
  - a. .TIFF format
  - b. (CAD/Arc GIS compatible) and in
  - c. .JPG/.ECW/.SID format having accuracy of 10cm GSD (Ground Sample Distance) and isometric view from sides
5. 4K videos of the waterbody
6. Shape source file (.shp)
7. CAD/Arc GIS compatible drawing file of each water body showing the land features
8. Circumference (in acres) of water body

## Sample Deliverables/outputs

### 2D Geo-referenced Orthophoto

Resolution: ~2cm/pixel

Format: .TIFF, .ECW

CAD/GIS compatible formats



### Contours

Interval: 0.5m

Format: .SHP, .DWG

CAD/GIS compatible formats



**Waterbody area demarcation**

Area:                      sq. m/acres

CAD/GIS compatible formats



**Feature demarcation**

Format:                      .SHP, .DWG

CAD/GIS compatible formats



**Responsibilities of QCI:**

1. Shall provide the geolocation coordinate of each water body for the aerial survey which will be provided one week before the start of the survey
2. Shall provide the overall operations plan for the survey activity at least one week in advance for surveying purpose
3. Shall nominate a single point of contact at state and district level for coordination of on-ground activities
4. Shall nominate QCI personnel with each team for purpose of coordination and liaising with local authorities.
5. Shall aid in obtaining Permission letters to fly drones by DM/SP (local administration, police) and exemptions from DGCA as required for the project.

**Desired Specifications of the drone:**

S.No.	Description	Required Specification without operator
1.	UAS Type	Multi-rotor (with VTOL)
2.	Mission	Surveying and Mapping / Professional Grade
3.	Landing & Takeoff	Vertical Take-Off and Landing (VTOL)
4.	Maximum	Up to the service provider.

	Takeoff weight (MTOW)	Must be in line with DGCA guidelines
5.	Flight Height above Ground Level	Flight for aerial survey – 60 mts and altitude for video and images – 40 mts
6.	GNSS Grade	PPK Enabled with GNSS base station (GNSS station of L1 and L2 frequency)
7.	Nominal Coverage at 120 m (400 ft) Forward Overlap: 80% Side Overlap: 60 %	Minimum 0.7 sq km with < 5cm GSD
8.	Endurance	Endurance must be minimum 30 minutes or more
9.	Camera	Camera must be of minimum 20MP or more.
10.	Operational wind Speed	Minimum 8 m/s or higher
11.	Average X,Y accuracy	<10cm (95% of total checked values(absolute accuracy) should be less than 10 cm)
12.	Average Z accuracy	< 20 cm(95% of total checked values (absolute accuracy) should be less than 10 cm)
13.	Security	128 bit encryption
14.	DGCA Guideline	The Professional Survey Grade unmanned Aerial Vehicle /Drone shall have all necessary permits and should be registered with DGCA as per (or conform to) the latest DGCA guidelines i.e. DGCA F. No. 05-13/2014-AED Vol. IV dated 27 august 2018 or any other latest guidelines as and when issued by DGCA in future.

## TERMS & CONDITIONS

1. The mentioned scope of work shall be awarded state-wise to the bidder(s) demonstrating the capability to provide end-to-end services on lowest total cost (L1) among the technically qualified participants.
2. Quality Council of India holds the right to negotiate the price for allocation of work to bidder/bidders if need arises.
3. No extension of the bid submission shall be encouraged as this is a priority work.
4. Quality Council of India has the right to allow appropriate division of the work among the technically competent bidders whosoever matches the price quoted by L1 bidder.
5. The delegation of work / states / districts will be strictly on the basis of number of teams being deployed by the shortlisted bidder / bidders.
6. If any shortlisted bidder is unable to complete the assigned sites in the stipulated time, the same will be transferred to others in case of more than one bidder is involved in the project. The QCI team shall continuously monitor the performance deliverables and timelines and re-allocate locations based on such factors. Quality of deliverables in the laid out timelines of the utmost importance.

7. In case of multiple shortlisted bidders, the bidder completing their assigned sites earlier will be given additional work as the project demands more resources to complete the project on time.
8. The shortlisted bidder(s) must not disclose or use any information or data collected in this project for any personal or commercial activities. Once the project is completed, the bidder(s) shall not retain any data back-up and the same has to be maintained on QCI cloud / API. All data, information, pictures generated/shared during the course of project shall be the sole property of QCI and the selected bidders shall be bound by a Non-Disclosure Agreement to keep all data confidential and submit the same back to QCI. Any retention or use of such data shall have strict legal implications.

## **GENERAL TERMS & CONDITIONS**

### **1. AMENDMENT TO RFP**

At any time prior to the last date for receipt of applications, QCI may for any reason, whether at its own initiative or in response to a clarification requested by a prospective applicant, modify the RFP document by an amendment. In order to provide prospective applicants reasonable time in which to take the amendment into account in preparing their proposals, QCI may at its discretion extend the last date for the receipt of proposals and/or make other changes in the requirements set out in the RFP. Any such amendment shall be communicated to the through the QCI website.

### **2. REGULATORY COMPLIANCES**

It shall be the responsibility of the bidder to comply with all government guidelines issued by the Govt. of India till date regarding the product compliance and registrations as per the guidelines issued by DGCA (but not limited to) for enlistment of All Unmanned Aircrafts.

### **3. SAFETY AND INSURANCE**

Ensuring safety of operator at the time of assessment shall be the responsibility of the bidder. QCI has no obligation or responsibility towards any individual in any such cases or situations. The bidder must have and maintain valid and enforcement insurance policies for public liability, professional indemnity, worker's compensations required by law.

### **4. FORCE MAJEURE**

That neither the shortlisted bidder nor QCI shall be held responsible for non- fulfilment of their respective obligations due to the exigency of one or more of the force majeure events such as but not limited to Acts of God, war, flood, earthquakes, strike, lockouts, epidemics, riots, civil commotion etc., provided on the occurrence and cessation of any such events.

The affected party thereby shall give a notice in writing to the other party within one week of such occurrence or cessation. If the force majeure conditions continue beyond six months, the parties shall then mutually decide about the future course of action.

#### **5. NO SUBLETTING ASSIGNMENT**

No work shall be sublet by shortlisted bidder(s), nor shall he assign or transfer any interest in this Agreement without the written consent of QCI. Subject to the foregoing, this Agreement inures to the benefit of, and is binding upon, the heirs, successors, and assigns of the parties hereto.

#### **6. GOOD WORKING CONDITIONS OF EQUIPMENT**

The shortlisted bidder(s) shall ensure that the drone and associated equipment being used during the data collection and data processing are in good working condition. In case of required replacement or repairs of equipment, the associated expenses including labor, material, parts and other items shall be borne by the shortlisted bidder(s).

Shall ensure availability of the standby drone and other necessary equipment in case an extended of a downtime which affects the performance of the services.

#### **7. MAINTENANCE OF CONFIDENTIALITY**

The bidder(s) must not divulge any confidential information and assure that reasonable steps are taken to provide for the safe custody of any and confidential information in its possession and to prevent unauthorized access thereto or use thereof. The shortlisted bidder(s) must not, without the prior written consent of QCI, disclose any confidential information of QCI or any government department or relating to any ministry or any other party. In giving written consent to the disclosure of confidential information, QCI may impose such conditions as it thinks fit, and the bidder must comply with these conditions. Confidentiality clause shall survive for a longer period of one year after the termination of contract or contract expiry period.

The selected bidder will be required to sign a mutually agreed Non-Disclosure Agreement (NDA) with QCI.

#### **8. INTELLECTUAL PROPERTY RIGHTS**

All intellectual property rights developed as a consequence of any allotment of work to the shortlisted bidder(s) shall be the sole property of QCI. The shortlisted bidder shall be required to submit the collected data, output and other information to QCI post completion of the project.

#### **9. PAYMENT SCHEDULE**

Payment shall be made as per the below mentioned milestones:

- a. 20% of the total estimated amount for the state shall be paid as mobilization advance on



- submission of detailed plan of deployment for the state to the QCI team.
- b. 30% payment of the total estimated amount for the state to be released on completion of 50% of the assigned work.
  - c. 40% of the payment shall be paid, on submission of all data sets, as per QCI requirements of every village (Complete state)
  - d. Balance amount shall be paid by QCI after successful project completion and sign-off from the designated Project Manager, QCI

## 10. PROJECT DELIVERY TIMELINE

The initiation of services as per scope of work is expected within 7 working days from the award of contract, receipt of mobilization advance and permissions from regulatory authorities for project execution, whichever is earlier.

## 11. EARNEST MONEY DEPOSIT

Earnest Money Deposit (EMD) of Rs. 20,000/- (Twenty thousand only) should necessarily be accompanied with the Technical Bid of the Company/Firm/Agency in the form of a Demand Draft from any of the Nationalized/ Scheduled Bank drawn in favor of the 'Quality Council of India', payable at New Delhi and valid for a period of 90 days from the date of submission. EMD can also be deposit through RTGS/ NEFT as detail under: -

For payment of EMD through Bank transfer: -

NAME OF BANK	AXIS BANK LTD, 6/83, PADAM SINGH ROAD, KAROL BAGH, NEW DELHI
NAME OF ACCOUNT	QUALITY COUNCIL OF INDIA
S.B. ACCOUNT	223010100053020
IFSC CODE	UTIB0000223

NO CHEQUES WILL BE ACCEPTED. The tenderer whose EMD has been deposited by NEFT/RTGS, must enclose the transaction details/ evidence along with their technical bid, otherwise the bid will be rejected.

### EMD Exemption:

- a. Bidders registered under 'Micro & Small Enterprises Act' (MSE) are exempted from submission of EMD. Exempted bidders should provide a valid certificate issued by any approved body of 'Ministry of Micro, Small & Medium Enterprises' (MSME) for EMD exemption.
- b. Startups registered with the Department for Promotion of Industry and Internal Trade (DPIIT) are exempted from submission of EMD. To claim the exemption, the startup must submit the certificate of registration granted by DPIIT.

## 12. PERFORMANCE BANK GUARANTEE

The Purchaser will require the selected Bidder to provide a Performance Bank Guarantee, within 30 days from the Notification of award, for a value equivalent to 10 % of the commercial bid value. The Performance Guarantee shall contain a claim period of three months from the last date of validity. The selected Bidder shall be responsible for extending the validity date and claim period of the Performance Guarantee as and when it is due on account of non-completion of the delivery and Warranty period. In case the selected Bidder fails to submit performance guarantee within the time stipulated, the Purchaser at its discretion may cancel the order placed on the selected Bidder without giving any notice. Purchaser shall invoke the performance guarantee in case the selected Bidder fails to discharge their contractual obligations during the period or Purchaser incurs any loss due to Bidder's negligence in carrying out the project implementation as per the agreed terms & conditions.

## 13. ETHICS

QCI expect all operators, shortlisted bidder(s) to show highest ethical standards during the course of the assignment especially during on-groundwork. If any complaints/information regarding any incident of malpractices (bribery, seeking monetary or non-monetary favor/gifts) is brought to the notice, the shortlisted bidder(s) shall take the necessary action (to the extent of expulsion/removal) as per its organization rules and laws applicable at that time. QCI is absolved of any liability/claim arising out of any such above situations.

## 14. EVALUATION OF BIDS

For the purpose of empanelment under the said project, QCI will follow a 2-step approach. In the first step the bidders will be evaluated for a pre-qualification criterion as mentioned below, the bidders fulfilling the pre-qualification criteria shall be evaluated as per the Technical Qualification criteria (Through a round of technical presentation, if required).

The commercial bids will be opened for the technically qualified bidders.

**Presentation:** As a part of evaluation of proposals submitted by the applicants, QCI may seek further information or a presentation from the bidders for evaluation purposes. QCI may call for such information/ presentation at a short notice.

## 15. PRE-QUALIFICATION CRITERIA

S. No	Basic Requirements	Specific Requirements	Documents Required
a.	Legal Entity	The bidder should be a registered firm duly registered under Indian Companies Act, 1956/2013  Company should be in existence since last 05 years	- Copy of valid Registration Certificates  - Copy of Certificates of incorporation
b.	Turnover	Average Annual Turnover of the Bidder during the last Three financial years, i.e. FY 2017-18, FY 2018-19, 2019-20 (as per the last published audited balance sheets), should be more than Rs. 50 (Fifty) Lacs	Audited Annual Reports OR Balance Sheets or CA Certificate with CA's Registration Number/ Seal
c.	Technical Capability & Experience	The bidder shall have minimum experience of drone survey of 100 sq. km from a single work executed for any organization preferably for central/state government or PSU.  The bidder shall have successfully completed drone survey of at least 5 Villages/cities/ULBs/municipal corporation each with area greater than 10 sq. km.	Work Order / Work Completion Certificates from the client  Work Order & Work Completion Certificates from the client.
d.	Tax Registration	The company shall hold valid GST and PAN certifications.	Copies of relevant certificates of registration
e.	DGCA compliance for drones.	The bidder shall have DGCA compliant drones for purpose of approval	Copy of valid proof of ownership/lease/manufacturing must be submitted
f.	Blacklisting	The bidder shall not have been blacklisted by any central or state government agency, PSU etc	Undertaking in this regard to be submitted.

### Note:

- Proposals without necessary supporting documents or without meeting the prescribed qualification criteria will be treated as non-responsive and will not be considered for further evaluation.
- Eligible startups registered with the Department for Promotion of Industry & Internal Trade (DPIIT) shall be given relaxations under the Prior Experience and Turnover

Criteria. To claim such exemption, the startup must submit the Certificate of Registration along with the Technical Bid Documents.

## **16. REJECTION OF APPLICATION**

The application is liable to be rejected if:

- a. Not in prescribed forms/Annexures and not containing all required details.
- b. Not properly sealed and signed as per requirements.
- c. Received after the expiry of due date and time.
- d. Missing of any supporting document(s) with the Proposal.

## **17. TERMINATION OF CONTRACT**

QCI reserves the right to terminate the contact by giving 15 days' prior notice in writing in case the work is not found satisfactory.

## **18. TERMS AND CONDITIONS**

- a. All bidders submitting the proposal shall be required to undertake the complete work as per the scope of work requirement of this RFP.
- b. QCI reserves the right to increase/decrease the minimum order quantity as may be deemed fit. The work shall be distributed as per the performance evaluation based on the speed of work, quality of outputs, overall team capability.
- c. The QCI shall not be responsible for any late receipt of applications for any reasons whatsoever. The applications received late will not be considered and returned unopened to the applicant.
- d. Interested bidders (Applicants) who meet the requisite Prequalification Criteria shall be considered for submission of this RFP.
- e. The QCI reserves the right:
  - i. To reject any/all applications without assigning any reasons thereof.
  - ii. To relax or waive any of the conditions stipulated in this document as deemed necessary in the best interest of the QCI without assigning any reasons thereof.
- f. The QCI shall not be liable for any mishappening conducted by the drone operator while flying the Drones and damage caused to the drones as a result of the same.

## SUBMISSION OF TECHNICAL BID

1. Signed & stamped Annexure-I and Annexure-II
2. Bidder Organization Incorporation Certificate/Partnership Deed/LLP Certificate/ Certificate of Registration
3. PAN & GST Certificate
4. Past work orders/purchase orders for proving services by flying drones in India
5. All other supporting documents as mentioned under the Pre-qualification criteria
6. All the regulatory documents as a proof of fully complied drone

## SUBMISSION OF FINANCIAL BID

Per State cost for the scope mentioned above to be provided in the below given format:

Service Model						
States	No. of Villages	Cost per village	Cost per State	Total Cost before tax	Tax	Total cost after tax
Uttar Pradesh	691					
Bihar	220					
Uttarakhand	222					
West Bengal	1990					
Jharkhand	66					

\*There can be ~2 to 3 water bodies in a village

**Note:** QCI reserves the right to distribute the work among more than one shortlisted bidder for states covering large number of villages.

## SUBMISSION DETAILS:

Interested parties may send the technical and financial bid in two separately sealed envelopes inside a larger sealed envelope super-scribing "Request for Proposal for Data Collection & Data Processing of geotagged images captured using Professional Survey Grade Drones" to Deputy Director (Accounts), Quality Council of India, Institution of Engineers Building, 2nd Floor, 2, Bahadur Shah Zafar Marg, New Delhi 110002 latest by November 27, 2020, 5 PM.

For any queries, you may please contact the below-mentioned persons:

For technical queries: Mr. Ashish Gambhir

Email id: [ashish.g@qcin.org](mailto:ashish.g@qcin.org)

For any other queries: Ms. Kanika Sethi

Email id: [kanika.sethi@qcin.org](mailto:kanika.sethi@qcin.org)

## Annexure-I

### Application

Date:

To,  
Deputy Director  
Accounts & Administration  
Quality Council of India  
2nd Floor, Institution of Engineers  
Bahadur Shah Zafar Marg  
New Delhi-110002

Subject: Proposal for Supply of Drones and related services

Dear Sir,

Having examined the pre-qualification document indicating scope of works, I/We hereby submit our proposal together with all the necessary information and relevant documents with QCI for "RFP" for Supply of Drones and related services. The proposal is made by me/us on behalf of..... (Company/Firm/Association of individuals) in the capacity of ..... duly authorized to submit the proposal.

I/We understand that QCI reserves the right to reject any proposal without assigning any reasons thereof. I/We undertake that all the information furnished by me/us in the proposal is true to the best of me/our knowledge and belief. If any of the information is found to be false on subsequent verification, I/We undertake that I/We may be excluded from the list of shortlisted Firms.

AUTHORISED SIGNATORY

(Name and Designation)

Name of Firm:

Address:

e-mail id:

Contact details:

## Annexure-II

### Company Profile

1	Name of the Applicant Firm	
2	Ownership (Government/ PSU/ Private)	
3	Type of Organization: Partnership firm/ Public Limited Company/ Pvt. Limited Company/ Limited Liability Partnership (please specify and attach proof)	
4	i. PAN Number ii. GST Number	
5	Name and Designation of Key Management Person(s)	
6	Date & Year of establishment of firm	
7	Number of years of experience in providing services as per scope of work	
8	Any other important information about the organization	
9	Details of the similar assignments with client details and value of the project	

Signature with Seal