भारतीय आयुर्विज्ञान अनुसंधान परिषद
स्वास्थ्य अनुसंधान विभाग, स्वास्थ्य और परिवार
कल्याण मंत्रालय, भारत सरकार

Indian Council of Medical Research
Department of Health Research, Ministry of Health
and Family Welfare, Government of India

No. i-DRONE/7/12/HQ-2023-Part(1) Dated: 23.04.2026

QUOTATION/ RATE INQUIRY

Sealed quotations are hereby invited on behalf of Director General, Indian Council of Medical Research, New Delhi from the Aspirant Service Provider for "Drone-Based Digital Imaging for Counting and Behaviour Monitoring of Indian Flying Foxes".

Please submit duly sealed quotations to Sr. Administrative Officer, CPC, ICMR Hqrs. V. Ramalingaswami Bhawan, Ansari Nagar, New Delhi – 110029, latest **by 08.05.2026 up to 05:30 PM**.

Please note the following:

1. Open Envelope and unsigned Quotations will be rejected.
2. Quotations send by E-mail / Fax will not be considered.
3. Quotation in hardcopy is to be submitted in the attached prescribed proforma only in a sealed Envelope.
4. Quotation received after the last date of submission is liable to be rejected.
5. The total project duration is 1.5 years, which involve active drone-based field services periodically.
6. Director General, ICMR reserves the right to reject any or all quotations without assigning any reason.
7. Please clearly mark "Quotation No. "ICMR/CPC/2025-26/i-Drone/01" and Due Date:08.05.2026 on top of the envelope.
8. GST will be applicable as per GoI norms.
9. Vendor's conditions mentioned in the quotation shall not be binding on ICMR.
10. Any dispute concerning any Terms & Conditions of the Quotation and/ or the supply of services, will be subject to New Delhi Jurisdiction only.
11. Service should be supplied within 15 days from the date of issue of Purchase Order. The liquidated charges @ 0.5% per week shall be imposed if supply made after expiry of due date subject to maximum 10% of the total value of contract value.
12. Successful vendor has to submit PBG of 3% of total contract value (incl GST) within 15 days of issuance of PO. Validity of PBG shall be 02 months beyond the contract duration.
13. Payments will be released by ICMR-NIE, Chennai after the submission of bill in duplicate on monthly basis.
14. The quoted cost should be on a per aerial km basis, inclusive of all charges such as software, drone logistics, human resources, travel and accommodation, any other incidental charges, etc.

Sr. Admn. Officer, CPC
for Director General, ICMR

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SCOPE OF WORK

The selected vendor shall be responsible for the supply, integration, deployment, validation, and training support of a drone-based AI-enabled multi-sensor surveillance system designed for ecological monitoring of bat populations in human- interface zones to strengthen early warning systems for zoonotic spillover events.

- The vendor shall supply an industrial-grade unmanned aerial vehicle (UAV) platform capable of carrying integrated multi-sensor payloads and operating reliably under Indian peri-urban and rural field conditions.

- The UAV platform shall have a minimum flight endurance of 60 minutes per battery cycle under standard payload conditions to enable adequate aerial coverage of bat roosting sites and surrounding habitats.

- The drone system shall be equipped with GNSS-based navigation incorporating GPS and compatible satellite systems, with RTK-enabled positioning capability for high- precision geo-referencing of ecological data.

- The UAV shall incorporate fail-safe mechanisms including Return-to-Home (RTH), obstacle detection and avoidance systems, redundant flight controllers, and emergency landing protocols to ensure operational safety.

- The vendor shall provide high-resolution RGB imaging, radiometric thermal imaging, ultrasonic acoustic recording, and multispectral or hyperspectral imaging modules integrated on a stabilized gimbal platform.

- The vendor shall provide AI-enabled analytics software capable of automated bat detection, counting, behavioural pattern recognition, multi-sensor data fusion, geo-spatial mapping, and secure data storage (preferably).

- The vendor shall conduct structured hands-on training sessions for designated personnel covering UAV operation, sensor calibration, AI analytics usage, maintenance procedures, and SOP development.

- The vendor shall provide on-site required technical support as and when required.

- All necessary approvals/permissions (as applicable) for drone operations from concerned authorities shall be obtained prior to the drone operations.

DETAILED TECHNICAL SPECIFICATIONS

1. UAV Platform Technical Requirements

- The UAV platform shall be a registered multi-rotor system designed for ecological and environmental surveillance applications with demonstrated operational stability.
- The UAV shall support a payload capacity of not less than 2 kilograms without compromising flight performance.
- The UAV shall incorporate RTK-enabled GNSS positioning capable of centimeter-level geo-referencing accuracy.
- The UAV shall demonstrate wind resistance capability of at least 10-12 meters per second.
- The system shall include redundant IMU, compass, and navigation systems and comply with applicable DGCA regulatory requirements.
- The UAV shall have an endurance of up to 60 mins at least, with line of sight for at least 1 km, operating temperatures for 10-50°C, launch type – VTOL (vertical take off and landing), Automatic return on signal loss or low battery, third-party insurance etc.

2. RGB Imaging System

- The RGB imaging system shall include a minimum 20 MP sensor capable of capturing high-resolution still images suitable for AI-based bat counting.
- The system shall support 4K video recording capability for behavioural motion analysis.
- The imaging unit shall include low-light operational capability for dawn and dusk surveillance.
- The RGB camera shall be mounted on a three-axis stabilized gimbal to ensure image clarity and positional accuracy.

3. Thermal Imaging Module

- The thermal imaging module shall utilize an uncooled VOx microbolometer sensor with a minimum resolution of 640 × 512 pixels.
- The thermal sensitivity (NETD) shall be ≤ 50 mK to enable accurate differentiation between bat clusters and surrounding vegetation.
- The thermal camera shall support radiometric temperature output for quantitative analytics.
- The thermal image should be spatially registered (aligned) with the RGB image
- The system shall support full resolution @ 30 Hz thermal video.
- Thermal and RGB videos should be temporally synchronized.
- The thermal imaging system **shall be** fully integrated with the AI analytics platform.

4. Acoustic Monitoring Module

- The acoustic module shall include ultrasonic microphones capable of recording in the frequency range of at least 20-120 kHz.
- The system shall support high sampling rates (minimum 250 kHz) to ensure accurate acoustic data capture.
- The acoustic data shall be synchronized with GPS coordinates and time stamps for spatial-temporal behavioural mapping.

5. Multispectral / Hyperspectral Module

- The multispectral system shall capture at least five spectral bands (Blue, Green, Red, Red-edge, and Near-Infrared) for habitat interaction analysis.
- In case of hyperspectral configuration, the system shall operate within the 400-1000 nm spectral range with geo-referenced output.
- The module shall support generation of vegetation indices such as NDVI for environmental interface assessment.

6. Software and Data Management

- The AI analytics software shall include automated bat detection, counting, and behavioural anomaly detection capabilities.
- The platform shall provide geo-spatial visualization tools and exportable reports compatible with institutional databases.
- The system shall ensure secure storage with encryption protocols and controlled access mechanisms.
- The vendor shall provide licensed software access along with periodic updates during the warranty period.

7. Training, Warranty and Support

- The vendor shall provide structured technical training for field and technical personnel covering system operation, data analysis, and troubleshooting.
- The system shall be supplied with a minimum 6 months comprehensive warranty covering hardware and software components.
- The vendor shall provide service support with defined response timelines.

FINANCIAL BID FORMAT

(On Letter Head)

To,

Sr. Administrative Officer,
CPC, ICMR Hqrs.,
V. Ramalingaswami Bhawan,
Ansari Nagar, New Delhi – 110029

Offer for supply of against ICMR-Hqrs inquiry No. i-DRONE/7/12/HQ-2023-Part(1) is under:

S No	Particulars	Unit Price (per aerial km basis)	Discount	GST	Net Price (per aerial km basis) (incl GST & Discount)
1.	Drone-Based Digital Imaging for Counting and Behaviour Monitoring of Indian Flying Foxes				
TOTAL (incl GST & Discount) (Rs.)					

Note: 1. Quoted rates are to be provided on 'per aerial kilometer' basis. 2. Quoted rates should be inclusive of all charges such as software, drone logistics, human resources, travel and accommodation, any other incidental charges, etc.

The undersigned, hereby declare that:

1. I/We certify that quoted product meets the requirement as described in the call for quotation.
2. I/We certify that rate quoted for this product does not exceed the Maximum Retail Price.
3. I/We certify that rate quoted is not higher as compared to the same service delivered by us in any other Govt. Organization/ PSU/ Autonomous Bodies in India.

Date:

Name:
Signature & Stamp of Bidder: