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REQUEST FOR PROPOSAL RFP 011/21

NAME & ADDRESS OF FIRM	DATE: January 22, 2021
	REFERENCE: Development of Wildfire Data Management and Communication System

Dear Sir / Madam:

We kindly request you to submit your Proposal for **Development of Wildfire Data Management and Communication System (the detailed TOR is attached as Annex 1a)**.

Please be guided by the form attached hereto as Annex 2, in preparing your Proposal.

Proposals need to be submitted on or before **12 February 2021, 4:00 pm** local Yerevan time (GMT +4) via email to the following e-mail address: tenders.armenia@undp.org

Proposals submitted by email must be limited to a maximum of 10MB, virus-free and no more than 3 transmissions. They must be free from any form of virus or corrupted contents, or the quotations shall be rejected.

Please note that proposals received through any other e-mail address will not be considered.

Your Proposal must be expressed in the English, and valid for a minimum period of 60 calendar days.

In the course of preparing your Proposal, it shall remain your responsibility to ensure that it reaches the address above on or before the deadline. Proposals that are received by UNDP after the deadline indicated above, for whatever reason, shall not be considered for evaluation. If you are submitting your Proposal by email, kindly ensure that they are signed and in the .pdf format, and free from any virus or corrupted files.

Services proposed shall be reviewed and evaluated based on completeness and compliance of the Proposal and responsiveness with the requirements of the RFP and all other annexes providing details of UNDP requirements.

The Proposal that complies with all of the requirements, meets all the evaluation criteria and offers the best value for money shall be selected and awarded the contract. Any offer that does not meet the requirements shall be rejected.

Any discrepancy between the unit price and the total price shall be re-computed by UNDP, and the unit price shall prevail and the total price shall be corrected. If the Service Provider does not accept the final price based on UNDP's re-computation and correction of errors, its Proposal will be rejected.

No price variation due to escalation, inflation, fluctuation in exchange rates, or any other market factors shall be accepted by UNDP after it has received the Proposal. At the time of Award of Contract or Purchase Order, UNDP reserves the right to vary (increase or decrease) the quantity of services and/or goods, by up to a maximum twenty five per cent (25%) of the total offer, without any change in the unit price or other terms and conditions.

Any Contract or Purchase Order that will be issued as a result of this RFP shall be subject to the General Terms and Conditions attached hereto. The mere act of submission of a Proposal implies that the Service Provider accepts without question the General Terms and Conditions of UNDP, herein attached as Annex 3.

Please be advised that UNDP is not bound to accept any Proposal, nor award a contract or Purchase Order, nor be responsible for any costs associated with a Service Providers preparation and submission of a Proposal, regardless of the outcome or the manner of conducting the selection process.

UNDP's vendor protest procedure is intended to afford an opportunity to appeal for persons or firms not awarded a Purchase Order or Contract in a competitive procurement process. In the event that you believe you have not been fairly treated, you can find detailed information about vendor protest procedures in the following link:

<http://www.undp.org/content/undp/en/home/operations/procurement/protestandsanctions/>

UNDP encourages every prospective Service Provider to prevent and avoid conflicts of interest, by disclosing to UNDP if you, or any of your affiliates or personnel, were involved in the preparation of the requirements, design, cost estimates, and other information used in this RFP.

UNDP implements a zero tolerance on fraud and other proscribed practices, and is committed to preventing, identifying and addressing all such acts and practices against UNDP, as well as third parties involved in UNDP activities. UNDP expects its Service Providers to adhere to the UN Supplier Code of Conduct found in this link : http://www.un.org/depts/ptd/pdf/conduct_english.pdf

Thank you and we look forward to receiving your Proposal.

Sincerely yours,

Procurement Unit / UNDP Armenia

Description of Requirements

Context of the Requirement	Development of Wildfire Data Management and Communication System
Implementing Partner of UNDP	Ministry of Environment of the Republic of Armenia
Brief Description of the Required Services ¹	The forest and wildfire prevention, monitoring and firefighting is not possible without introduction of modern early warning system based on the application of well-developed geofomation technologies using remote sensing (RS) and ground-based components.
List and Description of Expected Outputs to be Delivered	As per attached Terms of Reference (TOR), Annex 1a
Person to Supervise the Work/Performance of the Service Provider	Armen Chilingaryan, DRM Programme Manager
Frequency of Reporting	Weekly progress reports during the active stage and monthly during the warranty period
Progress Reporting Requirements	On a regular basis
Location of work	☐ Exact Address/es <i>[pls. specify]</i> ☒ At Contractor's Location
Expected duration of work	40 days
Target start date	February 20, 2021
Latest completion date	March 30, 2021
Travels Expected	☒ Not Required
Special Security Requirements	☒ Not Required
Facilities to be Provided by UNDP (i.e., must be excluded from Price Proposal)	☒ Not Required
Implementation Schedule indicating breakdown and timing of activities/sub-activities	☒ Required
Names and curriculum vitae of individuals who	☒ Required

¹ A detailed TOR may be attached if the information listed in this Annex is not sufficient to fully describe the nature of the work and other details of the requirements.

will be involved in completing the services												
Currency of Proposal	☒ United States Dollars ☒ Local Currency											
Value Added Tax on Price Proposal ²	☒ must be exclusive of VAT and other applicable indirect taxes											
Validity Period of Proposals (<i>Counting for the last day of submission of quotes</i>)	☒ 60 days ☐ 90 days ☐ 120 days In exceptional circumstances, UNDP may request the Proposer to extend the validity of the Proposal beyond what has been initially indicated in this RFP. The Proposal shall then confirm the extension in writing, without any modification whatsoever on the Proposal.											
Partial Quotes	☒ Not permitted ☐ Permitted											
Payment Terms ³	<table border="1"> <thead> <tr> <th>Outputs</th> <th>Percentage</th> <th>Timing</th> <th>Condition for Payment Release</th> </tr> </thead> <tbody> <tr> <td>Completion of task: Basic Analytical (WEB) program, internal and external EWS including mobile data collection software subsystem (for Android, IOS systems) developed and integrated with LoRa communication network. Final Report developed and Presented to UNDP.</td> <td>100%</td> <td>40 days after contract signing</td> <td> Within thirty (30) days from the date of meeting the following conditions: a) UNDP's written acceptance (i.e., not mere receipt) of the quality of the outputs; and b) Receipt of invoice from the Service Provider. </td> </tr> </tbody> </table>				Outputs	Percentage	Timing	Condition for Payment Release	Completion of task: Basic Analytical (WEB) program, internal and external EWS including mobile data collection software subsystem (for Android, IOS systems) developed and integrated with LoRa communication network. Final Report developed and Presented to UNDP.	100%	40 days after contract signing	Within thirty (30) days from the date of meeting the following conditions: a) UNDP's written acceptance (i.e., not mere receipt) of the quality of the outputs; and b) Receipt of invoice from the Service Provider.
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Person(s) to review/inspect/ approve outputs/completed	Armen Chilingaryan, DRM Programme Manager											

² VAT exemption status varies from one country to another. Pls. check whatever is applicable to the UNDP CO/BU requiring the service.

³ UNDP preference is not to pay any amount in advance upon signing of contract. If the Service Provider strictly requires payment in advance, it will be limited only up to 20% of the total price quoted. For any higher percentage, or any amount advanced exceeding \$30,000, UNDP shall require the Service Provider to submit a bank guarantee or bank cheque payable to UNDP, in the same amount as the payment advanced by UNDP to the Service Provider.

services and authorize the disbursement of payment	
Type of Contract to be Signed	☒ Contract Face Sheet (Goods and Services) UNDP
Criteria for Contract Award	☒ Highest Combined Score (based on the 70% technical offer and 30% price weight distribution), where the minimum passing score of technical proposal is 70%.
Criteria for the Assessment of Proposal	<u>Technical Proposal (70%)</u> ☒ <u>Expertise of the Firm - Maximum obtainable points: – 400</u> - At least 5 years of experience in development and managing similar platforms/software, max: 200; - Advanced experience in working with government agencies civil society organizations and international organizations, max: 100; - At least 3 years of experience in working with international organizations and donors; max: 100; ☒ <u>Methodology, Its Appropriateness to the Condition and Timeliness of the Implementation Plan, technical capacity - Maximum obtainable points: 300</u> - The detailed description of implementation methods and organisational approaches, milestones, timeframe and detailed budget breakdown (see budget breakdown template attached)- max 300. ☒ <u>Management Structure and Qualification of Key Personnel - Maximum obtainable points: 300</u> - Team leader with experience with not less than 5 years of experience of managing similar ICT related assignments max: 150 - Two software development specialists with not less than 5 years of experience of development of similar platforms/products, max: 100 - One technical specialist for installation and configuration of Low Range radio-communication systems, max: 50 <u>Financial Proposal (30%)</u> To be computed as a ratio of the Proposal's offer to the lowest price among the proposals received by UNDP.
UNDP will award the contract to:	☒ One and only one Service Provider

Annexes to this RFP ⁴	☒ Detailed Terms of Reference and Technical Specification (Annex 1a and Annex 1b) ☒ Form for Submission of Proposal (Annex 2) ☒ General Terms and Conditions / Special Conditions (Annex 3) ⁵
Contact Person for Inquiries (Written inquiries only) ⁶	<i>Procurement Unit, UNDP Armenia</i> procurement.armenia@undp.org Any delay in UNDP's response shall be not used as a reason for extending the deadline for submission, unless UNDP determines that such an extension is necessary and communicates a new deadline to the Proposers.
Other Information [p/s. specify]	

⁴ Where the information is available in the web, a URL for the information may simply be provided.

⁵ Service Providers are alerted that non-acceptance of the terms of the General Terms and Conditions (GTC) may be grounds for disqualification from this procurement process.

⁶ This contact person and address is officially designated by UNDP. If inquiries are sent to other person/s or address/es, even if they are UNDP staff, UNDP shall have no obligation to respond nor can UNDP confirm that the query was received.

Terms of Reference

Development of Wildfire Data Management and Communication System

I. General Information

Project: “Addressing climate change impact through enhanced capacity for wildfires management in Armenia”

Project and Output numbers: 00102520/00104555

UN Agency: UNDP

Duty Station: Armenia

Duration of Assignment: 40 days after signing the contract

II. Background Information

The project aims to address the critical issue of forest and wildfire risks exaggerated under the climate change, by supporting national partners building necessary technical capacity and establishing sustainable practices of monitoring, prevention and coordination of roles and responsibilities during suppression of forest fires. The project will contribute to the application of sustainable forest management practices enhancing greenhouse sinks conservation, as well as to the conservation of carbon in agriculture lands and protection of forest ecosystems rich biodiversity.

The stated objectives can be ensured through provision of assistance for improvement and enforcement of the relevant policy and regulatory framework, strengthening forest fire early warning and monitoring systems, establishment of clear roles and responsibilities of corresponding national structures, and developing their technical capacity to execute their mandates. The project will provide for contemporary equipment, technologies, and other capacities to consolidate the efforts of respective stakeholders at regional and national levels.

The project will involve forest neighbouring communities in all project activities as key stakeholder and steward for sustainable management of forest resources, including assistance in transfer and application of climate change mitigation innovative technological solutions, e.g. production of pellets and bricks; energy efficient stoves, involving them in agro forestry system through cooperation with technology accelerator, thus generating income, and jobs.

The project builds on a number of past and current UNDP activities in the area of sustainable management of natural resources and disaster risk reduction. The project foresees significant cooperation with the Russian Federation, both through technical and advisory support and in terms of technology transfer.

III. Objectives of Assignment

The forest and wildfire prevention, monitoring and firefighting is not possible without introduction of modern early warning system based on the application of well-developed geoformation technologies using remote sensing (RS) and ground-based components. The ground component should be based on operative data obtained from local administration, local communities or rescue team members specifically assigned for the task of forest and wildfire monitoring. The operative integration of remote and ground-based data on the unified data management platform will facilitate prompt analysis to reflect the situation and act as a reliable source for decision-making. The RS component technology

will require corresponding hardware and software components and professional knowledge to interpret the acquired data. The combination of available satellite data with various internet-based RS data sources would provide objective and solid background for further, detailed monitoring of forest and wildfires. Taking into account the fact that forest and wildfires in Armenia usually cover areas mostly from tens to one hundred hectares, RS technology would be highly recommended for the monitoring and prevention of forest and wildfires.

The application of the GIS platform for the integration of remote and ground-based data, as well as the system supporting decision-making would require investments both in hardware and in software. In addition, an early warning system should be established for emergency response information to the local population, tourists and visitors, especially when heat waves are frequent, and the danger of forest and wildfire is high. Based on the knowledge of the spatial extent of the fuels the forest area management bodies can design strategies of fire prevention, detection and suppression, planning of optimal use of firefighting resources, development of the maps including available water resources and roads for organization of the fire suppression activities. Thus, the modelling of forest and wildfire fuel conditions with average climatic data and actual weather parameters and their further processing by means (and data) of modern geoinformation technologies (RS, GIS) would provide solid basis for the early warning, monitoring and response system. The Khosrov State Forest Reserve was chosen to install of early warning and monitoring system including Low Range communication network to ensure the proper communication and coverage in Khosrov.

Khosrov State Forest Reserve, is a nature reserve in Ararat Province of Armenia. This area was designated as a state reserve in September 1958 and covers around 23213.5 ha at elevations from 700 to 2800 m above sea level. The Khosrov reserve protects juniper (*Juniperus polycarpus*) and oak (*Quercus macranthera*) forests, arid associations of semi-desert and phrygana landscapes and other Mediterranean relict plant ecosystems as well as the genetic fund of rare animals and plants adapted to the reserve conditions. Khosrov Forest State Reserve, thanks to its numerous peculiarities, is unique not only in Armenia but also in the whole Caucasus ecoregion. The early warning and monitoring system will solve the problem of lack of communication within Khosrov State Forest Reserve, as well as fire and motion sensors will be installed to facilitate the monitoring of the area and will allow faster and more efficiently detect and prevent violations and fire outbreaks. At the same time, there will be mechanisms to warn the local population and get data from them.

IV. Scope of Work and Deliverables

The development of early warning and monitoring system aimed to forest and wildfire prevention, monitoring and firefighting.

Functional Specifications: The wildfire early warning and monitoring system should have the following technical specifications:

- ✓ Analytical WEB based basic program
- ✓ Internal and external Early warning system and software subsystem ensuring mobile data collection for Android, IOS systems
- ✓ Mobile software subsystem (Android) for registering the conducted work by the forest management staff
- ✓ Integration with the Low Range communication network

The software should be developed in MySQL.

The WEB software should ensure the following functions:

- Carry out control of users, create users, give them roles which will determine the authority of user of the system.
- Have GIS tools for importing map layers, import shape files, make boundaries and create areas.
- See all the violations and case coordinates, photos and other necessary information on the map.
- Create system that ensure the visualization of monitoring areas that forest management staff should visit and monitor, with fixing the routes, time and direction, as well as the exact GPS coordinates/positions of staff that will ensure proper response in case of emergencies. The system should also provide services that allows to send and receive messages to and from the monitoring site. Transmission of messages must be possible through both mobile and Low Range (Lora) network, which must be accessible in the area of SPAN.
- Send messages to the population which will be displayed in the mobile application and receive case information from the population.
- Have an online electronic database and data management of violations and cases, which will allow easy searching and export the required information through an excel filters. The system should have automated reporting process that allows to receive reports by inspected areas, registered cases, as well as calls received from citizens.
- Have integrated external an internal early warning system with visualization module, where heat flow, motion and system integrated with alarms from other sensors will be displayed.
- Create and edit online guide integrated in mobile application for the staff, rescuers, volunteers and population of the communities located in neighboring to the forest areas.
- Establish area-based data management system/roster for the forest management staff, wildfire responders including rescuers, community volunteers, forest management staff etc. with relevant standard operation procedures provided by the Ministry of Emergency Situations (MES) and Ministry of Environment (MoE), guidelines and contact information.

Population alarm and mobile data collection software subsystem should ensure the following functions:

- Visualise an interactive map showing the boundaries of KSFR, case locations and necessary case information.
- The user should be able to detect a case, fix his position, take a photo, write a comment and transfer the data to the main analytical system.
- Receive messages from the main analytics system
- Visualize the guide controlled by the main analytics system and call contact numbers.

Mobile software subsystem for staff should be designed in the way that allows data collection by staff, communication through the application, access to information. subsystem should ensure the following functions:

- Identification and registering of cases: fix the coordinates of the case on the map, make notes about the situation, take photos, write a comment, save and send to the Central Analytical System as well as receive messages from Central Analytical System
- Receive alarms about active cases from the Central Analytical System, see case location (detected sensor), case type and other necessary information
- See the staff position and cases on the interactive map and provide the necessary information about the registered cases.

The overall system should be integrated with the Low Range (LoRa) communication with possibility to be connected with the Internet and provide connection to any point.

The installation of the network should be done according to the following principle:

- 1 base station is installed near the border of the KSFR, which is connected to permanent power supply and Internet connection, automated mini-stations (with sensors) are installed in the KSFR, which provide communication within a radius of about 3 km, at the same time transmitting data recorded by sensors.
- Automated mini stations should be small and powered by a solar battery (small size).
- As a means of communication, the staff should be provided with mobile devices that work with automated mini-stations and do not depend on the mobile network.
- The network should be able to transmit text messages and data from sensors directly to LoRa network devices and offline via a base station.

N	Components	Technical specifications	Quantity
1	Base station Set include: • station, • spare battery, • mounting box, • antenna	• External size not more than 40x30x20 cm • Weight not more than 10kg • Power supply 220V • Location is inside the building	1
2	Automated mini station with sensors (motion, fire) Set include: • Mini station • solar panel • Power supply battery • mounting box • antenna • mounting metal rod	• External size not more than 40x30x20 cm • Weight not more than 10kg • Power supply: solar battery 50 x40 sm. • Location is outdoor, on a 3m high metal rod	7
3	Mobile device with gps Set include: • Mobile mini station • Antenna • Battery	• External size not more than 3x10x7 cm • Weight not more than 250gr	15
4	Software		1

Special requirements

- After final acceptance of the software, the ownership of the Source codes should be transferred and become UNDP and/or Ministry of Environment property and can be changed if necessary. The Source code as well as the database data should not be transferred to the third party and must be deleted from the Supplier's systems and computers. The Supplier shall be prohibited from disclosing confidential and proprietary information that is to be shared between one another in an effort to develop the Software.

- SSL/TLS should be used for the security.
- The website shall be fully compliant with the latest version of the browsers, including Chrome, Microsoft Edge, Mozilla Firefox, and Opera.
- UNDP in partnership with the MoE and Forest Management Agency will conduct regular monitoring activities for up to one year during which the technical implementation and overall success of the early warning and monitoring system will be thoroughly monitored during which the company should provide the necessary assistance for updating the system and based on the identified needs 15% of the technical assignment can be revised on free of charge basis.
- After hand over provide one-year advisory services during the utilization of early warning and monitoring system for the relevant staff of the KSFR.
- The system must operate with such power and radio frequency range that do not require permission of the RA legislation.

Deliverables and payment

100% payment will be provided after the completion of task: Basic Analytical (WEB) program, internal and external EWS including mobile data collection software subsystem (for Android, IOS systems) developed and integrated with LoRa communication network. Final Report developed and Presented to UNDP.

EXPECTED RESULT

- Basic Analytical (WEB) program *developed, installed and functioning*
- Population alarm and mobile data collection software subsystem (for Android, IOS systems) *developed, installed and functioning*
- Mobile software subsystem (Android) of implemented works by the staff *developed, installed and functioning*
- Mini LoRa radio network developed, installed and functioning

V. Required Competencies

Company's qualification requirements:

- ✓ The Proposer should have at least 5 years of experience in development and managing similar platforms/software.
- ✓ The Proposer should have advanced experience in working with government agencies civil society organizations and international organizations.
- ✓ The Proposer should provide the list of successfully completed similar projects within the last 2-3 years.
- ✓ At least 3 years of experience in working with international organizations and donors.

Key personnel qualification:

- ✓ Team leader with experience with not less than 5 years of experience of managing similar ICT related assignments.
- ✓ Two software development specialists with not less than 5 years of experience of development of similar platforms/products.
- ✓ One technical specialist for installation and configuration of Low Range radio-communication systems.

Technical Specifications			
ANNEX 1b			
TECHNICAL SPECIFICATIONS REQUIRED FOR THE SUPPLY, INSTALLATION AND COMMISSIONING OF LOW RANGE SYSTEM AND WILDFIRE MONITORING AND MANAGEMENT EWS SOFTWARE TO BE INSTALLED IN KHOSROV			
#	Description	Q-ty	Basic description and requirements
TECHNICAL SPECIFICATIONS FOR EARLY WARNING AND MONITORING SYSTEM AIMED TO FOREST AND WILDFIRE PREVENTION, MONITORING AND FIREFIGHTING.			
Functional Specifications: The wildfire early warning and monitoring system should have the following technical specifications: ✓ Analytical WEB based basic program ✓ Internal and external Early warning system and software subsystem ensuring mobile data collection for Android, IOS systems ✓ Mobile software subsystem (Android) for registering the conducted work by the forest management staff ✓ Integration with the Low Range radio communication network			
1.	THE WEB SOFTWARE SPECIFICATIONS	1	The WEB software should be developed by the below mentioned codes: ✓ Code for Database – MariaDB/MySQL ✓ Code for Backend – PHP (Laravel Framework) ✓ Code for Frontend – jQuery, Html 5, CSS 3, Bootstrap 4.0, Leaflet JS. The WEB software should ensure the following functions: • Carry out control of users, create users, give them roles which will determine the authority of user of the system. • Have GIS tools for importing map layers, import shape files, make boundaries and create areas. • See all the violations and case coordinates, photos and other necessary information on the map. • Create system that ensure the visualization of monitoring areas that forest management staff should visit and monitor, with fixing the routes, time and direction, as well as the exact GPS coordinates/ positions of staff that will ensure proper response in case of emergencies. The system should also provide services that allows to send and receive messages to and from the monitoring site. Transmission of messages must be possible through both mobile and Low Range (Lora) network, which must be accessible in the area of SPAN. • Send messages to the population which will be displayed in the mobile application and receive case information from the population. • Have an online electronic database and data management of violations and cases, which will allow easy searching and export the required information through an excel filters. The system should have automated reporting process that allows to receive reports by inspected areas, registered cases, as well as calls received from citizens.

			• Have integrated external an internal early warning system with visualization module, where heat flow, motion and system integrated with alarms from other sensors will be displayed. • Create and edit online guide integrated in mobile application for the staff, rescuers, volunteers and population of the communities located in neighboring to the forest areas. • Establish area-based data management system/roster for the forest management staff, wildfire responders including rescuers, community volunteers, forest management staff etc. with relevant standard operation procedures provided by the MES and MoE, guidelines and contact information.
2.	POPULATION ALARM AND MOBILE DATA COLLECTION SOFTWARE	1	Population alarm and mobile data collection software should be developed in: ✓ Android - Java/Kotlin/JS (min version 6.0) ✓ iOS - Swift/Objective C/ JS (min version 12) The subsystem should ensure the following functions: • Visualize an interactive map showing the boundaries of KSFR, case locations and necessary case information. • The user should be able to detect a case, fix his position, take a photo, write a comment and transfer the data to the main analytical system. • Receive messages from the main analytics system • Visualize the guide controlled by the main analytics system and call contact numbers.
3.	MOBILE SOFTWARE SUBSYSTEM FOR STAFF	1	Mobile software subsystem for staff should be designed in the way that allows data collection by staff, communication through the application, access to information. It should be developed using; ✓ Android platform - Java/Kotlin/JS (min version 6.0) Subsystem should ensure the following functions: • Identification and registering of cases: fix the coordinates of the case on the map, make notes about the situation, take photos, write a comment, save and send to the Central Analytical System as well as receive messages from Central Analytical System • Receive alarms about active cases from the Central Analytical System, see case location (detected sensor), case type and other necessary information • See the staff position and cases on the interactive map and provide the necessary information about the registered cases.
SUB-TOTAL FOR SOFTWARE AND INSTALLATION OF RAWs AND AAS			

SPECIFICATIONS FOR LOW RANGE (LoRa) RADIO COMMUNICATION SYSTEM			
#	Description	Q-ty	Basic description and technical specifications
1	BASE STATION WITH INTEGRATED SOFTWARE FOR LOW RANGE RADIO COMMUNICATION SYSTEM	1	Set include: ✓ Station, ✓ Spare battery, ✓ Mounting box, ✓ Antenna ✓ External size not more than 40x30x20 cm ✓ Weight not more than 10kg ✓ Power supply 220V Base station should be installed inside of the building
2	AUTOMATED MINI STATION WITH SENSORS (MOTION, FIRE)	7	Set include: ✓ Mini station ✓ Integrated solar panel ✓ Power supply battery ✓ Mounting box ✓ Antenna ✓ Mounting metal rod ✓ External size not more than 40x30x20 cm ✓ Weight not more than 10kg ✓ Power supply: solar battery 50 x40 sm. ✓ Location is outdoor, on a 3m high metal rod
3	MOBILE DEVICE WITH GPS	15	Set include: ✓ Mobile mini station ✓ Antenna ✓ Battery ✓ External size not more than 3x10x7 cm ✓ Weight not more than 250gr
4	ORGANIZATION OF BASIC TRAINING FOR FOREST	1	After development of the early warning and monitoring system, as well as provision of LoRa system organization of basic training for the relevant staff of the KSFR, both for using and managing the system.

	MANAGEMENT STAFF		
SUB-TOTAL FOR LoRa RADIO COMMUNICATION SYSTEM			
TOTAL FOR EWS AND LoRa RADIO COMMUNICATION SYSTEM			

Additional requirements

- After final acceptance of the software, the ownership of the Source codes should be transferred and become UNDP and/or Ministry of Environment (MOE) property and can be changed if necessary. The Source code as well as the database data should not be transferred to the third party and must be deleted from the Supplier's systems and computers. The Supplier shall be prohibited from disclosing confidential and proprietary information that is to be shared between one another in an effort to develop the Software.
- SSL/TLS should be used for the security.
- The website shall be fully compliant with the latest version of the browsers, including Chrome, Microsoft Edge, Mozilla Firefox, and Opera.
- UNDP in partnership with the MoE and Forest Management Agency will conduct regular monitoring activities for up to one year during which the technical implementation and overall success of the early warning and monitoring system will be thoroughly monitored during which the company should provide the necessary assistance for updating the system and based on the identified needs 15% of the technical assignment can be revised on free of charge basis..
- After hand over provide one-year advisory services during the utilization of early warning and monitoring system for the relevant staff of the KSFR.
- The system must operate with such power and radio frequency range that do not require permission of the RA legislation.

FORM FOR SUBMITTING SERVICE PROVIDER'S PROPOSAL⁷

(This Form must be submitted only using the Service Provider's Official Letterhead/Stationery⁸)

[insert: Location].

[insert: Date]

To: [insert: Name and Address of UNDP focal point]

Dear Sir/Madam:

We, the undersigned, hereby offer to render the following services to UNDP in conformity with the requirements defined in the RFP dated [specify date], and all of its attachments, as well as the provisions of the UNDP General Contract Terms and Conditions:

A. Qualifications of the Service Provider

The Service Provider must describe and explain how and why they are the best entity that can deliver the requirements of UNDP by indicating the following:

- a) *Profile – describing the nature of business, field of expertise, licenses, certifications, accreditations;*
- b) *Business Licenses – Registration Papers, Tax Payment Certification, etc.*
- c) *Latest Audited Financial Statement – income statement and balance sheet to indicate its financial stability, liquidity, credit standing, and market reputation, etc.;*
- d) *Track Record – list of clients for similar services as those required by UNDP, indicating description of contract scope, contract duration, contract value, contact references;*
- e) *Certificates and Accreditation – including Quality Certificates, Patent Registrations, Environmental Sustainability Certificates, licenses, etc.*
- f) *Written Self-Declaration that the company is not in the UN Security Council 1267/1989 List, UN Procurement Division List or Other UN Ineligibility List.*

B. Proposed Methodology for the Completion of Services

The Service Provider must describe how it will address/deliver the demands of the RFP; providing a detailed description of the essential performance characteristics, reporting conditions and quality assurance mechanisms that will be put in place, while demonstrating that the proposed methodology will be appropriate to the local conditions and context of the work.

⁷ This serves as a guide to the Service Provider in preparing the Proposal.

⁸ Official Letterhead/Stationery must indicate contact details – addresses, email, phone and fax numbers – for verification purposes

C. **Qualifications of Key Personnel**

If required by the RFP, the Service Provider must provide :

- a) *Names and qualifications of the key personnel that will perform the services indicating who is Team Leader, who are supporting, etc.;*
- b) *CVs demonstrating qualifications must be submitted if required by the RFP; and*
- c) *Written confirmation from each personnel that they are available for the entire duration of the contract.*

D. **Cost Breakdown per Deliverable***

	Deliverables <i>[list them as referred to in the RFP]</i>	Percentage of Total Price <i>(Weight for payment)</i>	Price <i>(Lump Sum, All Inclusive),</i> currency
1	Completion of task: Basic Analytical (WEB) program, internal and external EWS including mobile data collection software subsystem (for Android, IOS systems) developed and integrated with LoRa communication network. Final Report developed and Presented to UNDP.	100%	
	Total	100%	

**This shall be the basis of the payment tranches*

E. **Cost Breakdown by Cost Component [This is only an Example]:**

Description of Activity	Remuneration per Unit of Time	Total Period of Engagement	No. of Personnel/ No of items	Total Rate
I. Personnel Services				
1. Services from Home Office				
a. Expertise 1				
b. Expertise 2				
2. Services from Field Offices				
a . Expertise 1				
b. Expertise 2				
3. Services from Overseas				
a. Expertise 1				
b. Expertise 2				
II. Out of Pocket Expenses				
1. Travel Costs				
2. Daily Allowance				
3. Communications				

4. Reproduction				
5. Equipment Lease				
6. Others				
III. Other Related Costs (Software and Hardware equipment)	Quantity		Unit Price	Total
WEB SOFTWARE (as per Annex 1b)	1			
POPULATION ALARM AND MOBILE DATA COLLECTION SOFTWARE (as per Annex 1b)	1			
MOBILE SOFTWARE SUBSYSTEM FOR STAFF	1			
BASE STATION WITH INTEGRATED SOFTWARE FOR LOW RANGE RADIO COMMUNICATION SYSTEM	1			
AUTOMATED MINI STATION WITH SENSORS (MOTION, FIRE)	7			
MOBILE DEVICE WITH GPS	15			
ORGANIZATION OF BASIC TRAINING FOR FOREST MANAGEMENT STAFF	1			
GRAND TOTAL				

*[Name and Signature of the Service Provider's
Authorized Person]*

[Designation]

[Date]

Annex 3

(Attached separately)

General Terms and Conditions