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ANNEX II + III: TECHNICAL SPECIFICATIONS + TECHNICAL OFFER

Contract title: Procurement of Unmanned aircraft vehicle (UAV) and auxiliary equipment

Publication reference: Euro-MED0200675 FRED, tender no. 1

Columns 1-2 should be completed by the contracting authority

Columns 3-4 should be completed by the tenderer

Column 5 is reserved for the evaluation committee

Annex III - the contractor's technical offer

The tenderers are requested to complete the template on the next pages:

- Column 2 is completed by the contracting authority shows the required specifications (not to be modified by the tenderer),
- Column 3 is to be filled in by the tenderer and must detail what is offered (for example the words 'compliant' or 'yes' are not sufficient)
- Column 4 allows the tenderer to make comments on its proposed supply and to make eventual references to the documentation

The eventual documentation supplied should clearly indicate (highlight, mark) the models offered and the options included, if any, so that the evaluators can see the exact configuration. Offers that do not permit to identify precisely the models and the specifications may be rejected by the evaluation committee.

The offer must be clear enough to allow the evaluators to make an easy comparison between the requested specifications and the offered specifications.



1. Item number	2. Specifications required	3. Specifications offered	4. Notes, remarks, ref to documentation	5. Evaluation committee's notes
Nr. 1	<p>Unmanned aircraft system with a possibility of adding additional payloads for area monitoring</p> <ul style="list-style-type: none"> a) The unmanned aircraft must be manufactured in accordance with EU Regulation 2019/945 and marked with a C-class label. b) The mass of the unmanned aircraft without batteries must not exceed 4 kg. c) The maximum take-off mass (MTOM) of the unmanned aircraft must not exceed 10 kg. d) The minimum range of the unmanned aircraft (signal transmission range) must not be less than 15 km (FCC) or 8 km (CE/SRRC/MIC). e) The maximum flight time with the specified set of batteries, without additional equipment, must not be less than 50 minutes. f) The unmanned aircraft must be resistant to moderate wind conditions. g) The unmanned aircraft must support at least three Global Navigation Satellite Systems (GNSS) and have the capability to apply RTK (Real-Time Kinematic) position correction (RTK module). h) The unmanned aircraft must have a minimum IP rating of IP55. i) A suitable case for storing and transporting the unmanned aircraft must be provided. j) The unmanned aircraft must be supplied with a basic set and three (3) additional sets of batteries, a suitable charger, and a case for transporting and storing the batteries. k) The unmanned aircraft must be equipped with an obstacle avoidance system for all three axes. l) The unmanned aircraft must be equipped with an additional sensor 			



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	<p>(Circular Scanning Millimetre Wave Radar - CSM) for obstacle detection and avoidance in low visibility conditions.</p> <p>m) The remote-control station for the unmanned aircraft must be equipped with software that allows for the planning of automated flight operations.</p> <p>n) The unmanned aircraft must be equipped with a parachute.</p> <p>o) The unmanned aircraft must have the capability to install additional equipment for area monitoring (e.g., Thermal camera, LiDAR, loudspeaker, spotlight, etc.).</p> <p>p) The supplier must provide a development environment (SDK) and API access for retrieving telemetry data and video streaming in real time, including corresponding support, technical documentation, and instructions.</p> <p>q) The supplier shall provide minimum 1-year warranty and service plan. The service plan should include replacement units within two years for accidental damage, including collisions and water damage</p>			
Nr. 2	<p>Thermal camera</p> <p>a) The thermal camera must be compatible with the unmanned aircraft offered in item Nr. 1.</p> <p>b) The thermal camera must have a built-in mechanical stabilization system (gimbal) with at least three axes, which is detachable from the unmanned aircraft.</p> <p>c) The thermal camera must have an integrated RGB camera capable of taking photos and recording videos during flight, with the ability to record video in 4K resolution (3840x2160 px).</p> <p>d) The maximum mass of the thermal camera must not exceed 900 g.</p> <p>e) The thermal camera must have a minimum IP rating of IP44.</p>			



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	<ul style="list-style-type: none"> f) The photo and video resolution of the thermal camera must not be less than 640x512 px. g) The frequency spectrum of the thermal camera for fire detection must be in the wavelength range of 8 to 14 micrometres. h) The thermal camera must support the "Spot Metering" method for temperature measurement. i) The thermal camera must have a slot for a microSD card, including a card with a minimum storage capacity of 256 GB. j) The supplier shall provide a minimum 1-year warranty and service plan. The service plan should include replacement units within two years for accidental damage, including collisions and water damage 			
Nr. 3	<p>Spotlight</p> <ul style="list-style-type: none"> a) Fully compatible with the drone model offered in No. 1. Plug-and-play design, requiring minimal installation effort. b) Light Output: Minimum luminous intensity: 10,000 lumens. Colour temperature: 5,000–6,500 Kelvin (neutral white light). Effective illumination distance: Minimum of 100 meters. c) Power and Battery: Powered directly from battery system of drone offered in item No.1. or through an external power supply. d) Power consumption: Should have option which not exceed 70W to ensure minimal impact on drone flight time. e) Weight and Dimensions: Maximum weight: 800 grams (to maintain drone flight efficiency). f) Operational temperature range: -20°C to +50°C. g) Control and Integration: Remote control capability flight control software of drone offered in item No. 1. h) Warranty and Support: Minimum 1-year warranty covering 			



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	<p>manufacturing defects and performance issues.</p> <ul style="list-style-type: none"> i) Technical support and availability of spare parts for at least 5 years. j) Delivery and Packaging: Delivered with all necessary mounting accessories, cables, and user manuals. k) Documentation: Detailed technical specifications sheet and Installation and user guide. l) Training and Support: Provide basic operational training for the spotlight 			
Nr. 4	<p>Loudspeaker</p> <ul style="list-style-type: none"> a) Fully compatible with the drone offered in item No. 1. and featuring seamless integration with its application and related software. b) Sound Pressure Level (SPL) minimum 120. c) Effective broadcast range of at least 400 meters in open environments. d) Ability to transmit live voice messages in real-time. e) Support for playback of pre-recorded audio files. f) Power supply through the drone's power system with minimal additional weight and less than 50W g) It must not exceed 600 grams to avoid significantly impacting drone flight performance. h) Remote control is via the drone app or dedicated ground station. 			



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	<ul style="list-style-type: none"> i) Wireless communication with the drone's onboard systems j) Operating Temperature Range: -10°C to 50°C. k) Warranty of minimum 1 year 			
Nr. 5	<p>Three-Day Drone Training Program</p> <p>The supplier shall provide three days of training for four Protection and rescue service staff members. The target audience is beginners or intermediate users who wish to learn drone operations.</p> <p>The training program shall at minimum consist of the following:</p> <p>Day 1: Introduction and theoretical foundations: understanding drones, an overview of drone types, drone operation basics, regulations and safety, legal and regulatory framework, aviation laws and permissions in Montenegro, drone licensing and registration, safety guidelines, and simulation.</p> <p>Day 2: Hands-on training and basic operations, pre-flight preparation, drone assembly and calibration, flight planning, weather considerations and site assessment, basic flight manoeuvres, flight control exercises (take off, landing, hovering, and directional control) practicing in manual and GPS-assisted modes, emergency manoeuvres, responding to system failures or GPS loss and self-practice. Participants perform supervised flights in a controlled outdoor environment.</p> <p>Day 3: Advanced operations and practical applications: advanced flight</p>			



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	<p>techniques, autonomous flight programming such as using waypoint navigation and mapping tools, setting up automated flight paths, mounting cameras and other equipment, configuring camera settings for photography and videography and real-world applications in rescue services.</p> <p>Post-flight procedures: data extraction and analysis, drone maintenance and troubleshooting,</p>			
Nr. 6	<p>Liability insurance for the drone</p> <p>Supplier shall provide minimum 1-year liability insurance according to regulations in Montenegro, secure liability insurance to cover potential damages to third parties.</p>			