

PART A: INFORMATION FOR TENDERER

Name and address of the Contracting Authority:	DOO "MECOnet", Podgorica – Kralja Nikole br. 301, Podgorica
Project name:	ARTificial intelligence platform to prevent Climate change natural hazArds – ARCA
Project number:	IPA-ADRION00107
Title of the tender:	LIDAR drone recording services
Reference number:	IPA-ADRION00107 -ARCA / MCN/PP11

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INSTRUCTIONS TO TENDERERS

1. INFORMATION ON SUBMISSION OF THE TENDERS

Subject of the contract:

The subject of this tender is:

- **Implementation of services** as indicated in the technical information in the part “Services required” of this document.

Participation:

Participation in this tender procedure is open only to the invited tenderers.

Natural or legal persons are not entitled to participate in this tender procedure or be awarded a contract if they are any of the situations mentioned in Sections 2.4. (EU restrictive measures), 2.6.10.1. (exclusion criteria) or 2.6.10.1.1. (rejection from a procedure) of the Practical Guide¹. Should they do so, their tender will be considered unsuitable or irregular respectively.

Deadline for submission of the tenders:

The deadline for submission of tenders is **July 13th, 2026. at 17:00 hours** (local time, Montenegro). Any tender received after this deadline will be automatically rejected.

Content of the tender:

The tender will be submitted in **1 original (scanned)**.

The tenderers will submit their tenders in English using the:

- **Standard tender submission form and technical offer available in the Part B of the tender dossier AND**
- **Financial offer available in the Part C of this tender dossier.**

Address and meanings for submission of the tenders:

- Subject of the e-mail: **LIDAR drone recording services - IPA-ADRION00107 -ARCA / MCN/PP11**
- The tender will be submitted by e-mail on the following address:
meconet.me@gmail.com

The tenderers are reminded that in order to be eligible the tenders need to be received by the Contracting Authority by the deadline indicated above.

2. TECHNICAL INFORMATION

The tenderers are required to provide services as indicated in chapter “Required services” of this document.

¹ Procurement and Grants for European Union external actions-A Practical Guide, <https://ec.europa.eu/europeaid/frag/>

3. FINANCIAL INFORMATION

The financial offer must be presented in EURO using the template available in the Part C of this tender dossier.

This is a global price contract. Maximum budget available for this contract is **5.000 EUR (NETO, VAT excluded)**. Maximum budget refers to the maximum amount available for implementation of described services.

Payments under this contract will be made in the currency of the tender - EUR.

4. ADDITIONAL INFORMATION

If tenderers have to request additional information during the procedure, they may submit questions in writing to the following address up to **July 11th, 2026 at 17:00 hours** (local time, Montenegro), specifying the reference number and the title of the tender:

Anka Ralević
DOO »MECOnet« Podgorica
E-mail: meconet.me@gmail.com

The Contracting Authority has no obligation to provide clarification after this date. Last date for the Contracting Authority to issue clarification is **July 12th, 2026 by 15:00 hours**.

Selection criteria

The following selection criteria will be applied to the tenderers. In the case of tenders submitted by a consortium, these selection criteria will be applied to the consortium as a whole.

1) Technical capacity of tenderer.

The reference period which will be taken into account will be the last three years preceding the submission deadline.

- the tenderer has provided services under at least one (1) contract in fields related to this contract which was implemented at any moment during the following period: 9/7/2023 - 9/7/2026

The quality of each technical offer will be evaluated in accordance with the award criteria and the weighting detailed in the evaluation grid, which is included in Part A of this tender dossier. No other award criteria will be used.

Upon completion of the technical evaluation, the envelopes containing the financial offers for tenders that were not eliminated during the technical evaluation will be opened (i.e. those with an average score of 75 points or more). Tenders exceeding the maximum budget available for the contract are unacceptable and will be eliminated.

The award criteria: best price-quality ratio, established by weighing technical quality against price on an 80/20 basis.

The unsuccessful/successful tenderers will be informed of the results of the evaluation procedure via writing. The estimated time of response to the tenderers is July 14th, 2026, one day after the deadline for submission of tenders.

SERVICES REQUIRED

1. PROJECT SUMMARY

The primary objective of the project **Artificial intelligence platform to prevent Climate change natural hazards (ARCA)** is to create a transnationally applicable platform through pilot initiatives in wooded areas, employing cutting-edge technologies to combat the risks posed by climate change-induced natural hazards. The project relies on advanced algorithms based on Machine Learning (ML) and diverse networks made of Internet of Things (IoT) sensors. These technological components work collaboratively to model specific forests and proactively mitigate the impact of natural hazards such as windstorms, drought, and wildfires. The **digital platform** comprises wireless sensor networks (WSNs), video cameras, **drones**, and LiDAR remote sensing, all contributing to a comprehensive forest modeling approach. A key action of the proposal is "to promote and encourage the development of transnationally designed innovations (technical and non-technical innovation, including services) through pilot and joint actions contributing to facing societal and environmental challenges like energy efficiency or climate change", through effective monitoring of forest sites located in the eligible areas.

By effectively monitoring eligible forest sites, the ARCA infrastructure aims to achieve, among others, the following goals: 1. Developing AI and machine learning algorithms for continuous monitoring of forest ecosystems and the formulation of climate adaptation scenarios. 2. Implementing a Decision Support System (DSS) for preventing natural hazards, enhancing resilience, and monitoring air quality.

In relation to these project goals, this particular procurement aims to realize the **execution of one or more flights**, as required to fully cover the defined target area, via **unmanned aerial vehicle (drone)**, which would directly serve to support the establishment of the described digital platform.

The **drone** recordings are directed to support aerial image and video acquisition in forest areas, to enable dedicated flight campaigns for testing and validating the project infrastructure, and to provide visual data inputs used in AI-based processing, analysis and demonstration of natural hazard monitoring solutions. The drone enhances the ARCA sensor network/digital platform by adding a mobile aerial layer that complements fixed sensors, supports testing and validation of the monitoring infrastructure, and contributes image and video data to shared AI-driven analysis of natural hazards.. The recordings will directly contribute to the operational deployment of the ARCA monitoring infrastructure and digital platform, by secure the collection of data needed to effectively establish the cross-border monitoring network, in collaboration with other project partners.

2. DESCRIPTION OF ASSIGNMENT

Results to be achieved by the Contractor:

- Conduct one or more flights, as required to fully and continuously cover the defined target area, with LiDAR-equipped drone(s) over the designated zone within National Park of Lovćen
- Deliver retrieved data in format suitable for further analysis, as defined in the service description.

3. REQUESTED SERVICES AND DELIVERABLES

The tenderers are required to provide services as indicated below. In the tenderer's technical offer, the tenderers will indicate more details on the deliveries, referring back to the table below.

Service 1	
Title	LIDAR drone recording services
Description	<p>Service description</p> <p>The Contractor shall perform one or more LiDAR drone data acquisition flights, as required to fully cover the defined target area as a single, unified recording project over the designated target zone within National Park Lovćen in order to collect high-resolution georeferenced LiDAR data.</p>
	<p>Scope of work</p> <p>The Contractor shall:</p> <p>1. Plan and execute LiDAR drone flights</p> <ul style="list-style-type: none"> • Perform a minimum of one (1) drone flight mission, or as many as required, to fully and continuously cover the target area as a single, unified recording project • Cover a total area of approximately 9.65 km² (minimum acceptable coverage: 8 km²), defined by the Contracting Authority based on the boundary coordinates provided by the defined target area map • Ensure proper flight planning to achieve required overlap and coverage

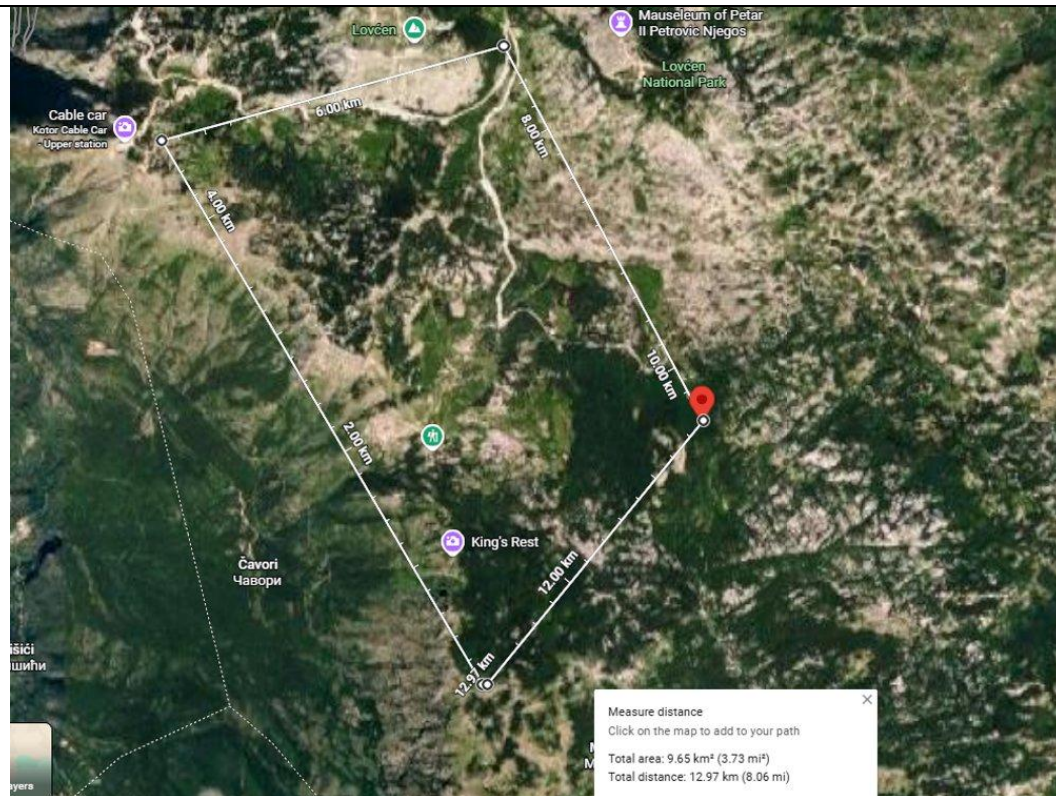


Figure 1. Indicative target area, National Park Lovćen (measured area: 9.65 km²; perimeter: 12.97 km). The four reference points listed below define the approximate boundary. The Contractor may, under Contracting Authority's approval, adjust or optimise the exact flight boundary by up to ±500 m per point to account for terrain, access, and flight planning efficiency, provided the minimum acceptable coverage of 8 km² within the designated zone is maintained. Slight deviations from the projected polygon may also be tolerated where necessary – for example, where the indicated area is found to include a no-flight zone or other legal/operational restriction – subject to prior approval by the Contracting Authority and provided the minimum acceptable coverage of 8 km² is maintained.

Reference points (WGS84, decimal degrees):

Point	Latitude	Longitude	Map link
H – West	42.3931370	18.7961320	Open in Google Maps
G – South	42.3568093	18.8254926	Open in Google Maps
F – East	42.3743770	18.8456667	Open in Google Maps
I – North	42.3996551	18.8268435	Open in Google Maps

Coordinates are provided in decimal-degree format (WGS84) for direct entry into GIS or flight-planning software. Each “Open in Google Maps” link points to the exact reference point for quick visual verification in the field.

2. Acquire LiDAR data

- Use a **LiDAR-equipped UAV system** suitable for high-resolution vegetation and terrain mapping (e.g., DJI Zenmuse L1, L2, L3, or equivalent).
- Ensure the following minimum technical parameters:
 - Point density: **≥ 100 points/m² across at least 90% of the acquired mapping area.**
 - Vertical accuracy: **≤ 10 cm RMSE**
 - Horizontal accuracy: **≤ 20 cm**

- Flight overlap: **as required by the LiDAR system used, provided that the required point density and accuracy targets are achieved (minimum 20% for systems with wide field of view, such as the DJI Zenmuse L3)**
- Scan angle: **nadir angle (standard for forestry surveying)**
- Perform **GNSS-supported georeferencing (RTK or PPK)**

3. Perform basic LiDAR data processing

- Process trajectory and georeferencing data
- Generate a **georeferenced LiDAR point cloud**
- Perform **basic classification** of the point cloud, at minimum: Class 2 – Ground; Class 3 – Low Vegetation; Class 4 – Medium Vegetation; Class 5 – High Vegetation; Class 6 – Buildings (where present). Additional classes may be provided if available.
- Apply basic noise filtering according to industry best practices; no specific software is required (DJI Terra, CloudCompare, or equivalent are acceptable)
- **Equivalent principle applies.**

4. Deliver LiDAR datasets

The Contractor shall deliver:

- **Unclassified (raw) LiDAR point cloud** (.las / .laz)
- **Classified LiDAR point cloud** (.las / .laz)
- **Digital Elevation Model (DEM)** – GeoTIFF
- **Digital Surface Model (DSM)** – GeoTIFF
- **Orthomosaic / Orthophoto** – GeoTIFF (where RGB imagery is available; supports visual validation and integration with other geospatial datasets)
- **In case**

As well as:

- Canopy Height Model (CHM) derived from DSM and DEM (GeoTIFF, 0.5–1 m resolution). The CHM shall represent vegetation height only; buildings, roads, power lines, and other non-vegetation features shall be removed through the classification process prior to CHM generation.
- Classified point cloud with at minimum the following classes: Class 2 – Ground; Class 3 – Low Vegetation; Class 4 – Medium Vegetation; Class 5 – High Vegetation; Class 6 – Buildings (where present). Additional classes may be provided where the data supports it.
- Vegetation metrics derived from LiDAR data, including canopy cover (%) and point density per grid cell; additionally, mean canopy height, maximum canopy height, and vegetation density **shall be provided where the data permits**. No specific software is prescribed.

All datasets must:

- Be georeferenced in **UTM Zone 34N (WGS84 / EPSG:32634)**
- Have spatial resolution of **0.5 m – 1 m** (for raster products)

In relation to the aforementioned outputs, The Contractor may, upon prior agreement with the Contracting Authority, provide technically equivalent or more methodologically appropriate forms of output and datasets, provided that they are technically justified, equivalent, compatible with the project objectives, and based on the characteristics of the acquired LiDAR dataset.

Equivalent principle applies.

5. Provide raw and supporting data

The Contractor shall also deliver:

- GNSS/IMU trajectory data – native files generated by the acquisition and processing software; no specific file format is required
- Flight logs and mission data – native files generated by the acquisition and processing software; no specific file format is required
- All files necessary for independent reprocessing of the dataset – to be delivered upon explicit request by the Contracting Authority (due to the potentially large data volume involved)

All data must be delivered:

- All data shall be delivered without encryption, proprietary restrictions, or licensing limitations that would prevent full independent use, processing, or redistribution by the Contracting Authority.

All data shall be delivered in a structured folder hierarchy separating raw data, processed data, and metadata

6. Provide metadata

The Contractor shall provide a metadata file including:

- Acquisition date and time
- Sensor and LiDAR system specifications (manufacturer-published specification sheets are acceptable)
- Flight parameters (altitude, speed, overlap, scan angle)
- Coordinate system and projection
- Point density and accuracy metrics
- Description of processing steps

No specific file format is required for the metadata file; standard reports generated by the acquisition and processing software are acceptable.

7. Recording deadline extension & Quality Assurance

Deadlines for the implementation of field data acquisition above may be extended in case of conditions unsuitable for recording (adverse weather, lack of approval or permits by authorities, or other circumstances beyond the Contractor's or Contracting Authority's control), subject to prior written permission from the Contracting Authority. Any such extension shall not exceed 15 (fifteen) days in total.

	<p>If the required technical parameters (point density, accuracy, coverage) are not achieved, the Contractor shall repeat the data acquisition at no additional cost.</p> <p>The produced data will be transferred and delivered to the Contracting Authority.</p> <p>Data must be produced in English.</p> <p>In relation to the previously defined outputs, data and metadata, The Contractor may, upon prior agreement with the Contracting Authority, provide technically equivalent or more methodologically appropriate forms of output and datasets, provided that they are technically justified, equivalent, compatible with the project objectives, and based on the characteristics of the acquired LiDAR dataset.</p> <p>Timeline</p> <ul style="list-style-type: none"> • Field data acquisition: within 10 days from contract signing, or from the establishment of suitable conditions in case of deadline extension described in point 7 of technical specifications. • Data delivery: within 10 days after acquisition
Required time frame	15th July - 15th September (extendable by up to 15 days with Contracting Authority approval as described in point 7 of the technical specifications)

NOTE:

- All of the above mentioned documents and report should be written in English and developed in compliance with publicity and visibility requirements of Interreg ADRION Programme.

4. LOCATION AND DURATION

Operational base for the project will be in Cetinje and Podgorica municipalities.

The intended start date is **15th of July 2026**, and the period of implementation of the contract will be from the contract signature by both parties **until 15th of September 2026**. This period **may be extended by up to 15 (fifteen) days**, with the prior written permission of the Contracting Authority, in case of conditions unsuitable for recording (adverse weather, lack of approval or permits by relevant authorities, or other circumstances beyond the Contractor’s or Contracting Authority's control).

5. REPORTING

Content, language, format and number of reports:

The contractor will submit the following reports in English in one original:

- **Final deliverable** as described in description of Service 1 (par. 3 of the Instructions) including or technically and methodologically equivalent to: raw and classified LiDAR point clouds (.las/.laz), DEM and DSM (GeoTIFF), a vegetation-only CHM (0.5–1 m resolution), an

orthomosaic/orthophoto (GeoTIFF, where RGB imagery is available), a classified point cloud (Classes 2–6 minimum), and vegetation metrics (canopy cover, point density per grid cell, plus mean/max canopy height where available), all georeferenced in UTM Zone 34N (WGS84 / EPSG:32634), together with GNSS/IMU trajectory data and flight logs in native format, and all files necessary for independent reprocessing (delivered upon explicit request), in an open, unrestricted, and well-structured format with complete metadata, within 10 days after acquisition, with mandatory re-acquisition at no additional cost if quality standards are not met.

Submission and approval of reports

The report referred to above will be submitted in hard and suitable electronic copy to the Contracting Authority. The Contracting Authority is responsible for approving the reports.

FORMAT OF THE CONTRACT BETWEEN THE CONTRACTOR AND THE CONTRACTING AUTHORITY

**PROJECT TITLE: ARTificial intelligence platform to prevent Climate change natural
hazArds – ARCA**

PROJECT No. IPA-ADRION00107

CONTRACT TITLE: LIDAR drone recording services

REF No: IPA-ADRION00107 -ARCA / MCN/PP11

Concluded between:

DOO “MECOnet”

Podgorica, Kralja Nikole br. 301

(Contracting Authority)

AND

Title

Address of the contractor

Reg.no.

(Contractor)

Article 1: Subject of the contract

The subject of the contract are the services as indicated in the contractor’s offer – “Part B: Documents to be completed by the tenderer”.

Article 2: Contract value

This contract, established in Euro is a Global price contract.

The maximum total contract value for implementation of services indicated in the Article 1 is 5.000 EUR NETO.

Article 3: Contracting documents

This documents which form the part of this contract are (by the order of precedence):

- Contract agreement
- Contractor’s technical offer as provided in the tendering phase - “Part B: Documents to be completed by tenderer Technical offer”
- Contractor’s financial offer as provided in the tendering phase “Part C: Documents to be completed by tenderer Financial offer”
- Declaration on honour

Article 4: General provisions

The Contractor must comply with publicity and visibility requirements of Interreg ADRIAN Programme. For more information Contractor is advised to visit official website of the Programme: <https://www.adrioninterreg.eu/>

Article 5: Deliveries and payments

The Contractor will deliver without reservation the services indicated in the contractor's offer "Part B: Documents to be completed by tenderer". The deliveries will be implemented within the indicated dates.

The Contracting Authority will pay to the contractor the services in the amount indicated in the Article 2 of this contract document. The payments will be issued by the following time schedule, with the initial payment being administered after the signation of the agreement and the final upon the confirmation of deliverables, as per article 3 and 5 of the Services Required document.

Month/Year		EUR
July 2026	Initial payment	50% of financial offer
August/September 2026	Final payment	50% of financial offer
	Total	< max 100 % of the contract value >

The Contractor will provide Contracting Authority with the reports on execution of the Services as indicated in point 5 of chapter Services required within Single tender_A_Documents for information.

The Final payment will commence after the delivery and confirmation of the final deliverable by the Contractor.

Article 6: Duration of the contract

The duration of the contract is from contract signature by both parties until the 15th of September 2026. This deadline may be extended by up to 15 (fifteen) days with the prior written permission of the Contracting Authority, in case of conditions unsuitable for recording (adverse weather, lack of approval or permits by relevant authorities, or other circumstances beyond the Contractor's or Contracting Authority's control).

Article 7: Cancellation of the contract

The contract can be suspended by the Contractor due to one of the following reasons:

- Contracting Authority not fulfilling payment and other obligations

The contract can be terminated by the Contracting Authority due to one of the following reasons:

- The Contractor is in serious breach of the contract, failing to meet contractual obligations
- The Contractor is bankrupted or being wound up, is having its affairs administrated by courts, has entered into arrangements with creditors, has suspended business activities, is the subject of proceedings concerning those matters, or is in any analogous situations arising from a similar situation provided for in national legislation or regulations

Article 8: Resolving of disputes

Any disputes arising out of or relating to this Contract which cannot be settled otherwise shall be referred to the exclusive jurisdiction of court in Podgorica in accordance with the legislation of the state of the Contracting Authority.

Article 9: Other specific conditions applying to the contract

Done in English in two originals, one original for the contracting authority and one original for the contractor.

For the Contractor

Name:

Title:

Signature:

Date:

For the Contracting Authority

Name:

Title:

Signature:

Date:

ADMINISTRATIVE COMPLIANCE GRID

Project acronym :	ARCA	Project no:	IPA-ADRION00107
Contract title :	LIDAR drone recording services	REF No:	IPA-ADRION00107 -ARCA / MCN/PP11

Tender envelope number	Tenderer's name	Within deadline? (Y/N)	Eligible nationality? (Y/N)	Tender submission form duly completed? (Y/N)	Language as required? (Y/N)	Documentation complete? (Y/N)	Other administrative requirements of the tender dossier? (Yes/No/Not applicable)	Overall decision? (Accept / Reject)
1								
2								
3								

EVALUATION GRID – GLOBAL PRICE CONTRACT

Project acronym :	ARCA	Project no:	IPA-ADRION00107
Contract title :	LIDAR drone recording services	REF No:	IPA-ADRION00107 -ARCA / MCN/PP11

Name of tenderer:	Maximum	Score
Rational	20	
Strategy	80	
Overall total score	100	

Strengths	
Weaknesses	

NB: Only tenders with average scores of at least 75 points qualify for the financial evaluation