

ТЕХНИЧЕСКОЕ ЗАДАНИЕ

Name of purchased goods:	Purchase and delivery of equipment: laptops, tablets with accessories, projector with screen, SLR camera with accessories, batteries and chargers for camera traps, drone with lidar and software
Project number and title:	00101043, UNDP-GEF Project "Conservation and sustainable management of key globally significant ecosystems for multiple benefits"
Period of delivery:	Within 60 calendar days after signing the Purchase Order, UNDP format
Contract type:	Purchase Order, UNDP format

Project Description:

The United Nations Development Programme in Kazakhstan (UNDP), in partnership with the Forestry and Wildlife Committee of the Ministry of Ecology, Geology and Natural Resources of the Republic of Kazakhstan (hereinafter – FWC MEGNR RoK), is implementing the UNDP - GEF (Global Environment Facility) Project "Conservation and sustainable management of key globally significant ecosystems for multiple benefits" (hereinafter – the Project), aimed at the conservation and sustainable management of forest resources.

The objective of the Project is to improve the conservation and management of forest resources and the surrounding grassland, floodplain, and desert ecosystems, which are important for the conservation of biodiversity, land resources, and the local population's well-being. To achieve the Project goal and reduce certain threats and barriers, the project structure involves working on 3 components:

- **Component 1:** Increasing the representativeness of globally important forest ecosystem biodiversity in the PAs network and improving the effectiveness of PAs management;
- **Component 2:** Promoting the integration of forest PAs into the landscape context by creating conditions for the effective regulation and management of globally significant ecosystems;
- **Component 3:** International cooperation and knowledge management.

Scope of work:

In order to improve the technical equipment of the ecosystem and biodiversity monitoring system in the project areas, the following equipment is being purchased:

- laptops (type 1), tablets with accessories, drone with lidar and software for Kazakh forestry enterprise Republican State Treasury Enterprise (RSTE);
- laptop (type 2), projector and screen for the Environmental Center of State National Natural Park (SNNP);
- SLR camera with accessories for the Public Foundation "Wildlife Without Borders";
- lens for the SLR camera (150-600 mm) of Aksu-Zhabagly State Nature Reserve (SNR);
- batteries and chargers for photo traps of pilot Pas: Ile-Alatau SNNP, Almaty SNR, Zhongar-Alatau SNNP, "Kolsai-Kolderi" SNNP, Katon-Karagai SNNP, Aksu-Zhabagly SNR, Sairam-Ugam SNNP, Merke Forestry, Charyn SNNP, "Tarbagatai" SNNP, Markakol SNR, "Altyn-Emel" SNNP, Karatau SNR.

This equipment is divided into lots, suppliers can submit for all lots, or for specific lot/s:

- Lot #1: Laptop (Type 1), Laptop (Type 2) Microsoft Office Home and Business 2019, Laptop (Type 1) backpack, Laptop (Type 2) bag, Projector, Projector screen;
- Lot#2: Tablet, Auto Charger for Tablet, Tablet memory card, Tablet bag;

Лот №3: SLR camera, Battery pack for SLR cameras, Additional battery for SLR cameras, Lens for SLR camera (150-600 mm), Lens for SLR camera (70-200 mm), SLR camera memory card, SLR camera backpack, Tripod head for SLR cameras;

- Lot #4: Battery for the camera trap, Battery charger for camera traps;
- Lot#5: Drone, Lidar camera for drone, Software to control the drone and process images from the drone.

The following are the minimum technical specifications for the equipment to be purchased:

Specifications:

No.	Item	Minimum Configurations		Quantity
LOT #1:				
1	Laptop (type 1)	CPU	Intel Core i7	10 pcs.
		CPU base frequency	2,6 GHz	
		Maximum processor frequency	4,4 GHz	
		Number of Cores	6	
		RAM	16 Gb, DDR4	
		RAM frequency	2666 MHz	
		Hard disk	1 T6 HDD	
		Solid State Drive	128 Gb	
		Video card type	Discrete	
		Vedeocard	8 Gb	
		Screen diagonal, inch	17.3	
		Screen resolution	1920 x 1080 Full HD	
		Screen surface	Matt	
		Multimedia	- Camera; - Speakers; - Microphone.	
Connectors	- HDMI; - Mini DisplayPort; - RJ-45; - Microphone input; - Headphone output.			
Means of communication	- LAN 10/100/1000; - Wi-Fi (802.11 ac); - Bluetooth.			
Installed operating system	Microsoft Windows 10 Professional, 64-bit, rus			
2	Laptop (type 2)	CPU	Intel Core i5	1 pcs.
		CPU base frequency	2,4 GHz	
		Maximum processor frequency	4,2 GHz	
		Number of Cores	4	
		RAM	16 Gb, DDR4	
		RAM frequency	3200 MHz	
		Solid State Drive	512 Gb	
		Video card type	Integrated in the processor	
		Means of communication	- LAN 10/100/1000; - Wi-Fi (802.11ac); - Bluetooth.	
		Multimedia	- Camera;	

			- Speakers; - Microphone.	
		Screen diagonal, inch	15,6	
		Screen resolution	1920 x 1080 Full HD	
		Screen surface	Matt	
		Installed operating system	Microsoft Windows 10 Professional, 64-bit, rus	
3	Microsoft Office Home and Business 2019	Desktop applications	Word; Excel; PowerPoint	for 1 device
		System bit capacity	64-bit	
		Interface language	Русский	
		Scope	For government agencies	
		Operating system	Windows 10	
		License	Client, perpetual license	
4	Laptop (Type 1) backpack	Material	Nylon/polyester	10 pcs.
		Clasp Type	Zipper	
		Main pocket	For 17.3-inch laptop	
		Additional pockets	- For A4 size documents; - For pens and charger.	
		Waterproof	Yes	
5	Laptop (Type 2) bag	Material	Nylon/polyester	1 pcs.
		Clasp Type	Zipper	
		Main pocket	For 15.6-inch laptop	
		Secondary pockets	- For A4 size documents; - For pens and charger.	
		Shoulder strap	Yes	
		Waterproof	Yes	
6	Projector	Type	Stationary projector	1 pcs.
		Technology	LCD	
		Original resolution	1920 x 1080 (FullHD)	
		Aspect Ratio	4:3, 16:9, 16:10	
		Lamp life, hours	6 000	
		Luminous flux, lumen	from 4200	
		Line scan frequency	15 - 92 kHz	
		Projection options	Reverse, frontal, ceiling mount	
		Contrast	16 000:1	
		Lens	f = 16.9 - 20.2 мм	
		Zoom	1.2 x	
		Video Connectors	- 1 x VGA input; - 1 x HDMI input; - Composite input (RCA).	
7	Projector screen	Type	Screen	1 pcs.
		Diagonal	339 cm	
		Surface type	Matte White	
		Workspace size	292 x 172 cm	
		Format	16:9	
		Mount type	Tripod mounted	

LOT #2:

8	Tablet	Screen size, inch	10.1	20 pcs.
		Screen resolution	1200x1920	
		Communication Standard	4 G	
		RAM	4 GB	
		Built-in memory	64 GB	
		Processor	Mediatek/Helio	
		Number of processor cores	4	
		Cameras	- Main: 16 MP; - Front: 16 MP.	
		Wireless interfaces:	- Wi-Fi; - Bluetooth.	
		Navigation	- GPS; - GLONASS; - Galileo; - BeiDou.	
		Sensors	- Compass; - Accelerometer; - Gyroscope.	
		Battery capacity	10 000 mAh	
		Operating system	11	
		Number of SIM cards	1/2	
		Support for memory cards	- Micro SD; - Micro SDHC.	
		Display type	IPS	
		Display Protection	Yes	
		Dust and moisture protection	IP69K and IP68	
		Shock resistance	Yes	
		Charging connector	Yes	
Headset jack	Yes			
Body material	Metal, plastic			
Delivery set	1) Tablet; 2) Battery charger; 3) USB cab; 4) Instruction.			
9	Auto Charger for Tablet	Cable length	1 m	20 pcs.
		Minimum input voltage	12 V	
		Maximum input voltage	24 V	
10	Tablet memory card	Type	MicroSDXC	20 pcs.
		Speed Class	Class 10 UHS-I U1, V10, A1	
		Capacity	64 GB	
		Reading Speed	95 Mbytes/sec	
		Writing Speed	30 Mbytes/sec	
11	Tablet bag	Material	Nylon/polyester	20 pcs.
		Clasp Type	Zipper	
		Main pocket	For 10.1 inch tablet	
		Secondary pockets	For pen and charger	
		Shoulder / belt strap	Yes	

		Waterproof	Yes	
LOT #3:				
12	SLR camera	Camera type	SLR	1 pcs.
		Supports interchangeable lenses	Yes	
		Total number of MP	46.9	
		Number of effective MP	45.7	
		Sensor size	Full frame	
		Sensor type	CMOS	
		Maximum resolution, px	8256 x 5504	
		Light Sensitivity (ISO)	64 - 25600	
		Advanced ISO modes	32 - 102400	
		Connecting an external flash	Yes	
		Shooting speed, frames/sec	9	
		Max Shot Series	- 200 JPEG photos; - 200 RAW photos;	
		LCD screen	Rotary, touch-sensitive	
		Shutter speed, sec.	30 - 1/8000	
		Number of focus points	153	
		Manual focus	Yes	
		Memory card type	SDHC, Secure Digital, SDXC,	
		Image formats	JPEG (3 levels of compression), TIFF, RAW	
		Interfaces	Wi-Fi, USB, Bluetooth, HDMI	
		Movie File Format	MOV, MP4	
Maximum video resolution	3840x2160			
Frame rate, HD	50/60			
Frame rate, FullHD	50/60			
Frame rate, 4K	25/30			
Dust and moisture protection	Yes			
Tripod mount, remote control, computer control	Yes			
13	Battery pack for SLR cameras	Type	Battery pack	1 pcs.
		Shutter button	Check out	
		Waterproof and dustproof	Yes	
		AF and shutter buttons	Yes	
		Main and sub dials	Yes	
		Increase number of shots	Up to 5 140	
		Faster camera response time	Up to 9 frames per second	
14		Battery type	Li-Ion	3 pcs.

	Additional battery for SLR cameras	Compatibility	Yes	
		Capacity, mAh	1900	
		Voltage, V	7	
15	Lens for SLR camera (150-600 mm)	Matrix size	Full Frame	2 pcs.
		Lens type	Ultra-long focus, zoom	
		Focal length	Variable	
		Focal length, mm	150-600	
		Focal length	5-6.3	
		Minimum aperture	40	
		Minimal focus distance, m	2.7	
		Maximum zoom	0,2	
		Autofocus	Yes	
		Image stabilization	Yes	
		SLR camera compatibility by Bayonet	Yes	
16	Lens for SLR camera (70-200 mm)	Matrix size	Full Frame	1 pcs.
		Lens type	Zoom, long focus	
		Focal length	Variable	
		Focal length, mm	70-200	
		Focal length	2.8	
		Minimum aperture	22	
		Minimal focus distance, m	1.1	
		Maximum zoom	0.21	
		Autofocus	Yes	
		Image stabilization	Yes	
		SLR camera compatibility by Bayonet	Yes	
17	SLR camera memory card	Capacity, GB	120	1 pcs.
		Reading Speed, MB/s	440	
		Write speed, MB/s	440	
		Type of storage device	XQD	
18	SLR camera backpack	Capacity	Pockets for: - 70-200 mm and 150-160 mm lenses, charging; - additional batteries; - battery pack.	1 pcs.
		Material	Nylon/textile	
		Waterproofing	Yes	
19	Tripod head for SLR cameras	Rotation in the horizontal plane:	360°	1 pcs.
		Maximum load:	5 kg,	
		Quick-release pad:	Yes	
		Tilt:	up and down +90°/-70°.	
LOT #4:				
20	Battery for the camera trap	Battery type	Ni-Mh	205 set.
		Size	AA/HR6	
		Nominal capacity	At least 2500 mAh	
		Voltage	1.2 B	

		The battery must be made with low self-discharge technology	Not more than 20% for 6 months	
		Life cycle	At least 500 charge/discharge cycles.	
		Number of batteries	12 pcs.	
		Rechargeable	Yes	
		Packaging	Blister	
21	Battery charger for camera traps	Charges	from 1 to 8 Ni-Cd /Ni-MH batteries of size AA/HR6 and AAA/HR03	14 pcs.
		Charging current and charging time	Fast charge (1.5h-6h)	
		Charging method	Turns off automatically	
		Polarity reversal protection	Yes	
		Discharge function	Yes	
		Safety timer	Yes	
		Temperature sensors	Yes	
		Powered by mains and car battery	Yes	
LOT #5:				
22	Drone	Type of equipment	Drone	1 pcs.
		Drone class	Professional	
		Operating frequency range:	- 2.4-2.483 GHz; - 5.725 to 5.825 GHz.	
		Positioning accuracy	- <i>in the horizontal plane: 1 cm</i> - <i>in the vertical plane: 1.5 cm</i>	
		Maximum tilt angle	30°	
		Max. altitude above sea level	5,000 m	
		Max. permissible wind speed	15 m/s	
		Max. flight time	55 min without payload	
		Protection class	IP45	
		Navigation/Positioning Systems	GPS, GLONASS, BeiDou, Galileo	
		Operating temperature range	-20°C...+50°C	
		Positioning and Detection	In 6 directions	
		Flight Data Display	Yes	
		Hot-swappable batteries	Yes	
		Obstacle detection range:	<i>front/rear/left/right:</i> 0,7-40 m; <i>top/bottom:</i> 0,6-30 m.	
		Viewing angle:	<i>front/back/bottom:</i> - 65° (horizontal) - 50° (vertical) <i>left/right/top:</i>	

			- 75° (horizon,) - 60° (vertical)	
		Battery capacity	5935 mAh	
		Payload weight	Up to 2.7 kg	
		Camera type	HD	
		Camera resolution:	960 p	
		Camera angle of view:	145°	
		Camera frame rate:	30 fps	
		Suspension installation \ Camera placement options	– Single Downward Gimbal; – Dual Downward Gimbals; – Single Upward Gimbal; –Upward and Downward Gimbals; – Triple Gimbals.	
		Max Transmitting Distance (unobstructed, free of interference)	15 km	
		Remote control battery capacity	5 000 mAh	
		Remote control charging time:	2.5 hours	
		Control panel operating temperature range	-20°C...+40°C	
		Drone package	- Drone; - Remote control; - Charger; - USB cable; - Battery; - Propellers; - Landing chassis; - Carrying case; - Power cable; - Battery Charging Station.	
		Built-in drone control software	Running on Android and iOS	
23	Lidar camera for drone	<i>Main characteristics</i>		1 pcs.
		Type of equipment	Lidar	
		Vertical accuracy:	5 cm. at 50 m.	
		Horizontal Accuracy:	10 cm. at 50 m.	
		Single-channel return:	240,000 dots/sec.	
		Detection Range:	- 450 m with a reflectivity of 80%; - 190 m at a reflectance of 10%.	
		Level of protection:	IP44	
		Point cloud view	Yes	
		Operating temperature range	From -20 to 50° CF	
		Coloring modes of the point cloud in real time:	- True Color; - Coloring by reflectivity; - Coloring by height.	

		Supported memory cards:	- MicroSD, Class 10 or higher, rated UHS-1 or higher; - Maximum capacity: 256GB.	
		<i>Characteristics of the lidar camera</i>		
		Range accuracy:	3 cm per 100 m	
		Maximum returns supported:	3	
		Scan Modes:	- Non-repeating scan pattern; - Repeating scan pattern.	
		Laser Safety:	Class 1 (IEC 60825-1:2014) (eye safety)	
		Optional technical vision sensor	Yes	
		<i>Auxiliary positioning sensor</i>		
		Resolution	1280×960	
		Field of View	95°	
		<i>RGB mapping camera</i>		
		Sensor size:	1 inch	
		Effective pixels:	20 MP	
		Photo size:	5472×3078; 4864×3648; 5472×3648	
		Photo Format:	JPEG	
		Video format:	MOV, MP4	
		Video Resolution:	H.264, 4K: 3840×2160 30p	
		ISO	- video: 100-3200 (Auto), 100-6400 (Manual) - Photo: 100-3200 (Auto), 100-12,800 (Manual).	
		Focal length:	8.8 mm /24 mm	
		Aperture range:	f/2.8 - f/11	
24	Software to control the drone and process images from the drone.	Functionality	<ul style="list-style-type: none"> – object visualization; – creating a map in real time: 2-dimensional and multispectral reconstructions, 3D models from point clouds; – 2D and 3D measurements; area and volume calculation; classification of objects and terrain elements; – import of KML files; support of coordinate systems used on the territory of Kazakhstan; – tasks planning in 3D; image georeferencing to GCP (GCP); – point-by-point flight; spatial planning; 	

			- creation of map of vegetation cover by NDRE and NDVI indices.	
		License type	Perpetual license	for 3 devices

Related services for the delivery of goods:

- Passing performance tests of purchased products and their programs.
- Operation and maintenance manual.
- Warranty on laptops, tablets, auto chargers and memory cards for tablets, projector, projector screen, SLR camera with accessories (battery pack, additional battery, lenses (150-600 mm), camera lens (70-200 mm), memory card, tripod head), batteries and battery chargers for camera traps, drone with lidar and software. The Bidder should provide a minimum of 12 months warranty on the equipment from the time the goods are handed over to the end-user at the address specified.
- Availability of Service Centers or a technical support service if maintenance/repair is required, providing the address and contact details of the responsible person.
- In the event of a warranty, the Bidder will carry out the replacement with a new equipment or components, if it is impossible to repair the purchased equipment in the event of a manufacturing defect.

Expected results:

No.	Action	Due Date	Payment
1	<p>1. The following goods were delivered to the following address:</p> <ul style="list-style-type: none"> • <i>23 Baisheva Street, Almaty, Kazakh forestry enterprise RSTE office:</i> <ol style="list-style-type: none"> 1) laptop (type 1) – 10 pcs.; 2) laptop (Type 1) backpack – 10 pcs.; 3) tablet – 20 pcs.; 4) auto charger for tablet – 20 pcs.; 5) tablet memory card – 20 pcs.; 6) tablet bag – 20 pcs.; 7) drone – 1 pcs.; 8) lidar camera for drone – 1 pcs.; 9) software for drone – for 3 devices. • <i>6/1 Geologicheskaya Street, Ust-Kamenogorsk:</i> <ol style="list-style-type: none"> 1) laptop (Type 2) – 1 pcs.; 2) Microsoft Office Home and Business 2019 – for 1 device; 3) laptop (Type 2) bag – 1 pcs.; 4) projector – 1 pcs.; 5) projector screen – 1 pcs. • <i>4 Zhetisu Street, Almaty, Public Foundation “Wildlife Without Borders” office:</i> <ol style="list-style-type: none"> 1) SLR camera – 1 pcs.; 2) battery pack for SLR cameras – 1 pcs.; 	Within 60 calendar days of issue of Purchase Order, UNDP format	100 % upon delivery within 30 calendar days from the date of receipt of the goods and the signing of the invoice and waybill

<p>3) additional battery for SLR cameras – 3 pcs.;</p> <p>4) lens for SLR camera (150-600 mm) – 1 pcs.;</p> <p>5) Lens for SLR camera (70-200 mm) – 1 pcs.;</p> <p>6) SLR camera memory card – 1 pcs.;</p> <p>7) SLR camera backpack – 1 pcs.;</p> <p>8) Tripod head for SLR cameras – 1 pcs.</p> <ul style="list-style-type: none"> • <i>8/2 Turkestan Street, Nur-Sultan, UNDP Project Office:</i> <ul style="list-style-type: none"> 1) battery for the camera trap – 205 set; 2) battery charger for camera traps – 14 pcs; 3) lens for SLR camera (150-600 mm) – 1 pcs. <p>2. Представлены счет-фактура и накладная на товары.</p>		
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Preconditions:

- All products shall be packed in a way that ensures the safety of products during storage and transportation;
- The cost of services shall include VAT if the Supplier is a VAT payer;
- Timing of order – 60 calendar days from the date of issue of the Purchase Order, UNDP format;
- Bidder's acceptance of the UNDP General Terms and Conditions;
- Payment terms: 100% upon delivery of the equipment within 30 calendar days, based on financial documents provided by the Bidder (invoice, waybill).

Recommendations for submitting Quotations:**Documents to be submitted:**

- Duly accomplished Quotation Submission Form (Annex 2) and Technical and Financial Offer (Annex 3) according to the requirements of the RFQ;
- Latest Business registration/re-registration Certificate;
- VAT Certificate (if applicable; if the supplier is not a VAT payer, indicate this in the offer);
- Certificate confirming that currently there are no debts with the tax authorities;
- Brief description of the Company; the description of the Company must demonstrate Company's experience in selling relevant equipment on the market for at least 3 years with a list of similar deliveries over the last 3 years (indicating to whom and when the goods were delivered, with the Customer's contact information);
- Recommendation letters from previous customers - at least 2 letters;
- A complete set of documents with information about the supplied good (photo, technical specification, user manual, passport copy (if applicable));
- Letter of confirmation of the warranty for a period of at least 12 months, including warranty conditions and maintenance with the address and contacts of the service centers;
- Permit of the manufacturer to act as an official dealer or OEM Authorization letter from the dealer/distributor (if the Supplier is not a manufacturer);
- Attach any additional information that demonstrates your qualification for these goods including appropriate certifications;
- Delivery schedule with approximate date of delivery of goods;

Selection criteria:

Bidders will be evaluated based on the lowest price quotation method for each lot separately. The opportunity to provide goods will be provided to the Bidder whose proposal has been evaluated and determined as:

- Meeting the requirements of the Terms of Reference;
- Offering the lowest cost of goods.

Approved by:

DocuSigned by:
Signature: Talgat Kerteshev
Name and Designation: Talgat Kerteshev, Project Manager
Date of Signing: 11-May-2022

DocuSigned by:
Signature: Assel Nurbekova
Name and Designation: Assel Nurbekova, Programme Analyst of Energy and Environment Unit
Date of Signing: 11-May-2022