UNIVERSITY OF KELANIYA, SRI LANKA

CALL FOR EXPRESSIONS OF INTEREST (EOI)

Project Title: Towards a Circular Food Sector: Evidence Generation and Policy Support for Reducing Single-Use Plastics in Colombo and Galle Districts, Sri Lanka

Funded by: EU CIRCULAR Project

Applications/proposals are invited from licensed, technically proficient drone survey consultancies for the provision of **High-Resolution UAV Multispectral Mapping Services** for Single-Use Plastic (SUP) Waste Hotspot Detection and Waterbody Extraction in Colombo and Galle Districts, for the above research project conducted by the Department of Parasitology Faculty of Medicine, University of Kelaniya.

Background & Objective

The project aims to deploy precision environmental remote sensing technologies to identify, delineate, and quantify SUP hotspots across targeted sites in the Colombo and Galle Districts. The selected consultancy will conduct high-resolution, radiometrically calibrated UAV multispectral and RGB surveys across prioritized sites (canal corridors, coastal margins, open dumping zones, and high-density vendor areas) to generate precise spatial layers for plastic detection, manual density correlation, and aquatic network mapping.

Scope of Work

- Phase 1 – Regulatory Approvals & Permitting: Secure mandatory national security clearances from the Ministry of Defence (MoD), coordinate territorial clearance with local Police divisions, and obtain operational flight permits (with third-party liability insurance) from the Civil Aviation Authority of Sri Lanka (CAASL).
- Phase 2 – Data Acquisition & Field Calibration: Execute autonomous flight missions at 50–80 m AGL (2–3 cm GSD) with 80% forward and 70% side overlap, using a synchronized 5-band multispectral sensor (Blue, Green, Red, Red Edge, NIR) and high-resolution RGB sensor, with Downwelling Light Sensor (DLS) and radiometric calibration panels; provide logistical windows for GCP placement and ground-truth sampling.
- Phase 3 – Photogrammetry & Index Processing: Process raw data in PIX4Dfields/PIX4Dmapper for geometric and radiometric calibration, and generate Plastic Index (PI), Reverse NDVI (RNDVI), Plastic Detection Index (PDI), and NDWI spectral index maps.

Key Deliverables & Timeline (from contract signature)

- Inception Report – flight mission grids, safety protocols, and copies of submitted MoD/CAASL applications (Week 2).
- Permits & Clearances – signed CAASL Flight Permit and MoD security clearance approvals (Week 5).
- Raw & Processed Imagery – radiometrically calibrated 5-band orthomosaic cubes, RGB orthomosaics, and DSMs in GeoTIFF format (Week 8).
- Index Maps – PI, RNDVI, PDI, and NDWI GeoTIFF layers ready for ArcGIS Pro ingestion (Week 10).

- Final Operational Report – flight logs, calibration reports, meteorological summaries, and metadata documentation (Week 12).

Required Qualifications & Team Composition

- Lead Remote Sensing Specialist / Drone Pilot: CAASL-certified commercial drone operator with a minimum of 3 years' experience operating multirotor platforms in urban or coastal environments.
- GIS/Photogrammetry Analyst: Proficient in Pix4D software suites and ArcGIS Pro, with a proven track record in multispectral sensor handling, radiometric calibration, and spectral index generation.
- Hardware: Multirotor UAV platform with RTK-GNSS capability, stable under coastal wind gusts up to 10 m/s, and a calibrated 5-band multispectral camera system with integrated DLS.

Institutional Arrangements

The consultancy will report directly to the Principal Investigator. All intellectual property, raw images, and processed spatial data generated under the contract remain the exclusive property of the project and may not be shared with third parties without written authorization.

Duration

12 Weeks (Assignment basis)

Remuneration

An allowance of Rs. 300,000/- will be provided for this position in accordance with the approved project budget.

Application Procedure

Interested and qualified consultancies should submit a technical and financial proposal, company profile, relevant certifications/licenses, and CVs of the proposed team to the Principal Investigator, Prof. Nayana Gunathilaka (*n.gunathilaka@kln.ac.lk*).

Closing Date: 22nd June 2026