



REQUEST FOR PROPOSAL (RFP)

NAME & ADDRESS OF FIRM	DATE: October 16, 2019
	REFERENCE: Scaling-up Multi-Hazard Early Warning System and the Use of Climate Information in Georgia #00098643

Dear Sir / Madam:

We kindly request you to submit your Proposal for **ICT consultancy services for the preparation of technical specifications for the development and implementation of the centralized Multi-hazard Early Warning System of Georgia**

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

Proposals may be submitted on or before **15:00, Wednesday, November 06, 2019** and via email, courier mail or fax to the address below:

**United Nations Development Programme
9, Eristavi Street, Tbilisi, Georgia - UN House 1st floor
Box name: ICT Consultancy Services**

Prep-bid meeting: Pre-bid conference will be conducted:

Time: 15:00 GMT+4;

Date: 23 October 2019;

Venue: Project office – 2, Koka Kldiashvili st. II floor, apt 1, Tbilisi, Georgia 9 Eristavi str, Tbilisi, 0179, Georgia.

If interested bidders cannot attend the pre-bid conference, it is possible to join the meeting via skype. In that case, interested bidder must provide skype address by email to levan.gagua@undp.org (subject: ICT Consultancy) no later than COB October 22, 2019.

The Technical Proposal and the Financial Proposal envelopes MUST BE COMPLETELY SEPARATE and each of them must be submitted sealed individually and clearly marked on the outside as either “TECHNICAL PROPOSAL” or “FINANCIAL PROPOSAL”, as appropriate. Each envelope SHALL clearly indicate the name of the bidder.

The outer envelopes shall:

Bear the name and address of the bidder;

Be addressed to UNDP;

Bear a warning that states “Not to be opened before the time and date for proposal opening”.

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,


Ketí Skhireli
Project Coordinator
10/16/2019

Description of Requirements

Context of the Requirement	Project “Scaling-up Multi-Hazard Early Warning System and the Use of Climate Information in Georgia” - #00098643
Implementing Partner of UNDP	Ministry of Environmental Protection and Agriculture of Georgia (MEPA)
Brief Description of the Required Services	ICT consultancy services for preparation of technical specifications and other related documentation for the first phase of the development of the centralized Multi-hazard Early Warning System of Georgia.
List and Description of Expected Outputs to be Delivered	<ol style="list-style-type: none"> 1. A Project Charter, containing the Work Plan and the Methodology to be applied developed and coordinated with UNDP. 2. Documented business-processes pertinent to the implementation, operation and maintenance of the multi-hazard disaster risk and early warning. This deliverable shall include the results of the inventory and documentation of business processes envisaged to be implemented within the centralized Multi-hazard Early Warning System. The produced result must contain graphical business-process flowcharts (drafted by using a combination of UML – <i>Unified Modeling Language</i> and BPMN – <i>Business Process Model and Notation</i>) and with additional narrative descriptions as required; 3. Documented business-processes pertinent to the implementation, operation and maintenance of the multi-hazard disaster risk and early warning. This deliverable shall include the results of the inventory and documentation of business processes envisaged to be implemented within the centralized Multi-hazard Early Warning System. The produced result must contain graphical business-process flowcharts (drafted by using a combination of UML – <i>Unified Modeling Language</i> and BPMN – <i>Business Process Model and Notation</i>) and with additional narrative descriptions as required; 4. An inventory of roles and responsibilities of the users involved in current processes and envisaged functions to be performed within the future ICT solution. Additionally, an accountability matrix shall be produced specifying the role and responsibility within the process where it is relevant; 5. Results of the business-process analysis shall include the analysis of processes on redundancy, compliance with best practice, and areas to benefit from adoption of digital technologies as part of the ICT solution. The candidate list of business-processes to be implemented within the centralized Multi-hazard Early Warning System with highlighted recommendations on the refinements required to ensure its representation digitization process; 6. Review of the legal framework, including proposals on necessary legal amendments in order to ensure the establishment and sustainability of the Georgia’s centralized Multi-Hazard Early Warning System. 7. The Inventory of the ICT platforms/systems/databases already in existence in Georgia (if any), that are related to the scope of the project,

	<p>namely those that are relevant to the area of hazard disaster risk management and early warning. The inventory shall contain a brief description of the main functionalities of each relevant system (if any), by whom the system is operated, how information/data is processed by the system, standards applied to govern the quality of data and the technologies, including APIs, on which the system is based;</p> <p>8. Report on stakeholder's capacity to implement the and operate the centralized Multi-hazard Early Warning System, which must approach at least the following aspects:</p> <ul style="list-style-type: none"> • Identification of a suitable datacentre. Is any cloud or other hardware infrastructure available at the level of Government of Georgia suitable for hosting of the ICT solution to be implemented; • Description of the existing hardware infrastructure or providing technical requirements for the infrastructure required in order to ensure the hosting of the ICT solution (in satisfying non-functional requirements) to be implemented; • Assessment of internet and intranet connectivity at all locations earmarked for use or integration into the ICT solution; • Assessment of human resource capacity in terms of ICT specialists in order to ensure the adequate implementation, administration and further maintenance of the ICT solution; • Assessment of human resource capacity in terms of ICT specialists to maintain and provide data (if relevant) into the ICT solution, as required and determined by the Technical Specification; • Assessment of hardware needs with user community to use ICT solution e.g. PCs, Laptops, Printers, Scanners, MFU, etc.; <p>9. The concept system design specification for the Centralized Multi-hazard Early Warning System of Georgia. This document will be focused on outlining the vision for the envisaged ICT solution in addition to any architectural principles being adopted. Whilst reflecting on the findings and outputs from previous deliverables and with reference to international best practices for enterprise system design.</p> <p>10. Draft of the Detailed Technical Specification for the Centralized Multi-hazard Early Warning System of Georgia according to the structure provided in the <u>Annex 5 of this RFP: Tentative Structure of the Technical Specification Document</u>.</p> <p>11. Final version of the Detailed Technical Specification for the Centralized Multi-hazard Early Warning System of Georgia according to the structure provided in the <u>Annex 5 of this RFP: Tentative Structure of the Technical Specification Document</u>.</p>
Person to Supervise the Work/Performance of the Service Provider	<i>Direct supervision by Project component team leader and overall supervision by Project Coordinator.</i>
Frequency of Reporting	<i>Per deliverables indicated in ToR;</i>
Progress Reporting Requirements	<i>Required after successful implementation of deliverable indicated in ToR;</i>
Location of work	Tbilisi, Georgia
Expected duration of work	24 weeks

Target start date	End of November 2019																			
Latest completion date	End of May 2020																			
Travels Expected	N/A																			
Special Security Requirements	N/A																			
Facilities to be Provided by UNDP (i.e., must be excluded from Price Proposal)	UNDP is not providing any facilities, office or space for work. Moreover, under this assignment, the Project is not responsible for logistics and any type of organizational arrangements.																			
Implementation Schedule indicating breakdown and timing of activities/sub-activities	<input checked="" type="checkbox"/> Not Required																			
Names and curriculum vitae of individuals who will be involved in completing the services	<input checked="" type="checkbox"/> Required																			
Currency of Proposal	<input checked="" type="checkbox"/> United States Dollars <i>Note: For local contractors, the payment will be made in GEL according to UN exchange rate at the date of payment.</i> https://treasury.un.org/operationalrates/OperationalRates.php#G																			
Value Added Tax on Price Proposal	<input checked="" type="checkbox"/> must be exclusive of VAT and other applicable indirect taxes																			
Validity Period of Proposals	<input checked="" type="checkbox"/> 90 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	<input checked="" type="checkbox"/> Not permitted																			
Payment Terms	a) The payment for services provided will be made into five installments upon acceptance of deliverables by UNDP: <table><tr><th>Outputs</th><th>Percentage</th><th>Timing</th><th>Condition for Payment Release</th></tr><tr><td>Deliverable 1</td><td>15%</td><td>No later than 1st week from the commencement of the contract</td><td rowspan="4">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><tr><td>Deliverables 2,3,4</td><td>20%</td><td>No later than 4th week from the commencement of the contract</td></tr><tr><td>Deliverables 5,6,7,8</td><td>30%</td><td>No later than 8th week from the commencement of the contract</td></tr><tr><td>Deliverable 9</td><td>15%</td><td>No later than 12th week from the commencement of the contract</td></tr></table>			Outputs	Percentage	Timing	Condition for Payment Release	Deliverable 1	15%	No later than 1 st week from the commencement of the contract	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.	Deliverables 2,3,4	20%	No later than 4 th week from the commencement of the contract	Deliverables 5,6,7,8	30%	No later than 8 th week from the commencement of the contract	Deliverable 9	15%	No later than 12 th week from the commencement of the contract
Outputs	Percentage	Timing	Condition for Payment Release																	
Deliverable 1	15%	No later than 1 st week from the commencement of the contract	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.																	
Deliverables 2,3,4	20%	No later than 4 th week from the commencement of the contract																		
Deliverables 5,6,7,8	30%	No later than 8 th week from the commencement of the contract																		
Deliverable 9	15%	No later than 12 th week from the commencement of the contract																		

	Deliverables 10;11	20%	No later than 24 th week from the commencement of the contract	
Person(s) to review/inspect/ approve outputs/completed services and authorize the disbursement of payment	Direct supervision and review of the deliverables by Project component Team Leader and System and Technology International Expert, overall clearance of the deliverables for the disbursement of payments by GCF Project Coordinator.			
Type of Contract to be Signed	<input checked="" type="checkbox"/> Contract for Professional Services or PO			
Criteria for Contract Award	<input checked="" type="checkbox"/> Highest Combined Score (based on the 70% technical offer and 30% price weight distribution) <input checked="" type="checkbox"/> Full acceptance of the UNDP Contract General Terms and Conditions (GTC). This is a mandatory criteria and cannot be deleted regardless of the nature of services required. Non acceptance of the GTC may be grounds for the rejection of the Proposal.			
Criteria for the Assessment of Proposal	Technical Proposal (70%) <input checked="" type="checkbox"/> Expertise of the Firm 35 % <input checked="" type="checkbox"/> Methodology, Its Appropriateness to the Condition and Timeliness of the Implementation Plan 35 % <input checked="" type="checkbox"/> Management Structure and Qualification of Key Personnel 30% Financial Proposal (30%) To be computed as a ratio of the Proposal's offer to the lowest price among the proposals received by UNDP The technical proposal is evaluated on the basis of its responsiveness to the Term of Reference (TOR) and scoring is allocated in accordance with the Annex 7. If the offeror does not meet any of the minimum technical qualification criteria/requirements given in Annex 7, it will be given score zero and will be automatically disqualified and there is no more need for further evaluation of the disqualifying offeror.			
UNDP will award the contract to:	<input checked="" type="checkbox"/> One and only one Service Provider			
Annexes to this RFP	<input checked="" type="checkbox"/> Form for Submission of Proposal (Annex 2) <input checked="" type="checkbox"/> General Terms and Conditions for Services (Annex 3) <input checked="" type="checkbox"/> Detailed TOR (Annex 4) <input checked="" type="checkbox"/> Tentative Structure of the Technical Specification Document (Annex 5) <input checked="" type="checkbox"/> CV Forms (Annex 6) <input checked="" type="checkbox"/> Technical Evaluation Criteria (Annex 7)			
Contact Person for Inquiries (Written inquiries only)	1. <i>Tender related procedures: Levan Gagua, Project Contracting/Procurement Assistant: levan.gagua@undp.ge;</i> 2. <i>Technical assignment of the project: Nino Gvazava, Project component team leader, nino.gvazava@undp.ge</i>			

<p>Other Information/ Pre-Bid Meeting</p>	<p>Prep-bid meeting: Pre-bid conference will be conducted:</p> <p>Time: 15:00 GMT+4; Date: October 23 2019; Venue: Project office – 2, Koka Kldiashvili st. II floor, apt 1, Tbilisi, Georgia 9 Eristavi str, Tbilisi, 0179, Georgia,</p> <p>If interested bidders cannot attend the pre-bid conference, it is possible to join the meeting via skype. In that case, interested bidder must provide skype address by email to levan.gagua@undp.org (subject: ICT Consultancy) no later than COB October 22, 2019.</p> <p>All Bidders are encouraged to attend. Nonattendance, however shall not result in disqualification of an Interested bidder. Minutes of Bidding conference will be disseminated on the procurement website No verbal statement during the conference shall modify terms and conditions of the RFP, unless specifically in the minutes of the bidder's conference or issued/posted as an amendment of RFP.</p>
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FORM FOR SUBMITTING SERVICE PROVIDER'S PROPOSAL¹

(This Form must be submitted only using the Service Provider's Official Letterhead/Stationery²)

[insert: Location].
[insert: Date]

To: UNDP Georgia

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 10/16/2019, 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) Minimum 5 years of experience related to ICT consultancy, with at least one project specifically in analysis and design of software solutions (**Minimum Requirement**);*
- b) At least one successfully executed project (contract) with similar complexity within the last 5 (five) years (**Minimum Requirement**);*
- c) At least 2 (two) reference letters confirming successfully implemented ICT projects. (**Minimum Requirement**);*
- d) The bidder must have a local office in Georgia or at least a consortium partner, which is a registered company in Georgia – Registration paper or tax payment certification (**Minimum Requirement**);*
- e) The experience in the area of GIS is considered as **an asset**.*
- 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

Detailed technical description of the proposed methodology. How the tasks will be performed, what kind of approaches and standards will be used, estimated level of effort and allocated personnel.

¹ This serves as a guide to the Service Provider in preparing the Proposal.

² Official Letterhead/Stationery must indicate contact details – addresses, email, phone and fax numbers – for verification purposes

C. Qualifications of Key Personnel

Service Provider must provide:

1. Names and qualifications of the key personnel that will perform the services indicating who is Team Leader, who are supporting, etc.
2. CVs demonstrating qualifications defined as per ToR must be submitted.
3. Written confirmation from each personnel that they are available for the entire duration of the contract.

Company must propose: Project Manager (PM) ; Lead Business Analyst (LBA) – minimum one expert; Business Analyst (BA) – minimum two experts; System Architect – one expert; Expert in Technological Architectures – one expert; GIS Expert; Legal Expert.

At minimum:

Project Manager (PM) – one expert:

The PM shall be responsible for the coordination of all ICT consultancy services and ensuring the quality of the project deliverables. The proposed Project Manager will be evaluated according to the following criteria:

1	Project Manager Master Degree in areas such as computer sciences, engineering, and telecommunications or other ICT related (minimum requirement) . At least 7 years of overall professional experience in the ICT field (minimum requirement) At least 5 years experience in the management of ICT projects; (minimum requirement)
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Lead Business Analyst (BA) – minimum one expert

The Business Analyst shall be responsible for collecting and analyzing the stakeholders' requirements, relevant business processes, identification and description of the functional requirements, UX/UI requirements and preparation/compilation of the technical specifications for the development and implementation of the Multi-hazard Early Warning System.

The proposed Lead Business Analyst will be evaluated according to the following criteria:

2.	Lead Business Analyst Bachelor's degree in areas such as computer sciences, engineering, and telecommunications or related; (minimum requirement) At least 7 years of experience in the ICT field. (minimum requirement) At least one assignment related to IT Business Analysis and user requirements elicitation, including UX/UI. (minimum requirement) At least one project related to writing technical specifications for the development of ICT Solutions; (minimum requirement)
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Business analyst Analysts. – Minimum two experts

The proposed Business Analyst will be evaluated according to the following criteria:

3. Business Analyst

Bachelor's degree in areas such as computer sciences, engineering, and telecommunications or related; **(minimum requirement)**

At least 3 years of experience in the ICT field. **(minimum requirement)**

At least one project related to IT Business Analysis and user requirements elicitation, including UX/UI. **(minimum requirement)**

System Architect – one expert

The System Architect shall be responsible for analyzing of the data architecture and applications architecture related to the area of Multi-Hazard Disaster Risk management and Early Warning in Georgia and proposing best suitable architectural options on how the system has to developed and deployed.

The proposed System Architect will be evaluated according to the following criteria:

4. System Architect

Bachelor's degree in areas such as computer sciences, engineering, and telecommunications or related **(minimum requirement)**;

At least 7 years of experience overall professional experience in the ICT field **(minimum requirement)**

At least one project related to large-scale architectures: design and integration of the technical infrastructure such as hardware (computers), software (programs), web portals, Internet and intranet connections, firewalls, servers, and ICT security components; **(minimum requirement)**;

Expert in Technological Architectures – one expert

The Expert in technological architectures shall be responsible for identification, analyzing and proposing the potential ICT solution from the technological point of view:

- Identifying the stakeholders' needs in terms of software and hardware needed for implementation of the future Multi-hazard Early Warning System;
- Breaking down the future ICT project into manageable chunks;
- Working out which existing ICT and GIS products are recommended to be used based on cost benefit analysis and research;

5.	Expert in Technological Architectures
	Bachelor's degree in areas such as computer sciences, engineering, and telecommunications or related (minimum requirement);
	At least two projects in in the ICT field (minimum requirement);
	At least one project related to designing, implementation and operation of complex technological platforms; (minimum requirement);

GIS Expert

The GIS Specialist shall work at the intersection of data analysis, software and cartography.

The GIS Specialist must provide significant input to the process of preparation of the technical specification on how future system has to manage a national e-Library/GIS database – knowledge and data to increase awareness and provide the interactive hazard maps for Georgia.

The role of the GIS Specialist will imply also analyzing of the relevant aspects to model and map all relevant climate induced natural hazards for Georgia to provide a single source of definitive hazard mapping of the appropriate technical specification and level of detail for all uses, building upon modern modelling methods and software.

6	GIS Expert
	Bachelor's degree in areas such as computer sciences, engineering, and telecommunications or related (minimum requirement);
	At least one project in the ICT field (minimum requirement);
	At least five projects in application of GIS standards, technologies and software; (minimum requirement)

Legal Expert (LE) – one expert:

The Legal Expert shall carry out a desk review of the existing legislative framework of Georgia and related regulations relevant to the scope of the assignment, providing specialized support to the implementation team from a regulatory perspective. The LE shall identify the internal regulatory framework that requires upgrading in order to implement the Multi-hazard Early Warning System in Georgia.

Following consultations with the stakeholders, the LE shall develop draft regulations or amendments to the existing framework to allow implementation of the future system in Georgia.

7.	Legal Expert
	Degree Bachelor's degree in Law or related fields (minimum requirement).
	At least two assignments related to analysis of the legal framework of Georgia (minimum requirement).

D. **Cost Breakdown per Deliverable***

Instalment	Deliverables	Percentage of Total Price (Weight for payment)	Price (Lump Sum)
1	Deliverable 1	15%	
2	Deliverables 2,3,4	20%	
3	Deliverables 5,6,7,8	30%	
4	Deliverable 9	15%	
5	Deliverables 10;11	20%	
	Total	100%	

*This shall be the basis of the payment tranches

E. **Cost Breakdown by Cost Component:**

1. Personnel Services

No	Tasks	Man-Days(Please indicate number of days required for each expert to be engaged in the specific task)							
		Project Manager*	Lead Business Analyst*	Business Analyst*	Business Analyst*	System Architect*	Expert in Technologies Architectures*	GIS Expert*	Legal Expert*
0	Preparation of the Project Charter and inception project coordination activities								
1	Understanding of Georgia's Operational Environment in terms of Multi-Hazard Disaster Risk Management and Early Warning Systems								
1.1	Inventory of the stakeholders to be involved in the implementation and operation of the centralized Multi-hazard Early Warning System								
1.2	Inventory of the business-processes. The Contractor shall identify and document all relevant business-processes related to the management of multi-hazard disaster risks and early warning. All identified business-processes shall be categorized by function and by stakeholders involvement								
1.3	Inventory of user roles and responsibilities within the processes to be embedded within the System. The Contractor shall identify all existing user roles along with their respective responsibilities. More specifically, this is expected to generate a matrix of responsibilities clarifying the role / function in the process that needs to be developed								

1.4	Optimizing the identified business-processes, if needed. The Contractor shall identify all relevant process issues (e.g. overlapping, contradictions, gaps, bottlenecks, etc.) in compliance with the approach to introduce the ICT Solution and shall make recommendations for optimizing the processes, including adaptation to ICT technologies.								
1.5	Review of the legal framework related to the scope of the project and identification of the legal constraints or other issues limiting the potential establishment and success of the centralized multi-hazard early warning system in Georgia, in addition, to providing recommendations on legal amendments that might be necessary to mitigate these challenges.								
2	Current State of ICT								
2.1	Inventory of the existing relevant ICT platforms/systems (if any) in Georgia that are pertinent to the area of hazard disaster risk management and early warning. Inventory of the information/data that is managed and processed by these systems and standards that are applied. This task is critical, as it is expected to heavily influence the architectural design of the ICT solution. More specifically, whether data can be sourced dynamically through interconnected services that provide secure interfaces to some existing ICT systems/databases or not. Additionally documentation of any supported electronic data exchange mechanisms, including but not limited to channels, security, data formats, standards, etc;								
2.2	Analysis of analysis of the situation related to ICT infrastructure to evaluate and determine the suitability of hosting environments, both in respect to Government of Georgia ICT infrastructure and commercial propositions, including Cloud and non-cloud hosting providers. The analysis must be performed with reference to the non-functional requirements								

	defined for the centralized multi-hazard disaster risk and early warning system;								
2.3	Assessment of the availability of all prerequisites for the implementation of the new ICT Solution such as, ICT hardware at the level of the future users (client infrastructure e.g. PCs, Laptops, Printers, Scanners, etc), internet and intranet connectivity and bandwidth, ICT specialists in public authorities. Identification of gaps from the assessment, which must be addressed through recommended mitigation measures to ensure successful implementation of the new centralized Multi-hazard Early Warning System.								
3	Preparation of the Concept and Potential Architectures of the Georgia's Centralized Multi-hazard Early Warning System								
3.1	Drafting of the Concept of the centralized Multi-hazard Early Warning System as a high-level document describing the conceptual architecture of the future ICT solution, outlining its main functionalities, information/data to be processed, interoperability with other external systems/databases, implementation approach and other relevant aspects.								
4	Preparation of the Technical Specification and Related Tender Documentation for the Georgia's Centralized Multi-Hazard Disaster Risk and Early Warning System								
4.1	Compile all information prepared during the drafting of the deliverables listed above;								
4.2	Documentation of the functional requirements, which must include Use Case diagrams, business-process workflows, activity diagrams and narrative explanations of the technical requirements. It is recommended to use UML and BPMN, as required, for the presentation of the diagrams.								
4.3	Documentation of the non-functional requirements, including: system architecture layers, requirements regarding performance of the system, graphical user interface, UX/UI, accessibility and adaptability of the system, security, backup mechanisms, source-code management, etc.								

4.4	Drafting and compiling the detailed technical specification for the Centralized Multi-hazard Early Warning System of Georgia according to the structure provided in the Annex 1. Tentative Structure of the Technical Specification Document.								
A	Total estimated input (man-days) per each expert**								
B	Daily Consultancy rate (USD) (For each Expert)								
	Sub-TOTAL Personnel Services	A*B	A*B	A*B	A*B	A*B	A*B	A*B	A*B

2. Other related Costs ***

#	Description of Cost	Unit	Number of units	Unit rate	Total
1	Travel costs (if any)				
2	Communication (if any)				
3...	Other as applicable				
	Sub-TOTAL other costs				

GRAND TOTAL (personnel services and other costs)	
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*Please indicate number of days required for each expert to be engaged in the specific task

** Total number of days should be summed for each expert

*** Under Other related costs companies shall include detailed list of all costs associated with implementation of the tasks and deliverables, each cost shall be subjected and clearly calculated. Other related costs can be subject to UNDP review and approval

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

[Designation]

[Date]

General Terms and Conditions for Services

1.0 LEGAL STATUS:

The Contractor shall be considered as having the legal status of an independent contractor vis-à-vis the United Nations Development Programme (UNDP). The Contractor's personnel and sub-contractors shall not be considered in any respect as being the employees or agents of UNDP or the United Nations.

2.0 SOURCE OF INSTRUCTIONS:

The Contractor shall neither seek nor accept instructions from any authority external to UNDP in connection with the performance of its services under this Contract. The Contractor shall refrain from any action that may adversely affect UNDP or the United Nations and shall fulfill its commitments with the fullest regard to the interests of UNDP.

3.0 CONTRACTOR'S RESPONSIBILITY FOR EMPLOYEES:

The Contractor shall be responsible for the professional and technical competence of its employees and will select, for work under this Contract, reliable individuals who will perform effectively in the implementation of this Contract, respect the local customs, and conform to a high standard of moral and ethical conduct.

4.0 ASSIGNMENT:

The Contractor shall not assign, transfer, pledge or make other disposition of this Contract or any part thereof, or any of the Contractor's rights, claims or obligations under this Contract except with the prior written consent of UNDP.

5.0 SUB-CONTRACTING:

In the event the Contractor requires the services of sub-contractors, the Contractor shall obtain the prior written approval and clearance of UNDP for all sub-contractors. The approval of UNDP of a sub-contractor shall not relieve the Contractor of any of its obligations under this Contract. The terms of any sub-contract shall be subject to and conform to the provisions of this Contract.

6.0 OFFICIALS NOT TO BENEFIT:

The Contractor warrants that no official of UNDP or the United Nations has received or will be offered by the Contractor any direct or indirect benefit arising from this Contract or the award thereof. The Contractor agrees that breach of this provision is a breach of an essential term of this Contract.

7.0 INDEMNIFICATION:

The Contractor shall indemnify, hold and save harmless, and defend, at its own expense, UNDP, its officials, agents, servants and employees from and against all suits, claims, demands, and liability of any nature or kind, including their costs and expenses, arising out of acts or omissions of the Contractor, or

the Contractor's employees, officers, agents or sub-contractors, in the performance of this Contract. This provision shall extend, inter alia, to claims and liability in the nature of workmen's compensation, products liability and liability arising out of the use of patented inventions or devices, copyrighted material or other intellectual property by the Contractor, its employees, officers, agents, servants or sub-contractors. The obligations under this Article do not lapse upon termination of this Contract.

8.0 INSURANCE AND LIABILITIES TO THIRD PARTIES:

- 8.1** The Contractor shall provide and thereafter maintain insurance against all risks in respect of its property and any equipment used for the execution of this Contract.
- 8.2** The Contractor shall provide and thereafter maintain all appropriate workmen's compensation insurance, or the equivalent, with respect to its employees to cover claims for personal injury or death in connection with this Contract.
- 8.3** The Contractor shall also provide and thereafter maintain liability insurance in an adequate amount to cover third party claims for death or bodily injury, or loss of or damage to property, arising from or in connection with the provision of services under this Contract or the operation of any vehicles, boats, airplanes or other equipment owned or leased by the Contractor or its agents, servants, employees or sub-contractors performing work or services in connection with this Contract.
- 8.4** Except for the workmen's compensation insurance, the insurance policies under this Article shall:
 - 8.4.1** Name UNDP as additional insured;
 - 8.4.2** Include a waiver of subrogation of the Contractor's rights to the insurance carrier against the UNDP;
 - 8.4.3** Provide that the UNDP shall receive thirty (30) days written notice from the insurers prior to any cancellation or change of coverage.
- 8.5** The Contractor shall, upon request, provide the UNDP with satisfactory evidence of the insurance required under this Article.

9.0 ENCUMBRANCES/LIENS:

The Contractor shall not cause or permit any lien, attachment or other encumbrance by any person to be placed on file or to remain on file in any public office or on file with the UNDP against any monies due or to become due for any work done or materials furnished under this Contract, or by reason of any other claim or demand against the Contractor.

10.0 TITLE TO EQUIPMENT:

Title to any equipment and supplies that may be furnished by UNDP shall rest with UNDP and any such equipment shall be returned to UNDP at the conclusion of this Contract or when no longer needed by the Contractor. Such equipment, when returned to UNDP, shall be in the same condition as when delivered to the Contractor, subject to normal wear and tear. The Contractor shall be liable to compensate UNDP for equipment determined to be damaged or degraded beyond normal wear and tear.

11.0 COPYRIGHT, PATENTS AND OTHER PROPRIETARY RIGHTS:

- 11.1** Except as is otherwise expressly provided in writing in the Contract, the UNDP shall be entitled to all intellectual property and other proprietary rights including, but not limited to, patents, copyrights, and trademarks, with regard to products, processes, inventions, ideas, know-how, or documents and other materials which the Contractor has developed for the UNDP under the

Contract and which bear a direct relation to or are produced or prepared or collected in consequence of, or during the course of, the performance of the Contract, and the Contractor acknowledges and agrees that such products, documents and other materials constitute works made for hire for the UNDP.

- 11.2** To the extent that any such intellectual property or other proprietary rights consist of any intellectual property or other proprietary rights of the Contractor: (i) that pre-existed the performance by the Contractor of its obligations under the Contract, or (ii) that the Contractor may develop or acquire, or may have developed or acquired, independently of the performance of its obligations under the Contract, the UNDP does not and shall not claim any ownership interest thereto, and the Contractor grants to the UNDP a perpetual license to use such intellectual property or other proprietary right solely for the purposes of and in accordance with the requirements of the Contract.
- 11.3** At the request of the UNDP; the Contractor shall take all necessary steps, execute all necessary documents and generally assist in securing such proprietary rights and transferring or licensing them to the UNDP in compliance with the requirements of the applicable law and of the Contract.
- 11.4** Subject to the foregoing provisions, all maps, drawings, photographs, mosaics, plans, reports, estimates, recommendations, documents, and all other data compiled by or received by the Contractor under the Contract shall be the property of the UNDP, shall be made available for use or inspection by the UNDP at reasonable times and in reasonable places, shall be treated as confidential, and shall be delivered only to UNDP authorized officials on completion of work under the Contract.

12.0 USE OF NAME, EMBLEM OR OFFICIAL SEAL OF UNDP OR THE UNITED NATIONS:

The Contractor shall not advertise or otherwise make public the fact that it is a Contractor with UNDP, nor shall the Contractor, in any manner whatsoever use the name, emblem or official seal of UNDP or THE United Nations, or any abbreviation of the name of UNDP or United Nations in connection with its business or otherwise.

13.0 CONFIDENTIAL NATURE OF DOCUMENTS AND INFORMATION:

Information and data that is considered proprietary by either Party and that is delivered or disclosed by one Party ("Discloser") to the other Party ("Recipient") during the course of performance of the Contract, and that is designated as confidential ("Information"), shall be held in confidence by that Party and shall be handled as follows:

- 13.1** The recipient ("Recipient") of such information shall:
 - 13.1.1** use the same care and discretion to avoid disclosure, publication or dissemination of the Discloser's Information as it uses with its own similar information that it does not wish to disclose, publish or disseminate; and,
 - 13.1.2** use the Discloser's Information solely for the purpose for which it was disclosed.
- 13.2** Provided that the Recipient has a written agreement with the following persons or entities requiring them to treat the Information confidential in accordance with the Contract and this Article 13, the Recipient may disclose Information to:
 - 13.2.1** any other party with the Discloser's prior written consent; and,

13.2.2 the Recipient's employees, officials, representatives and agents who have a need to know such Information for purposes of performing obligations under the Contract, and employees officials, representatives and agents of any legal entity that it controls controls it, or with which it is under common control, who have a need to know such Information for purposes of performing obligations under the Contract, provided that, for these purposes a controlled legal entity means:

13.2.2.1 a corporate entity in which the Party owns or otherwise controls, whether directly or indirectly, over fifty percent (50%) of voting shares thereof; or,

13.2.2.2 any entity over which the Party exercises effective managerial control; or,

13.2.2.3 for the UNDP, an affiliated Fund such as UNCDF, UNIFEM and UNV.

13.3 The Contractor may disclose Information to the extent required by law, provided that, subject to and without any waiver of the privileges and immunities of the United Nations, the Contractor will give the UNDP sufficient prior notice of a request for the disclosure of Information in order to allow the UNDP to have a reasonable opportunity to take protective measures or such other action as may be appropriate before any such disclosure is made.

13.4 The UNDP may disclose Information to the extent as required pursuant to the Charter of the UN, resolutions or regulations of the General Assembly, or rules promulgated by the Secretary-General.

13.5 The Recipient shall not be precluded from disclosing Information that is obtained by the Recipient from a third party without restriction, is disclosed by the Discloser to a third party without any obligation of confidentiality, is previously known by the Recipient, or at any time is developed by the Recipient completely independently of any disclosures hereunder.

13.6 These obligations and restrictions of confidentiality shall be effective during the term of the Contract, including any extension thereof, and, unless otherwise provided in the Contract, shall remain effective following any termination of the Contract.

14.0 FORCE MAJEURE; OTHER CHANGES IN CONDITIONS

14.1 In the event of and as soon as possible after the occurrence of any cause constituting force majeure, the Contractor shall give notice and full particulars in writing to the UNDP, of such occurrence or change if the Contractor is thereby rendered unable, wholly or in part, to perform its obligations and meet its responsibilities under this Contract. The Contractor shall also notify the UNDP of any other changes in conditions or the occurrence of any event that interferes or threatens to interfere with its performance of this Contract. On receipt of the notice required under this Article, the UNDP shall take such action as, in its sole discretion; it considers to be appropriate or necessary in the circumstances, including the granting to the Contractor of a reasonable extension of time in which to perform its obligations under this Contract.

14.2 If the Contractor is rendered permanently unable, wholly, or in part, by reason of force majeure to perform its obligations and meet its responsibilities under this Contract, the UNDP shall have the right to suspend or terminate this Contract on the same terms and conditions as are provided for in Article 15, "Termination", except that the period of notice shall be seven (7) days instead of thirty (30) days.

14.3 Force majeure as used in this Article means acts of God, war (whether declared or not), invasion, revolution, insurrection, or other acts of a similar nature or force.

- 14.4** The Contractor acknowledges and agrees that, with respect to any obligations under the Contract that the Contractor must perform in or for any areas in which the UNDP is engaged in, preparing to engage in, or disengaging from any peacekeeping, humanitarian or similar operations, any delays or failure to perform such obligations arising from or relating to harsh conditions within such areas or to any incidents of civil unrest occurring in such areas shall not, in and of itself, constitute force majeure under the Contract..

15.0 TERMINATION

- 15.1** Either party may terminate this Contract for cause, in whole or in part, upon thirty (30) days notice, in writing, to the other party. The initiation of arbitral proceedings in accordance with Article 16.2 ("Arbitration"), below, shall not be deemed a termination of this Contract.
- 15.2** UNDP reserves the right to terminate without cause this Contract at any time upon 15 days prior written notice to the Contractor, in which case UNDP shall reimburse the Contractor for all reasonable costs incurred by the Contractor prior to receipt of the notice of termination.
- 15.3** In the event of any termination by UNDP under this Article, no payment shall be due from UNDP to the Contractor except for work and services satisfactorily performed in conformity with the express terms of this Contract.
- 15.4** Should the Contractor be adjudged bankrupt, or be liquidated or become insolvent, or should the Contractor make an assignment for the benefit of its creditors, or should a Receiver be appointed on account of the insolvency of the Contractor, the UNDP may, without prejudice to any other right or remedy it may have under the terms of these conditions, terminate this Contract forthwith. The Contractor shall immediately inform the UNDP of the occurrence of any of the above events.

16.0 SETTLEMENT OF DISPUTES

- 16.1 Amicable Settlement:** The Parties shall use their best efforts to settle amicably any dispute, controversy or claim arising out of this Contract or the breach, termination or invalidity thereof. Where the parties wish to seek such an amicable settlement through conciliation, the conciliation shall take place in accordance with the UNCITRAL Conciliation Rules then obtaining, or according to such other procedure as may be agreed between the parties.
- 16.2 Arbitration:** Any dispute, controversy, or claim between the Parties arising out of the Contract or the breach, termination, or invalidity thereof, unless settled amicably under Article 16.1, above, within sixty (60) days after receipt by one Party of the other Party's written request for such amicable settlement, shall be referred by either Party to arbitration in accordance with the UNCITRAL Arbitration Rules then obtaining. The decisions of the arbitral tribunal shall be based on general principles of international commercial law. For all evidentiary questions, the arbitral tribunal shall be guided by the Supplementary Rules Governing the Presentation and Reception of Evidence in International Commercial Arbitration of the International Bar Association, 28 May 1983 edition. The arbitral tribunal shall be empowered to order the return or destruction of goods or any property, whether tangible or intangible, or of any confidential information provided under the Contract, order the termination of the Contract, or order that any other protective measures be taken with respect to the goods, services or any other property, whether tangible or intangible, or of any confidential information provided under the Contract, as appropriate, all in accordance with the authority of the arbitral tribunal pursuant to Article 26 ("Interim Measures of Protection") and Article 32 ("Form and Effect of the Award") of the UNCITRAL Arbitration Rules. The arbitral tribunal shall have no authority to award punitive damages. In addition, unless otherwise expressly provided in the Contract, the arbitral tribunal

shall have no authority to award interest in excess of the London Inter-Bank Offered Rate ("LIBOR") then prevailing, and any such interest shall be simple interest only. The Parties shall be bound by any arbitration award rendered as a result of such arbitration as the final adjudication of any such dispute, controversy, or claim.

17.0 PRIVILEGES AND IMMUNITIES:

Nothing in or relating to this Contract shall be deemed a waiver, express or implied, of any of the privileges and immunities of the United Nations, including its subsidiary organs.

18.0 TAX EXEMPTION

18.1 Section 7 of the Convention on the Privileges and Immunities of the United Nations provides, inter-alia that the United Nations, including its subsidiary organs, is exempt from all direct taxes, except charges for public utility services, and is exempt from customs duties and charges of a similar nature in respect of articles imported or exported for its official use. In the event any governmental authority refuses to recognize the United Nations exemption from such taxes, duties or charges, the Contractor shall immediately consult with the UNDP to determine a mutually acceptable procedure.

18.2 Accordingly, the Contractor authorizes UNDP to deduct from the Contractor's invoice any amount representing such taxes, duties or charges, unless the Contractor has consulted with the UNDP before the payment thereof and the UNDP has, in each instance, specifically authorized the Contractor to pay such taxes, duties or charges under protest. In that event, the Contractor shall provide the UNDP with written evidence that payment of such taxes, duties or charges has been made and appropriately authorized.

19.0 CHILD LABOUR

19.1 The Contractor represents and warrants that neither it, nor any of its suppliers is engaged in any practice inconsistent with the rights set forth in the Convention on the Rights of the Child, including Article 32 thereof, which, inter alia, requires that a child shall be protected from performing any work that is likely to be hazardous or to interfere with the child's education, or to be harmful to the child's health or physical mental, spiritual, moral or social development.

19.2 Any breach of this representation and warranty shall entitle UNDP to terminate this Contract immediately upon notice to the Contractor, at no cost to UNDP.

20.0 MINES:

20.1 The Contractor represents and warrants that neither it nor any of its suppliers is actively and directly engaged in patent activities, development, assembly, production, trade or manufacture of mines or in such activities in respect of components primarily utilized in the manufacture of Mines. The term "Mines" means those devices defined in Article 2, Paragraphs 1, 4 and 5 of Protocol II annexed to the Convention on Prohibitions and Restrictions on the Use of Certain Conventional Weapons Which May Be Deemed to Be Excessively Injurious or to Have Indiscriminate Effects of 1980.

20.2 Any breach of this representation and warranty shall entitle UNDP to terminate this Contract immediately upon notice to the Contractor, without any liability for termination charges or any other liability of any kind of UNDP.

21.0 OBSERVANCE OF THE LAW:

The Contractor shall comply with all laws, ordinances, rules, and regulations bearing upon the performance of its obligations under the terms of this Contract.

22.0 SEXUAL EXPLOITATION:

22.1 The Contractor shall take all appropriate measures to prevent sexual exploitation or abuse of anyone by it or by any of its employees or any other persons who may be engaged by the Contractor to perform any services under the Contract. For these purposes, sexual activity with any person less than eighteen years of age, regardless of any laws relating to consent, shall constitute the sexual exploitation and abuse of such person. In addition, the Contractor shall refrain from, and shall take all appropriate measures to prohibit its employees or other persons engaged by it from, exchanging any money, goods, services, offers of employment or other things of value, for sexual favors or activities, or from engaging in any sexual activities that are exploitive or degrading to any person. The Contractor acknowledges and agrees that the provisions hereof constitute an essential term of the Contract and that any breach of this representation and warranty shall entitle UNDP to terminate the Contract immediately upon notice to the Contractor, without any liability for termination charges or any other liability of any kind.

22.2 The UNDP shall not apply the foregoing standard relating to age in any case in which the Contractor's personnel or any other person who may be engaged by the Contractor to perform any services under the Contract is married to the person less than the age of eighteen years with whom sexual activity has occurred and in which such marriage is recognized as valid under the laws of the country of citizenship of such Contractor's personnel or such other person who may be engaged by the Contractor to perform any services under the Contract.

23.0 AUTHORITY TO MODIFY:

Pursuant to the Financial Regulations and Rules of UNDP, only the UNDP Authorized Official possesses the authority to agree on behalf of UNDP to any modification of or change in this Contract, to a waiver of any of its provisions or to any additional contractual relationship of any kind with the Contractor. Accordingly, no modification or change in this Contract shall be valid and enforceable against UNDP unless provided by an amendment to this Contract signed by the Contractor and jointly by the UNDP Authorized Official.

Terms of Reference (ToR)

ICT consultancy services for the preparation of technical specifications for the development and implementation of the centralized Multi-hazard Early Warning System of Georgia

PROJECT TITLE

ICT consultancy services for preparation of technical specifications and other related documentation for the first phase of the development and implementation services in order to establish the centralized Multi-hazard Early Warning System of Georgia.

PROJECT DESCRIPTION

This project relates to the provision of ICT consultancy services in order to identify the operational environment for the proposed system; describe the current ICT situation and ICT needs; propose legal amendments if necessary in order to enable the establishment of the future system; proof of concept implementation of the system; and technical and tender related documentation for the design, development and implementation of the multi-hazard early warning system of Georgia.

PROJECT BACKGROUND

Georgia is exposed to various climate-induced hazards including floods and flash floods, climate-induced geological hazards (including landslides, mudflow, debris flows), droughts, soil erosion, severe winds, hailstorms and avalanches, predominately due to the diverse and complex terrain of the Caucasus mountains, its significant influence and the influence of the Black Sea and Caspian Sea on the climate and weather of the region, Georgia is exposed to various climate-induced hazards including floods and flash floods, climate-induced geological hazards (including landslides, mudflow, debris flows), droughts, soil erosion, severe winds, hailstorms and avalanches. Furthermore, according to Georgia's the 2nd and the 3rd National Communications, the frequency, intensity and geographical spread of extreme hydro meteorological hazards will increase under climate change and may result in significant impacts on key sectors including agriculture, critical infrastructure (transportation networks, buildings, roads, water supply, energy installations), natural resources and eco-systems, glaciers and forests.

To address the existing development challenges, UNDP Georgia designed a program aimed at reducing exposure of Georgia's communities, livelihoods and infrastructure to climate-induced natural hazards through a well-functioning nation-wide multi-hazard early warning system and risk-informed local action. The project will achieve transformative change in disaster risk reduction and risk management in Georgia through provision of critical climate risk information that would enable the Government of Georgia to implement number of nation-wide transformative policies and actions for reducing exposure and vulnerability of the population to climate-induced hazards. To this end, the project will rehabilitate the national hydrometric network to systematically collect data on climate-induced hazards. The project will undertake relevant technical studies to model and map all relevant climate induced natural hazards for Georgia to provide a single source of definitive hazard mapping of the appropriate technical specification and level of detail for all uses, building upon modern modelling methods and software. The project will address the lack of gender-sensitive socio-economic data and relevant capacities for risk, damages, losses, exposure and vulnerability assessments by developing and harmonising methodologies and technologies for the systematic collection of socioeconomic information required to assess climate induced hazard damages, losses, exposure and vulnerability. The project will also support the development of platforms for the

coordination and dissemination of climate-risk information across all sectors through the development of a centralised multi-hazard disaster risk information system. This will enable the systematic use of climate-risk information in decision making and importantly, in the management and reduction of climate-induced risks across all sectors.

The centralized multi-hazard disaster risk information system will consist of a national e-Library, databases (including a GIS database), information systems and web-based knowledge portal to increase awareness, provide interactive hazard mapping integration with social media channels and potential developed of a mobile application to maximise community engagement and allow for more efficient two-way flow of information. It will be an integral part of the National Spatial Data Infrastructure (NSDI) being developed for Georgia and provide the information access and sharing platform for geospatial information on hazards for use by all sectors.

The system will represent a major shift in how government departments currently work and will need to be supported by the introduction of appropriate data sharing protocols and importantly by extensive training and capacity building to ensure high uptake and sustainability.

SCOPE OF SERVICES

The main objective of ICT consultancy services consists of obtaining objective, detailed and qualified information regarding the current status of ICT within the public authorities of Georgia that are foreseen to be involved in the implementation and operation of the centralized Multi-hazard Early Warning System, as well as to produce the Technical Specification and other tender related documentation for the development and implementation of the centralized Multi-hazard Early Warning System of Georgia.

The objectives of the consultancy services must be achieved through:

- Identify and describe functional requirements (System's functionalities) for the future ICT solution of the centralized Multi-hazard Early Warning System of Georgia, through interviews with the stakeholders and workshop activities, whilst referring to international best practices in the area of multi-hazard disaster risk management and early warning systems. The functional description must include at least the general decomposition of functionalities, descriptions of the user roles, use cases and business processes;
- Identify and describe non-functional requirements for the future ICT solution of the centralized Multi-hazard Early Warning System of Georgia;
- Generation of comprehensive, detailed and accurate documentation of relevant ICT for public authorities that are envisaged to be involved in the implementation and operation of the centralized Multi-hazard Early Warning System of Georgia;
- Assessment of current technical infrastructure, existing platforms/systems, data specifications, metadata, other previous initiatives (if any) related to Early Warning Systems in Georgia and standards applied in order to establish the current situation. In addition, draft technical architecture options to facilitate the concept of a centralized and integrated Multi-hazard Early Warning System in Georgia;

- Review the institutional capacity and other relevant aspects in terms of HR, financial, equipment and regulatory gaps related to stakeholders' ability to implement and use a centralized Multi-hazard Early Warning System of Georgia;
- Prepare the Technical Specification for the procurement of the ICT solution or procurement of the development services for the implementation of the centralized Multi-hazard Early Warning System in Georgia. The tentative structure of the Technical Specification document is provided in Annex 5. Tentative Structure of the Technical Specification Document.
- Provide the list of recommendations for ensuring the removal of the identified capacity and regulatory gaps (in terms of HR, budget, equipment, trainings, etc) in order to facilitate the implementation of the centralized Multi-hazard Early Warning System in Georgia from all points of view. The recommendations should cover relevant areas such as existing processes, involved people, and technology;
- Prepare additional documentation necessary to carry out the activities related to the procurement and implementation of the aforementioned ICT solution such as qualification criteria for bidders, evaluation criteria for the bids, System's post implementation maintenance and support services.

The main tasks to be performed in order to achieve the objectives are established and described under expected outputs sections. Additionally, the ITC consultancy service provider is encouraged to include additional tasks, where applicable, in support of achieving the objectives of the assignment.

EXPECTED OUTPUTS AND TARGET COMPLETION

Understanding of Georgia's Operational Environment in terms of Multi-Hazard Disaster Risk Management and Early Warning Systems

Specific Objectives

The activities related to the multi-hazard risk management and notification of population in order to undertake necessary actions, consist of a series of workflows based on operational processes of several stakeholders such as responsible Georgian public authorities. Identifying and documenting of these aspects will generate benefit and shortening the period of time required for the development and deployment of the Centralized Multi-hazard Early Warning System.

Currently, there is no inventory and analysis of the stakeholders and their workflows, including optimization of their implementation or adaptation based on ICT solutions.

Understanding the stakeholders' operational environment aims at understanding the legal and institutional framework for operational processes of the entities involved in the multi-hazard disaster risk management activities. Moreover, by identifying and making the inventory of all roles and responsibilities, existing processes, tracking flows that are redundant or not complying in terms of operational optimization through ICT solutions.

Tasks

The assignment requires at least the following tasks to be performed by the Contractor:

- Inventory of the stakeholders to be involved in the implementation and operation of the centralized Multi-hazard Early Warning System;
- Inventory of the business-processes. The Contractor shall identify and document all relevant business-processes related to the management of multi-hazard disaster risks and early warning. All identified business-processes shall be categorised by function and by stakeholders involvement;
- Inventory of user roles and responsibilities within the processes to be embedded within the System. The Contractor shall identify all existing user roles along with their respective responsibilities. More specifically, this is expected to generate a matrix of responsibilities clarifying the role / function in the process that needs to be developed;
- Optimizing the identified business-processes, if needed. The Contractor shall identify all relevant process issues (e.g. overlapping, contradictions, gaps, bottlenecks, etc.) in compliance with the approach to introduce the ICT Solution and shall make recommendations for optimizing the processes, including adaptation to ICT technologies.
- Review of the legal framework related to the scope of the project and identification of the legal constraints or other issues limiting the potential establishment and success of the centralized multi-hazard early warning system in Georgia, in addition, to providing recommendations on legal amendments that might be necessary to mitigate these challenges.

Deliverables

As result of the tasks performed according to the section above, the Contractor shall produce the following deliverables:

- 1.1.1. A Project Charter, containing the Work Plan and the Methodology to be applied developed and coordinated with UNDP
- 1.1.2. The matrix of stakeholders, listing each stakeholder and his involvement in the future ICT solution implementation and/or operation;
- 1.1.3. Documented business-processes pertinent to the implementation, operation and maintenance of the multi-hazard disaster risk and early warning. This deliverable shall include the results of the inventory and documentation of business processes envisaged to be implemented within the centralized Multi-hazard Early Warning System. The produced result must contain graphical business-process flowcharts (drafted by using a combination of UML – *Unified Modeling Language* and BPMN – *Business Process Model and Notation*) and with additional narrative descriptions as required;
- 1.1.4. An inventory of roles and responsibilities of the users involved in current processes and envisaged functions to be performed within the future ICT solution. Additionally, an accountability matrix shall be produced specifying the role and responsibility within the process where it is relevant;

- 1.1.5. Results of the business-process analysis shall include the analysis of processes on redundancy, compliance with best practice, and areas to benefit from adoption of digital technologies as part of the ICT solution.. The Contractor shall provide a candidate list of business-processes to be implemented within the centralized Multi-hazard Early Warning System with highlighted recommendations on the refinements required to ensure its representation digitization process;
- 1.1.6. Review of the legal framework, including proposals on necessary legal amendments in order to ensure the establishment and sustainability of the Georgia's centralized Multi-Hazard Early Warning System.

Current State of ICT

Specific Objectives

The current status of ICT within the stakeholders refers to technologies implemented and used, processes and practices related to the management and use of ICT in Georgia's sector for hazard disaster risk management and early warning. Moreover, the organizational structures, roles, functions and people directly involved in the ICT management and its use. All these factors need to be considered in the architectural design of the ICT solution, and alignment shall be sought to help achieve the following objectives of the project.

Tasks

The assignment requires at least the following tasks to be performed by the Contractor:

- Inventory of the existing relevant ICT platforms/systems (if any) in Georgia that are pertinent to the area of hazard disaster risk management and early warning. Inventory of the information/data that is managed and processed by these systems and standards that are applied. This task is critical, as it is expected to heavily influence the architectural design of the ICT solution. More specifically, whether data can be sourced dynamically through interconnected services that provide secure interfaces to some existing ICT systems/databases or not. Additionally documentation of any supported electronic data exchange mechanisms, including but not limited to channels, security, data formats, standards, etc;
- Analysis of analysis of the situation related to ICT infrastructure to evaluate and determine the suitability of hosting environments, both in respect to Government of Georgia ICT infrastructure and commercial propositions, including Cloud and non-cloud hosting providers. The analysis must be performed with reference to the non-functional requirements defined for the centralized multi-hazard disaster risk and early warning system;
- Assessment of the availability of all prerequisites for the implementation of the new ICT Solution such as, ICT hardware at the level of the future users (client infrastructure e.g. PCs, Laptops, Printers, Scanners, etc), internet and intranet connectivity and bandwidth, ICT specialists in public authorities. Identification of gaps from the assessment, which must be addressed through recommended mitigation measures to ensure successful implementation of the new centralized Multi-hazard Early Warning System.

Deliverables

As result of the tasks performed according to the section above, the Contractor shall produce the following deliverables:

- 1.1.7. The Inventory of the ICT platforms/systems/databases already in existence in Georgia (if any), that are related to the scope of the project, namely those that are relevant to the area of hazard disaster risk management and early warning. The inventory shall contain a brief description of the main functionalities of each relevant system (if any), by whom the system is operated, how information/data is processed by the system, standards applied to govern the quality of data and the technologies, including APIs, on which the system is based;
- 1.1.8. Report on stakeholder's capacity to implement the and operate the centralized Multi-hazard Early Warning System, which must approach at least the following aspects:
 - Identification of a suitable datacenter. Is any cloud or other hardware infrastructure available at the level of Government of Georgia suitable for hosting of the ICT solution to be implemented;
 - Description of the existing hardware infrastructure or providing technical requirements for the infrastructure required in order to ensure the hosting of the ICT solution (in satisfying non-functional requirements) to be implemented;
 - Assessment of internet and intranet connectivity at all locations earmarked for use or integration into the ICT solution;
 - Assessment of human resource capacity in terms of ICT specialists in order to ensure the adequate implementation, administration and further maintenance of the ICT solution;
 - Assessment of human resource capacity in terms of ICT specialists to maintain and provide data (if relevant) into the ICT solution, as required and determined by the Technical Specification;
 - Assessment of hardware needs with user community to use ICT solution e.g. PCs, Laptops, Printers, Scanners, MFU, etc.;
 - Identification of any other ICT limitations or constraints that pose a risk to the successfully implementation of the ICT solution, accompanied by recommended mitigation measures.

The Concept and Potential Architectures of the Georgia's Centralized Multi-hazard Early Warning System

Specific Objectives

The concept of the Centralized Multi-hazard Early Warning System is twofold, firstly to articulate the proposed vision for the ICT solution and secondly to help identify at an early stage any technical, legislative and institutional challenges that might hinder its implementation. As a product of the concept design and with additional reference to the collation, analysis and documentation of requirements (commonly referred to as requirements engineering) a detailed technical specification of the ICT Solution will be developed.

Tasks

The assignment requires at least the following tasks to be performed by the Contractor:

- Drafting of the Concept of the centralized Multi-hazard Early Warning System as a high-level document describing the conceptual architecture of the future ICT solution, outlining its main functionalities, information/data to be processed, interoperability with other external systems/databases, implementation approach and other relevant aspects.

Deliverables

As result of the tasks performed according to the section above, the Contractor shall produce the following deliverables:

- 1.1.9. A concept system design specification for the Centralized Multi-hazard Early Warning System of Georgia. This document will be focused on outlining the vision for the envisaged ICT solution in addition to any architectural principles being adopted. Whilst reflecting on the findings and outputs from previous deliverables and with reference to international best practices for enterprise system design. The Concept must approach the following aspects:
 - The Scope and objectives of the ICT Solution to be implemented;
 - The key Stakeholders and their responsibilities;
 - Implementation approach – how the entire project is foreseen to be implemented. Breakdown by major project's components and stages;
 - Assumptions made in designing the conceptual architecture;
 - Risks associated with the implementation of the system and possible mitigation measures;
 - Conceptual architecture of the System;
 - Decomposition of functionalities; Breakdown the System into logical modules from the functional point of view and describing main functionalities of each module;
 - Interoperability with other external systems/databases. The contractor shall outline the IT systems/databases that have to be interconnected with the proposed IT solution. For each listed external system/database the Contractor shall provide a brief explanation on what information is needed to be exchanged and possible mechanisms, standards and protocols (e.g. web-services, XML, SOAP, HTTPS, etc).
 - IT architecture. The Contractor shall outline key components related to the future technology platform, to align the technological architecture to the applications conceptual architecture, including: server rooms, server equipment, data storage devices, operating environments, DBMS, IT support and maintenance services, networking (LAN & WAN), external connections, major network nodes, etc. The Contractor shall outline the dependency relationships between all components of the technology platform.

- Security aspects governing authentication of services and users, encryption of data in transfer and storage, physical security protocols for access to data center;
- Disaster Recovery recommendations and considerations.

Technical Specification and Related Tender Documentation for the Georgia's Centralized Multi-Hazard Disaster Risk and Early Warning System

Specific Objectives

The objective of this component is to produce the detailed technical specification of the centralized Multi-hazard Early Warning System of Georgia and provide input to the process of preparation of the tender related documentation.

Tasks

The assignment requires at least the following tasks to be performed by the Contractor:

- Compile all information prepared during the drafting of the deliverables listed above;
- Documentation of the functional requirements, which must include Use Case diagrams, business-process workflows, activity diagrams and narrative explanations of the technical requirements. It is recommended to use UML and BPMN, as required, for the presentation of the diagrams.
- Documentation of the non-functional requirements, including: system architecture layers, requirements regarding performance of the system, graphical user interface, UX/UI, accessibility and adaptability of the system, security, backup mechanisms, source-code management, etc.
- Drafting and compiling the detailed technical specification for the Centralized Multi-hazard Early Warning System of Georgia according to the structure provided in the Annex 5. Tentative Structure of the Technical Specification Document.

Deliverables

- 1.1.10. **Draft of the Detailed Technical Specification** for the Centralized Multi-hazard Early Warning System of Georgia according to the structure provided in the Annex 5. Tentative Structure of the Technical Specification Document.
- 1.1.11. **Final version of the Detailed Technical Specification for the Centralized Multi-hazard Early Warning System of Georgia according to the structure provided in the**Annex 5. Tentative Structure of the Technical Specification Document.

For an unambiguous and effective understanding of the technical specifications' content and relevant description of the IT solution, the Contractor shall prepare and include graphical diagrams. The technical specifications shall include mandatorily the following UML diagrams:

Use cases diagrams – to describe possible actions (use cases) that the System should perform in collaboration with one or more users/actors or other systems.

Activity and BPMN Diagrams – to describe the business-processes flowcharts.

Sequence Diagrams – to describe the interaction between System's objects in a sequential order.

State-Transition Diagrams – to describe all the states that a System's object can have, the events under which this object changes its state (*the transition*), the conditions that must be fulfilled in order the transition to occur and the activities which could be undertaken during the lifecycle of the object (action).

Deployment Diagrams – to describe the execution architecture of the System, including nodes such as hardware, devices or software execution environments, and the middleware connecting all of them.

Component Diagrams – to describe the organization and linkages of the physical components in the System. This diagram is also used to describe the information objects of the IT System, as well as combined with the elements of the operation diagram.

DELIVERABLES

The compiled list of the deliverables is presented in the table below:

#	Deliverable	Tentative deadline (weeks)
D.1	A Project Charter, containing the Work Plan and the Methodology to be applied developed and coordinated with UNDP.	W1
Understanding of the Georgia's Operational Environment in terms of Multi-Hazard Disaster Risk Management and Early Warning Systems		
D.2	The matrix of stakeholders, listing each stakeholder and his involvement in the future ICT solution implementation and/or operation;	W2
D.3	Documented business-processes pertinent to the implementation, operation and maintenance of the multi-hazard disaster risk and early warning. This deliverable shall include the results of the inventory and documentation of business processes envisaged to be implemented within the centralized Multi-hazard Early Warning System. The produced result must contain graphical business-process flowcharts (drafted by using a combination of UML – <i>Unified Modeling Language</i> and BPMN – <i>Business Process Model and Notation</i>) and with additional narrative descriptions as required;	W4
D.4	An inventory of roles and responsibilities of the users involved in current processes and envisaged functions to be performed within the future ICT solution. Additionally, an accountability matrix shall be produced specifying the role and responsibility within the process where it is relevant;	W4
D.5	Results of the business-process analysis shall include the analysis of processes on redundancy, compliance with best practice, and areas to benefit from adoption of digital technologies as part of the ICT solution. The candidate list of business-processes to be implemented within the centralized Multi-hazard Early Warning System with highlighted recommendations on the refinements required to ensure its representation digitization process;	W6
D.6	Review of the legal framework, including proposals on necessary legal amendments in order to ensure the establishment and sustainability of the Georgia's centralized Multi-Hazard Early Warning System.	W7
Current state of ICT		
D.7	The Inventory of the ICT platforms/systems/databases already in existence in Georgia (if any), that are related to the scope of the project, namely those that are relevant to the area of hazard disaster risk management and early warning. The inventory shall contain a brief description of the main functionalities of each relevant system (if	W8

#	Deliverable	Tentative deadline (weeks)
	any), by whom the system is operated, how information/data is processed by the system, standards applied to govern the quality of data and the technologies, including APIs, on which the system is based;	
D.8	<p>Report on stakeholder's capacity to implement the and operate the centralized Multi-hazard Early Warning System, which must approach at least the following aspects:</p> <ul style="list-style-type: none"> • Identification of a suitable datacentre. Is any cloud or other hardware infrastructure available at the level of Government of Georgia suitable for hosting of the ICT solution to be implemented; • Description of the existing hardware infrastructure or providing technical requirements for the infrastructure required in order to ensure the hosting of the ICT solution (in satisfying non-functional requirements) to be implemented; • Assessment of internet and intranet connectivity at all locations earmarked for use or integration into the ICT solution; • Assessment of human resource capacity in terms of ICT specialists in order to ensure the adequate implementation, administration and further maintenance of the ICT solution; • Assessment of human resource capacity in terms of ICT specialists to maintain and provide data (if relevant) into the ICT solution, as required and determined by the Technical Specification; • Assessment of hardware needs with user community to use ICT solution e.g. PCs, Laptops, Printers, Scanners, MFU, etc.; • Identification of any other ICT limitations or constraints that pose a risk to the successfully implementation of the ICT solution, accompanied by recommended mitigation measures. 	W8
The Concept and Potential Architectures of the Georgia's Centralized Multi-hazard Early Warning System		
D.9	The concept system design specification for the Centralized Multi-hazard Early Warning System of Georgia. This document will be focused on outlining the vision for the envisaged ICT solution in addition to any architectural principles being adopted. Whilst reflecting on the findings and outputs from previous deliverables and with reference to international best practices for enterprise system design.	W12

#	Deliverable	Tentative deadline (weeks)
Technical Specification and Related Tender Documentation for the Georgia's Centralized Multi-Hazard Disaster Risk and Early Warning System		
D.10	Draft of the Detailed Technical Specification for the Centralized Multi-hazard Early Warning System of Georgia according to the structure provided in the <u>Annex 5. Tentative Structure of the Technical Specification Document.</u>	W20
D.11	Final version of the Detailed Technical Specification for the Centralized Multi-hazard Early Warning System of Georgia according to the structure provided in the <u>Annex 5. Tentative Structure of the Technical Specification Document.</u>	W24

MANAGEMENT ARRANGEMENTS

- b) The contractor will work in close cooperation with the project System and Technology international consultant under the guidance of project (Scaling-up Multi-Hazard Early Warning System and the Use of Climate Information in Georgia Strengthening Climate Adaptation Capacities in Georgia) component Team Leader for substantive aspects of the assignment, and under the direct supervision of the Project Coordinator – for administrative aspects. All deliverables shall be coordinated with the Beneficiary and accepted by UNDP, if these meet the requirements of the Terms of Reference.
- c) For the payment terms refer to the **Annex 1 of this RFP**
- d) UNDP is responsible for the administrative and procedural issues related to the project, contracting and financial management (including payments) related to the activities conducted by the contractor.
- e) The Bidder is responsible for the implementation of project's planned activities according to the mutually agreed schedule with UNDP. The Bidder is responsible for identifying and mobilizing experts for carrying out the activities to be provided according to the project plan at the highest possible quality standard.

Language requirements

- f) All deliverables under these Terms of Reference will be prepared in English, in electronic and hardcopy format.
- g) All communication, Progress reports and other project management related documents shall be submitted in English. The deliverables in electronic form should be submitted in a format that would enable beneficiaries to further edit and use these deliverables.

Timeframe and Location

- h) It is envisaged that for the successful provision of services and preparation of deliverables required under this ToR, a team with necessary qualifications will be allocated by the successful bidder and a maximum 24 weeks of work is necessary. The expected period of the project is during End of November 2019 – End of May 2020.

JV & Consortium

- i) If the Bidder is a group of legal entities that will form or have formed a Joint Venture (JV), Consortium or Association for the Proposal, they shall confirm in their Proposal that : (i) they have designated one party to act as a lead entity, duly vested with authority to legally bind the members of the JV, Consortium or Association jointly and severally, which shall be evidenced by a duly notarized Agreement among the legal entities, and submitted with the Proposal; and (ii) if they are awarded the contract, the contract shall be entered into, by and between UNDP and the designated lead entity, who shall be acting for and on behalf of all the member entities comprising the joint venture.
- j) After the Deadline for Submission of Proposal, the lead entity identified to represent the JV, Consortium or Association shall not be altered without the prior written consent of UNDP.
- k) The description of the organization of the JV, Consortium or Association must clearly define the expected role of each of the entity in the joint venture in delivering the requirements of the RFP, both in the Proposal and the JV, Consortium or Association Agreement. All entities that comprise

the JV, Consortium or Association shall be subject to the eligibility and qualification assessment by UNDP.

- l) A JV, Consortium or Association in presenting its track record and experience should clearly differentiate between:
 - a) Those that were undertaken together by the JV, Consortium or Association; and
 - b) Those that were undertaken by the individual entities of the JV, Consortium or Association.

Previous contracts completed by individual experts working privately but who are permanently or were temporarily associated with any of the member firms cannot be claimed as the experience of the JV, Consortium or Association or those of its members, but should only be claimed by the individual experts themselves in their presentation of their individual credentials.

- m) The contractor shall include information on the level of effort and allocated resources.
- n) Under this assignment, the Project is not responsible for logistics and organizational arrangements.

IMPORTANT NOTE: The Company, which will be hired to perform this assignment, is NOT eligible for further development, implementation and deployment of the centralized Multi-hazard Early Warning System of Georgia.

ELIGIBILITY

Successful Bidder must meet the following minimum qualification requirements:

The Bidder must satisfy the following requirements:

- a) *Minimum 5 years of experience related to ICT consultancy, with at least one project specifically in analysis and design of software solutions (**Minimum Requirement**);*
- b) *At least one successfully executed project (contract) with similar complexity within the last 5 (five) years (**Minimum Requirement**);*
- c) *At least 2 (two) reference letters confirming successfully implemented ICT projects. (**Minimum Requirement**);*
- d) *The bidder must have a local office in Georgia or at least a consortium partner, which is a registered company in Georgia – Registration paper or tax payment certification (**Minimum Requirement**);*
- e) *The experience in the area of GIS is considered as **an asset**.*
- 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.*

The proposed project implementation team should consist of but not be limited to the following members:

Project Manager (PM) – one expert:

The PM shall be responsible for the coordination of all ICT consultancy services and ensuring the quality of the project deliverables.

The proposed Project Manager will be evaluated according to the following criteria:

1	Project Manager
	Master Degree in areas such as computer sciences, engineering, and telecommunications or other ICT related (minimum requirement).
	At least 7 years of overall professional experience in the ICT field (minimum requirement)
	At least 5 years experience in the management of ICT projects; (minimum requirement)

Lead Business Analyst (BA) – minimum one expert

The Business Analyst shall be responsible for collecting and analyzing the stakeholders' requirements, relevant business processes, identification and description of the functional requirements, UX/UI requirements and preparation/compilation of the technical specifications for the development and implementation of the Multi-hazard Early Warning System.

The proposed Lead Business Analyst will be evaluated according to the following criteria:

2.	Lead Business Analyst
	Bachelor's degree in areas such as computer sciences, engineering, and telecommunications or related; (minimum requirement)
	At least 7 years of experience in the ICT field. (minimum requirement)
	At least one assignment related to IT Business Analysis and user requirements elicitation, including UX/UI. (minimum requirement)
	At least one project related to writing technical specifications for the development of ICT Solutions; (minimum requirement)

Business Analysts – Minimum two experts

The proposed Business Analyst will be evaluated according to the following criteria:

3.	Business Analyst
	Bachelor's degree in areas such as computer sciences, engineering, and telecommunications or related; (minimum requirement)
	At least 3 years of experience in the ICT field. (minimum requirement)
	At least one project related to IT Business Analysis and user requirements elicitation, including UX/UI. (minimum requirement)

System Architect – one expert

The System Architect shall be responsible for analyzing of the data architecture and applications architecture related to the area of Multi-Hazard Disaster Risk management and Early Warning in Georgia and proposing best suitable architectural options on how the system has to developed and deployed.

The proposed System Architect will be evaluated according to the following criteria:

4.	System Architect
	Bachelor's degree in areas such as computer sciences, engineering, and telecommunications or related (minimum requirement) ;
	At least 7 years of experience overall professional experience in the ICT field (minimum requirement)
	At least one project related to large-scale architectures: design and integration of the technical infrastructure such as hardware (computers), software (programs), web portals, Internet and intranet connections, firewalls, servers, and ICT security components; (minimum requirement) ;

Expert in Technological Architectures – one expert

The Expert in technological architectures shall be responsible for identification, analyzing and proposing the potential ICT solution from the technological point of view:

- Identifying the stakeholders' needs in terms of software and hardware needed for implementation of the future Multi-hazard Early Warning System;
- Breaking down the future ICT project into manageable chunks;
- Working out which existing ICT and GIS products are recommended to be used based on cost benefit analysis and research;

5. Expert in Technological Architectures

Bachelor's degree in areas such as computer sciences, engineering, and telecommunications or related (**minimum requirement**);

At least two projects in the ICT field (**minimum requirement**);

At least one project related to designing, implementation and operation of complex technological platforms; (**minimum requirement**);

GIS Expert

The GIS Specialist shall work at the intersection of data analysis, software and cartography.

The GIS Specialist must provide significant input to the process of preparation of the technical specification on how future system has to manage a national e-Library/GIS database – knowledge and data to increase awareness and provide the interactive hazard maps for Georgia.

The role of the GIS Specialist will imply also analyzing of the relevant aspects to model and map all relevant climate induced natural hazards for Georgia to provide a single source of definitive hazard mapping of the appropriate technical specification and level of detail for all uses, building upon modern modelling methods and software.

6 GIS Expert

Bachelor's degree in areas such as computer sciences, engineering, and telecommunications or related (**minimum requirement**);

At least one project in the ICT field (**minimum requirement**);

At least five projects in application of GIS standards, technologies and software; (**minimum requirement**)

Legal Expert (LE) – one expert:

The Legal Expert shall carry out a desk review of the existing legislative framework of Georgia and related regulations relevant to the scope of the assignment, providing specialized support to the implementation team from a regulatory perspective. The LE shall identify the internal regulatory framework that requires upgrading in order to implement the Multi-hazard Early Warning System in Georgia.

Following consultations with the stakeholders, the LE shall develop draft regulations or amendments to the existing framework to allow implementation of the future system in Georgia.

7.	Legal Expert Degree Bachelor's degree in Law or related fields (minimum requirement). At least two assignments related to analysis of the legal framework of Georgia (minimum requirement).
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RECOMMENDED FORMAT OF THE PROPOSAL

The bidder shall submit, as part of its bid, the draft documents for project initiation, which shall include the following as a minimum:

- a. The organizational structure of the project;
- b. Detailed technical description of the proposed methodology. How the tasks will be performed, what kind of approaches and standards will be used, estimated level of effort and allocated personnel.
- c. Project Plan;
- d. Progress Monitoring Process;
- e. Exception Handling Process;
- f. Deliverables Acceptance Plan;
- g. Project Library Structure;
- h. In case the Service Provider is a consortium of companies, the application should contain a clear distribution of tasks among the consortium members;
- i. If the Bidder subcontracts activities of obtaining any deliverable, then it shall submit the Work Package attached to these activities. The package shall be presented in a form signed by both the Bidder and proposed Subcontractor as well and shall contain: date, responsible person, description of the tasks to be performed by the subcontractor, description of deliverables that are part of the working package, quality-checking methods to be used, level of resources to be allocated, date of commencement, finalization, constraints and reporting method.
- j. Financial offer and technical offer should be presented separately. Therefore All prices and other financial information must not be disclosed in any other place except in the financial proposal.

Tentative Structure of the Technical Specification Document.

- 1. GENERAL DESCRIPTION OF THE PROJECT**
 - 1.1. Scope and Objectives of the Project
 - 1.2. Terms and Acronyms
 - 1.3. Solution Overview
 - 1.4. Scope boundaries and exclusions
 - 1.5. Constraints and Issues
- 2. STAKEHOLDERS**
- 3. RISKS**
- 4. REQUIREMENTS TRACEABILITY**
- 5. CONCEPTUAL ARCHITECTURE**
- 6. ELECTRONIC DATA INTERCHANGE WITH OTHER DB/IS**
- 7. FUNCTIONAL REQUIREMENTS**
 - 7.1. Functional Decomposition
 - 7.2. Users roles
 - 7.3. Requirements regarding the *Multi-hazard Disaster Risk Knowledge Module*
 - 7.4. Requirements regarding the *Multi-hazard Disaster Risks and Vulnerabilities Monitoring Module*
 - 7.5. Requirements regarding the *Response Capabilities Module*
 - 7.6. Requirements regarding the *Warning Module*
 - 7.7. Requirements regarding the Module "<name of the module>"
 - 7.8. Requirements regarding the Module "<name of the module>"
 - 7.9. Requirements regarding the Module "<name of the module>"...
 - 7.10. Requirements regarding Reporting functionalities of the System
- 8. NON-FUNCTIONAL REQUIREMENTS**
 - 8.1. Requirements regarding the Architecture of the System
 - 8.2. Technological Requirements
 - 8.3. System Requirements
 - 8.4. Installation Requirements
 - 8.5. Security Requirements
 - 8.6. System Flexibility
 - 8.7. System Maintenance
 - 8.8. Scalability
 - 8.9. Disaster Recovery and Redundancy
 - 8.10. Graphical User Interface (GUI)
 - 8.11. Authentication
 - 8.12. Authorization
 - 8.13. Security Audit and Monitoring
 - 8.14. Performance Requirements
 - 8.15. User Manual and Documentation Requirements

- 8.16. Software Development
- 8.17. Database Management
- 8.18. Server Operations
- 8.19. Source-Code Management
- 8.20. Quality Management

9. OTHER TECHNICAL SPECIFICATIONS

- 9.1. General Technical Requirements
- 9.2. Hardware Specifications
- 9.3. Software Specifications and License Requirements
- 9.4. System Management, Administration, and Security Specifications
- 9.5. Service Specifications
- 9.6. Required Service Level Agreement (SLA)
- 9.7. Training of Users and System Administrators
- 9.8. Tasks and Deliverables

10. REQUIREMENTS REGARDING CONTRACTOR'S PROJECT TEAM

11. TESTING AND QUALITY ASSURANCE REQUIREMENTS

- 11.1. Inspections
- 11.2. Pre-commissioning Tests
- 11.3. Operational Acceptance Tests

12. PRELIMINARY IMPLEMENTATION SCHEDULE

13. REQUIREMENTS REGARDING THE FORMAT OF THE TECHNICAL PROPOSAL

14. ANNEXES

- 14.1. Related Information Technology Issues and Initiatives
- 14.2. Needed Hardware and Licensed Software
- 14.3. Template of the Service Level Agreement (SLA)
- 14.4. The Project Governance Structure

CV Forms for the proposed Personnel

Name of Personnel	[Insert]
Position for this assignment	[Insert]
Nationality	[Insert]
Language proficiency	[Insert]
Education/ Qualifications	<p><i>[Summarize college/university and other specialized education of personnel member, giving names of schools, dates attended, and degrees/qualifications obtained.]</i></p> <p>[Insert]</p>
Professional certifications	<p><i>[Provide details of professional certifications relevant to the scope of services]</i></p> <ul style="list-style-type: none"> ▪ Name of institution: [Insert] ▪ Date of certification: [Insert]
Employment Record/ Experience	<p><i>[List all positions held by personnel (starting with present position, list in reverse order), giving dates, names of employing organization, title of position held and location of employment. For experience in last five years, detail the type of activities performed, degree of responsibilities, location of assignments and any other information or professional experience considered pertinent for this assignment.]</i></p> <p>[Insert]</p>
References	<p><i>[Provide names, addresses, phone and email contact information for two (2) references]</i></p> <p>Reference 1: [Insert]</p> <p>Reference 2: [Insert]</p>

I, the undersigned, certify that to the best of my knowledge and belief, these data correctly describe my qualifications, my experiences, and other relevant information about myself.

Signature of Personnel

Date (Day/Month/Year)

Technical Evaluation Criteria

If the offeror does not meet any of the minimum technical qualification criteria/requirements defined in the sections 1, 2, and 3 of the Technical Evaluation Criteria (presented below), it will be given score (0) zero and will be automatically disqualified and will not be considered for further evaluation.

Summary of Technical Proposal Evaluation Forms		Points Obtainable
1.	Bidder's qualification, capacity and experience	350
2.	Proposed Methodology, Approach and Implementation Plan	350
3.	Management Structure and Key Personnel	300
Total		1000

Section 1. Bidder's qualification, capacity and experience			Points MAX obtainable
1.1	Minimum 5 years of experience related to ICT consultancy, with at least one project specifically in analysis and design of software solutions (Minimum Requirement);		100
	5 years (Minimum Requirement);	80	
	More than 5 years;	100	
1.2	At least one successfully executed contract/project with similar complexity within last 5 years (Minimum Requirement)		100
	1 contract/project (Minimum requirement)	70	
	More than 1 contract/project	100	
1.3	At least 2 (two) reference letters confirming successfully implemented ICT projects. (Minimum Requirement);		80
	2 references (Minimum requirement)	60	
	More than 2 references	80	
1.4	The bidder must have a local office in Georgia or at least a consortium partner, which is a registered company in Georgia – Registration paper or tax payment certification (Minimum Requirement);		35
1.5	Experience in the area of GIS is considered as an asset		35
Total Section 1			350

Section 2. Proposed Methodology, Approach and Implementation Plan			Points MAX obtainable
2.1	Understanding of the requirement: Have the important aspects of the task been addressed in sufficient detail? Are the different components of the project adequately weighted relative to one another?		150
	Important aspects of the task have been addressed in sufficient detail. Different components of the project are adequately weighted relative to one another (minimum requirement)	90	
	Important aspects of the task have been addressed in exceeding detail and components of the project are adequately weighted relative to one another	150	
2.2	Description of the Offeror's approach and methodology for meeting or exceeding the requirements of the Terms of Reference		125
	Approach and methodology meet the requirements of the Terms of Reference (minimum requirement)	80	
	Approach and methodology exceed requirements of the Terms of Reference	125	
2.3	Assessment of the implementation plan proposed including whether the activities are properly sequenced and if these are logical and realistic		75
	Activities are properly sequenced, are logical and realistic (minimum requirement)	75	
Total Section 2			350

Section 3. Management Structure and Key Personnel			Points MAX obtainable
3.1	Project Manager		
	Master's degree in areas such as computer sciences, engineering, and telecommunications or other ICT related (minimum requirement).	10	
	PhD in areas such as computer sciences, engineering, and telecommunications or other ICT related;	15	
	At least 7 years of overall professional experience in the ICT field (minimum requirement)	17	60
	More than 7 years of overall professional experience in the ICT field	23	
	At least 5 years experience in the management of ICT projects; (minimum requirement)	15	
	More than 5 years experience in the management of ICT projects;	22	
3.2	Lead Business Analyst		
	Bachelor's degree in areas such as computer sciences, engineering, and telecommunications or related; (minimum requirement)	5	
	Master in areas such as computer sciences, engineering, and telecommunications or related;	10	

	At least 7 years of experience in the ICT field. (minimum requirement)	10	40
	More than 7 years of experience in the ICT field;	17	
	At least one assignment related to IT Business Analysis and user requirements elicitation, including UX/UI. (minimum requirement)	7	
	At least one project related to writing technical specifications for the development of ICT Solutions; (minimum requirement)	6	
3.3	Business Analyst		
	Bachelor's degree in areas such as computer sciences, engineering, and telecommunications or related; (minimum requirement)	8	40
	Master in areas such as computer sciences, engineering, and telecommunications or related	13	
	At least 3 years of experience in the ICT field. (minimum requirement)	10	
	More than 3 years of experience in the ICT field	17	
	At least one project related to IT Business Analysis and user requirements elicitation, including UX/UI. (minimum requirement)	10	
3.4	System Architect		
	Bachelor's degree in areas such as computer sciences, engineering, and telecommunications or related (minimum requirement) ;	8	40
	Master degree in areas such as computer sciences, engineering, and telecommunications or related	13	
	At least 7 years of experience overall professional experience in the ICT field (minimum requirement)	10	
	More than 7 of experience overall professional experience in the ICT field;	17	
	At least one project related to large-scale architectures: design and integration of the technical infrastructure such as hardware (computers), software (programs), web portals, Internet and intranet connections, firewalls, servers, and ICT security components; (minimum requirement) ;	10	
3.5	Expert in Technological Architectures		
	Bachelor's degree in areas such as computer sciences, engineering, and telecommunications or related (minimum requirement) ;	8	40
	Master degree in areas such as computer sciences, engineering, and telecommunications or related	13	
	At least two projects in the ICT field (minimum requirement) ;	10	
	More than 2 two projects in the ICT field	17	
	At least one project related to designing, implementation and operation of complex technological platforms; (minimum requirement) ;	10	
3.6	GIS Expert		

	Bachelor's degree in areas such as computer sciences, engineering, and telecommunications or related (minimum requirement) ;	8	40
	Master degree in areas such as computer sciences, engineering, and telecommunications or related	13	
	At least one project in the ICT field (minimum requirement) ;	10	
	More than 1 project in the ICT field	17	
	At least five projects in application of GIS standards, technologies and software; (minimum requirement)	10	
3.7	Legal Expert		40
	Degree Bachelor's degree in Law or related fields (minimum requirement) .	14	
	Master degree in Law or related fields	20	
	At least two assignments related to analysis of the legal framework of Georgia (minimum requirement) .	14	
	More than 2 two assignments related to analysis of the legal framework of Georgia	20	
Total Section 3			300