

REQUEST FOR PROPOSAL (RFP)

NAME & ADDRESS OF FIRM	DATE: May 12, 2020
	REFERENCE: UNDP/RFP/05/2020

Dear Sir / Madam:

We kindly request you to submit your Proposal to provide technical support for demonstration of Rapid Vulnerability Assessment of the buildings and community infrastructure in 6 wards of 3 project metropolis/municipality for Comprehensive Disaster Risk Management Programme (CDRMP). The detailed Terms of Reference (ToR) is attached as Annex 4.

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

Proposals may be submitted on or before <u>1700 hours (Nepal Standard Time), Wednesday,</u> June 03, 2020 and via email to procurement.np@undp.org.

While submitting your proposal by email, kindly ensure that they are signed and in the .pdf format, and free from any virus or corrupted files. Proposals submitted by email must be limited to a maximum of **35 MB** (each transmission), virus-free and no more than **6** email transmissions. They must be free from any form of virus or corrupted contents, or the proposals shall be rejected

The technical and financial proposals should be in separate email messages mentioning the following subject lines:

Technical Proposal: UNDP/RFP/05/2020- Technical Proposal- {Bidder's Name} Financial Proposal: UNDP/RFP/05/2020- Financial Proposal- {Bidder's Name}

Your Proposal must be expressed in the **English**, and valid for a minimum period of **120 days**.

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

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

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

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

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

Any Contract or Purchase Order that will be issued as a result of this RFP shall be subject to the General Terms and Conditions indicated herein. The mere act of submission of a Proposal implies that the Service Provider accepts without question the General Terms and Conditions of UNDP in this link: http://www.undp.org/content/undp/en/home/procurement/business/how-we-buy.html

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 : <u>http://www.un.org/depts/ptd/pdf/conduct_english.pdf</u>

Thank you and we look forward to receiving your Proposal.

Sincerely yours,

Adhitari

Shiva Prakash Adhikari Procurement Associate, UNDP Nepal 5/12/2020

Description of Requirements

	Nepal is one of the ten least urbanized countries in the world. However, it is
Context of the	also one of the top ten fastest urbanizing countries. Urbanization in Nepal is
Requirement	dominated by a few large and medium cities with an excessive population
	concentration in the Kathmandu Valley. High urban growth is occurring in the
	Kathmandu Valley, the Inner Terai valleys, and in market and border towns
	located on highway junctures between the east-west highway and the five
	main north-south corridors. Excessive unplanned urban growth leads to many
	vulnerabilities and impacts on urban environments to varying degrees.
	The history of earthquake in Nepal dates to its origin being located in
	between Indian and Tibetan sub plates, the entire country is under constant
	threat of earthquake. The recent April 2015 earthquake exposed vulnerability
	of the settlements and structures as well as coping capacity of institutions
	and individuals. As a city comprises of many built fabrics inhabited by varying
	income groups, showing the socio-economic reality of different time segment
	only those built forms and the communities that cannot resist natural forces
	are vulnerable. Hence, the same intensity of earthquake bazard will have
	different impacts on the society, depending on the settlement natterns
	socio-economic status of the community and level of preparedness. Since the
	geophysical processes that cause the earthquake cannot be changed the
	best way to manage earthquake vulnerability is through intervening on the
	urban development process and enhancing community proparedness. The
	project word of Rharatour and Lalitour metropolitan including Rhimeshwor
	municipality are densely urbanized with infractructure and population with
	rick of various bazards like fire, earthquake, landslides and urban flooding
	Tisk of various flazarus like fire, earthquake, fanusilues and urban hooding.
	Recognizing the importance of understanding physical vulnerabilities with the
	urban settings, UNDP in past studied physical vulnerabilities with the
	development and use of Rapid Vulnerability Assessment (RVA) tools for
	earthquake vulnerability assessment of the building, including development
	of smart tool for collection of structural and functional data using android
	application. Further to this, statistical model for seismic vulnerability
	assessment has also been developed and tested in core urban areas of
	Kathmandu metropolitan city.
	Like the above-mentioned assessment using existing tools and software, the
	propose assignment also aims to identify buildings/ community
	infrastructures and conduct study of 2000 buildings in all project wards that
	are high risk to multiple hazards (earthquake and fire) using the same.
	Structural assessment using basic parameters for seismic resilience of the
	building along with use of GIS data layers to identify study area, buildings
	footprints in polygon and point, road in line, open space in polygon, river in
	line, and important landmarks in point will be carried out.
	Further to this, details on vehicular accessibility during emergency (fire,
	earthquake), evacuation routes, open spaces distance from flood plains or

	landslide prone areas shall be mapped out. In addition to this, series of consultation with local communities and municipal authorities by UNDP team and implementing partners will result in information of disaster/hazard events, losses, socio economic vulnerability. The data structure of each data layers shall be designed in such a way that that various attribute information generated from the rapid vulnerability assessment and GIS based map can be integrated to the corresponding data geographic features and maps that will be developed by UNDP Information Management officers with layers of geodata on disaster/hazard events, socio economic vulnerability , existing capacities to increase shared understanding of risk. Together with this, maps with information on hazards, at-risk communities; social and economic environment including accumulated risk areas and extant capacities within the action wards, will be overlaid with physical vulnerabilities which will be prepared jointly with Information Management Officers deployed in respective project metropolitan and municipalities. These results can then serve as useful tools for decision makers and can be applied directly to disaster risk management plans including replication of similar assessment in other densely urbanized cities of Nepal. Likewise, with the assessments and the final product will be helpful to provide, information and snapshot to the targeted community about existing risk and physical vulnerabilities which will ultimately support for advocacy with local government to plan and support suitable mitigation measures.
Implementing	N/A
Partner of UNDP	To provide technical support for demonstration of Panid Vulnerability
of the Required Services ¹	Assessment of the buildings and community infrastructure in 6 wards of 3 project metropolis/municipality for Comprehensive Disaster Risk Management Programme (CDRMP)
List and Description of Expected Outputs to be Delivered	 The selected organization is expected to complete the following outputs: Report on Rapid Vulnerability Assessment of the buildings (houses, public buildings, community infrastructure, etc.) with inventory of their structural and functional attributes, leading to GIS based database of individual buildings and the built environment (access, open space, evacuation routes, proximity to flood and landslide prone areas) including different thematic maps on collected data from the study area Maps and reports on the vulnerability scenarios of the buildings and the built environment, generated based on the set parameters Comprehensive maps book with information on structural and functional attributes of buildings along with critical infrastructure within two wards and communities of three project metropolis/municipality. Municipal staffs and community including technical institutes teachers and student capacitated, where possible, for implementation of the Rapid Vulnerability Assessment Tool.

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

	 Submission of all raw and final data including all GIS (Shape files), KML/KMZ.
Person to Supervise the Work/Performanc e of the Service Provider	Project Coordinator
Frequency of Reporting	As per the ToR
Progress Reporting Requirements	As per the ToR
Location of work	🛛 Kathmandu, Nepal
Expected duration of work	Four months
Target start date	July 2020
Latest completion date	October 2020
Travels Expected	N/A
Special Security Requirements	
	Others: Follow the safety measures of COVID-19, as required.
Facilities to be Provided by UNDP (i.e., must be excluded from Price Proposal)	⊠ Others: Not Applicable
Implementation Schedule indicating breakdown and timing of activities/sub- activities	⊠ Required
Company Registration Certificate	⊠ Required
Company Profile	⊠ Required
Latest Tax	🛛 Required
Clearance	
Certificate	
VAT/PAN	Required (in case of the companies and firms)
Registration	· · · · · · · · · · · ·
List of projects	⊠ Required
completed	

(please indicate contract value					
and duration)					
List of major clients with detailed contact address for last	⊠ Required				
Names and curriculum vitae of the proposed team including the individuals who will be involved in completing the services Currency of Proposal	⊠ Required				
	🛛 Local Currency: Nepa	lese Rupees (NPR.)		
Value Added Tax on Price Proposal ²	M must be inclusive of VAT and other applicable indirect taxes				
Validity Period of Proposals (Counting for the last day of submission of quotes)	■ 120 days In exceptional circumstances, UNDP may request the Proposer to extend the validity of the Proposal beyond what has been initially indicated in this RFP. The Proposal shall then confirm the extension in writing, without any modification whatsoever on the Proposal.				
Partial Quotes	⊠ Not permitted				
Payment Terms ³	Outputs Inception report with methodology and detailed work plan as highlighted above in	Percentage 20%	Timing	Condition for Payment Release Within thirty (30) days from the date of meeting the	

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

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

	the scope of work section. Rapid vulnerability assessment report with structural and functional attributes with vulnerability scenarios generated based on the	30%		following conditions: a) UNDP's written acceptance (i.e., not mere receipt) of the quality of the outputs; and b) Receipt of
	indicators for the study area (Intermediate progress report to be submitted)			invoice from the Service Provider.
	Validation and endorsement of report and all products including submission of map atlas of GIS based products	30%		
	Final Report with Process documentation, database including completion of capacity building activities of the ward and municipal staff on rapid vulnerability assessment (20%	20%		
Person(s) to review/inspect/ approve outputs/complete d services and authorize the disbursement of payment	Portfolio Manager			
Criteria for Contract Award	 ☑ Highest Combined Sc weight distribution) ☑ Full acceptance of the (GTC). This is a mandat nature of services requi the rejection of the Pro 	ore (based on e UNDP Contr ory criterion a red. Non acco posal.	the 70% tech act General T and cannot be eptance of the	nnical offer and 30% price Ferms and Conditions e deleted regardless of th e GTC may be grounds fo
	<u>Technical Proposal – 10</u>	000 points		

Criteria for the Assessment of Proposal	 Expertise of the Firm - 250 points Methodology, Its Appropriateness to the Condition and Timeliness of the Implementation Plan- 350 points
	☑ Management Structure and Qualification of Key Personnel- 400 points
	Financial Proposal – 300 points
	the proposals received by UNDP.
UNDP will award the contract to:	☑ One and only one Service Provider
Type of Contract	Purchase Order
to be Signed	 ☑ Contract Face Sheet (Goods and-or Services) UNDP (this template is also utilised for Long-Term Agreement⁴ and <i>if LTA will be signed, specify the document that will trigger the call-off. E.g., PO, etc.)</i> □ Other Type/s of Contract
Contract General Terms and Conditions ⁵	 □ General Terms and Conditions for contracts (goods and/or services) ⊠ General Terms and Conditions for de minimi contracts (services only)
	Applicable Terms and Conditions are available at:
	http://www.undp.org/content/undp/en/home/procurement/business/ how-we-buy.html
Annexes to this	☑ Form for Submission of Proposal (Annex 2)
RFP ⁶	General Terms and Conditions / Special Conditions (Annex 3) ⁷
	Detailed TOR – Annex 4
	[[pls. specify]

⁴ Minimum of one (1) year period and may be extended up to a maximum of three (3) years subject to satisfactory performance evaluation

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

⁶ Where the information is available in the web, a URL for the information may simply be provided.

⁷ Service Providers are alerted that non-acceptance of the terms of the General Terms and Conditions (GTC) may be grounds for disqualification from this procurement process.

⁸ A more detailed Terms of Reference in addition to the contents of this RFP may be attached hereto.

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Contact Person for Inquiries (Written inquiries only) ⁹	Procurement Unit UNDP Nepal Email: query.procurement.np@undp.org Written inquiries must be submitted mentioning RFP Ref: UNDP/RFP/05/2020, on or before 5:00PM, 21 May 2020. UNDP shall respond to the inquiries through a bulletin posted in UNDP Website: <u>http://www.np.undp.org/content/nepal/en/home/operations/</u> <u>procurement.html</u> . Inquiries received after the above date and time shall not be entertained.		
	Any delay in UNDP's response shall be not used as a reason for extending the deadline for submission, unless UNDP determines that such an extension is necessary and communicates a new deadline to the Proposers		
Other Information [pls. specify]	The Financial evaluation will be carried out only for the technically qualified submission that pass the minimum technical score of 70% (700 points) of the obtainable score of 1000 points in the evaluation of the technical proposals.		
	The Financial Proposal and the Technical Proposal <u>MUST BE COMPLETELY</u> <u>SEPARATE</u> and <u>each of them must be submitted individually</u> with different subject line as mentioned above. Failing to submit the Technical and Financial Proposals in separately will be treated as non-responsive.		

⁹ This contact person and address is officially designated by UNDP. If inquiries are sent to other person/s or address/es, even if they are UNDP staff, UNDP shall have no obligation to respond nor can UNDP confirm that the query was received.

			Points
Sum	mary of Technical Proposal Evaluation Forms	Score Weight	Obtainable
1	Expertise of firm/Organisation submitting proposal	25%	250
2	Proposed Work Plan and Approach	35%	350
3	Personnel	40%	400
			1000

I. Expertise of firm / organisation submitting proposal (Points obtainable 250 Points)	
1.1 Reputation of Organisation and Staff (Competence / Reliability)	50
1.2 Litigation and Arbitration history	15
1.3 General Organizational Capability which is likely to affect implementation (i.e. loose	
consortium, holding company or one firm, size of the firm / organization, strength of	
project management support e.g. project financing capacity and project management	
controls)	45
1.4 Extent to which any work would be subcontracted (subcontracting carries additional	
risks which may affect project implementation, but properly done it offers a chance to	
access specialized skills.	10
1.5 Quality assurance procedures, warranty	25
Sub total (1.1 to 1.5)	145
1.6 Relevance of: (Points - 105)	
- Specialized Knowledge	50
- Experience on Similar Programme / Projects	50
- Work for UNDP/ major multilateral/ or bilateral programmes	5
Sub Total for 1.6	105
Total for Expertise of firm / organization submitting proposal (I)	250
II. Proposed Work Plan and Approach (Points obtainable 350 Points)	
2.1 To what degree does the Offeror understand the task?	70
2.2 Have the important aspects of the task been addressed in sufficient detail?	25
2.3 Are the different components of the project adequately weighted relative to one	
another?	15
2.4 Is there evidence that the proposal been prepared based on an in-depth understanding	
and prior knowledge of the project environment?	40
2.5 Is the conceptual framework adopted appropriate for the task?	40
2.6 Is the scope of task well defined and does it correspond to the TOR?	60
2.7 Is the presentation clear and is the sequence of activities and the planning logical,	
realistic and promise efficient implementation to the project?	100
Total for Proposed Work Plan and Approach (II)	350
III. Personnel (Points obtainable 400 Points)	
3.1 GIS specialist- Team leader	
Master's degree in GIS / Geo-informatics / Computer Science / Urban planning / Civil	
Engineering or related subject	25
Experience in managing rapid vulnerability assessment in urban areas and experience with	
urban spatial information, working with GIS for DRR.	50
Worked with UN agencies/I/NGOs, Nepal Government	25

At least 10 years of working experience with urban spatial information, working with GIS	
for DRR, risk sensitive planning	20
Sub Total for Team Leader	120
3.2 Information technology Experts	
Bachelor's degree in computer engineering/computer application or related subject with 3	
years of work experience	10
Proven skills and experience in developing web portal and mobile application	30
Worked with UN agencies/I/NGOs, Nepal Government in similar assignments	10
Sub Total for IT expert	50
3.3 Senior Expert Structural engineer	
Master's degree in structural/earthquake engineering with at least 5 years of work	
experience	20
Experience in structural assessment of buildings with focus on Rapid Vulnerability	
Assessment,	40
Experience in delivering trainings to municipal staffs, elected representative and	
community	20
Worked with UN agencies/I/NGOs, Nepal Government in similar assignments	10
Sub Total for Structural Engineer	80
3.4 Senior Statistician	
Master's degree in Statistics with 5 years of experience in urban data analysis	10
Proven skill in urban related data analysis using SPSS and analysis tools, experience in spatial analysis of buildings and its attributes	20
Worked with UN agencies/I/NGOs, Nepal Government in similar assignments	10
Sub Total for Senior Statistician	50
3.5 GIS operator,	
Bachelor's degree in GIS / Geo-informatics and at least 2 years of experience in GIS	10
Experience in preparing digital base maps, GIS based urban maps, GIS based hazard-risk	
assessment and mapping,	30
Worked with UN agencies/I/NGOs, Nepal Government in similar assignments	10
Sub Total for GIS operator	50
3.6 Field Engineers	
Bachelor's degree in Civil Engineering / Structure Engineering / Architecture with minimum	
3 years of experience	10
Work experience in assessment of building	30
Knowledge of the project area	10
Sub Total for field engineers	50
Total for Personnel	400
Grand Total (A+B+C)	1000

Annex 2

FORM FOR SUBMITTING SERVICE PROVIDER'S PROPOSAL¹⁰

(This Form must be submitted only using the Service Provider's Official Letterhead/Stationery¹¹)

[insert: Location]. [insert: Date]

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

Dear Sir/Madam:

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

A. Qualifications of the Service Provider

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

a) Profile – describing the nature of business, field of expertise, licenses, certifications, accreditations;

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

B. Proposed Methodology for the Completion of Services

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

C. Qualifications of Key Personnel

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

- a) Names and qualifications of the key personnel that will perform the services indicating who is Team Leader, who are supporting, etc.;
- b) CVs demonstrating qualifications must be submitted if required by the RFP; and

¹⁰ This serves as a guide to the Service Provider in preparing the Proposal.

¹¹ Official Letterhead/Stationery must indicate contact details – addresses, email, phone and fax numbers – for verification purposes

c) Written confirmation from each personnel that they are available for the entire duration of the contract.

D. Cost Breakdown per Deliverable*

	Deliverables	Percentage	Price
	[list them as referred to in the RFP]	of Total	(Lump Sum, All
		Price	Inclusive)
		(Weight for	
		payment)	
1.	Inception report with methodology and detailed work plan	20%	
	as highlighted above in the scope of work section.		
2.	Rapid vulnerability assessment report with structural and	30%	
	functional attributes with vulnerability scenarios generated		
	based on the indicators for the study area (Intermediate		
	progress report to be submitted)		
3.	Validation and endorsement of report and all products	30%	
	including submission of map atlas of GIS based products		
4.	Final Report with Process documentation, database including	20%	
	completion of capacity building activities of the ward and		
	municipal staff on rapid vulnerability assessment		
	Total	100%	

*This shall be the basis of the payment tranches

E. Cost Breakdown by Cost Component:

SN	Activities	Unit	Rate	No. of	Total NPR
				Days	
Α	Key Human Resources				
1	GIS Specialist (Team Leader)	1		28 days	
2	IT expert	1		7 days	
3	Structural Engineer	1		10 days	
4	Senior Statistician	1		5 days	
5	GIS operator	1		12 days	
6	Field Engineer	3		15 days	
7	Field Enumerators (15 person* 9 days * 15 houses surveyed = 2025)	15		135 days	
	Sub Total A				
В	Other costs (if any)				
1	Travel Cost Lalitpur (16 and 19 ward) Bharatpur Metropolitan city (2 and 10 ward) and Bhimeshwor Municipality (3 and 6 ward)	Lumpsum			
2					
	Sub Total B				
С	Total (A+B)				
D	VAT 13%				
	Grand Total (C+D)				

N. B. Administrative and other associated costs, if any, should be built into the above headings proportionately.

Proposal will be disqualified if it does not follow the above price schedule format.

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

Annex 3

General Terms and Conditions of Contract

Annex 4

UNITED NATIONS DEVELOPMENT PROGRAMME

Comprehensive Disaster Risk Management Programme (CDRMP)

Terms of Reference

<u>to</u>

Technical support for demonstration of Rapid Vulnerability Assessment of the buildings and							
community infrastructure in 6 wards of 3 project metropolis/municipality							
Working Area:	Lalitpur (16 and 19 ward), Bharatpur Metropolitan city (2 and 10 ward) and Bhimeshwor Municipality (3 and 6 ward)						
Duration:	Four months						
Expected starting date: May 25	th , 2020						
Location, Country:	Kathmandu						
Contract Type:	Contractual Services; Companies						

1. Background

United Nations Development Programme (UNDP) has been present in Nepal since 1963, working towards greater development impact in the most remote, poor, and vulnerable areas. Reduction of vulnerability to disaster and climate risks is one of the core programmatic approaches in promoting sustainable and resilient development. Over the years, UNDP has established itself as the Government of Nepal's key partner on disaster risk management, in the areas of policy and institutional capacity enhancement as well as community-level risk reduction. A long-standing and excellent partnership and collaboration with the Government of Nepal (GoN) is the backbone of the UNDP's disaster risk management programme, and the key ministries and departments.

UNDP has been working closely and coordinating with GoN line Ministries, relevant stakeholders on development of DRRM Act 2074, Policy, Strategic Action Plan and Frameworks, for proactive disaster preparedness through regular surveillance, and readiness through network of emergency operation centres across the country, capacity development for flood, fire and earthquake response. With federalization, elected local governments are in place with authority and mandate to lead DRRM activities, and mobilizing resources. UNDP is working closely with the local governments, as they are embarking on formulating their annual and periodic planning and budgeting, prioritization and implementation, with action focusing on capacitating them for assessing disaster risks, planning and undertaking actions to enhance capacities for emergency preparedness and response in priority urban areas, contributing to longer-term resilience.

Recognizing the fact, urbanization has been haphazard and unplanned in the recent years in the urban areas of Nepal with the existing risk, have led in intensification of disaster impact. Disaster incidences have increased however the mechanism to cope with these disasters have not been operationalized with proven measures and model at local level, even the local level have different capacities in terms of human and financial resources. Further to this, with the change in federal structure there has been inadequate institutional arrangement for coordinated emergency preparedness for responses between municipal, ward and community level. Skill and capacity gaps of new governance systems and the communities including vulnerable population have been other key areas for improving knowledge and skills on risk and vulnerabilities including preparedness for response related works are crucial.

With the aim, to create a shared understanding on urban disaster risks and evolve mechanisms and measures that can aid the communities and municipal governments to address different dimensions

of vulnerabilities and risks and effectively respond to emergencies, with specific focus on the vulnerable population. UNDP is currently implementing a project, "Reducing disaster risks and enhancing emergency response capacities in multi hazard-risk prone urban areas of Nepal" in three local level, two being Lalitpur and Bharatpur metropolitan city whereas other one is Bhimeshwor Municipality representing cities across Nepal with the funding support from EU/ECHO.

In achieving its aim, the project has three results that mostly evolve around increased understanding of communities (including vulnerable population) and local authorities of at-risk urban areas about multiple hazards risk and vulnerabilities (Physical, Social and Economic). This will further yield in system establishment or strengthening at municipal ward and community level, including investment in both structural and non-structural interventions for effective and coordinated emergency response including risk reduction.

2. Context

Nepal is one of the ten least urbanized countries in the world. However, it is also one of the top ten fastest urbanizing countries. Urbanization in Nepal is dominated by a few large and medium cities with an excessive population concentration in the Kathmandu Valley. High urban growth is occurring in the Kathmandu Valley, the Inner Terai valleys, and in market and border towns located on highway junctures between the east-west highway and the five main north-south corridors. Excessive unplanned urban growth leads to many vulnerabilities and impacts on urban environments to varying degrees.

The history of earthquake in Nepal dates to its origin being located in between Indian and Tibetan sub plates, the entire country is under constant threat of earthquake. The recent April 2015 earthquake exposed vulnerability of the settlements and structures as well as coping capacity of institutions and individuals. As a city comprises of many built fabrics inhabited by varying income groups, showing the socio-economic reality of different time segment only those built forms and the communities that cannot resist natural forces are vulnerable. Hence, the same intensity of earthquake hazard will have different impacts on the society, depending on the settlement patterns, socio-economic status of the community and level of preparedness. Since the geophysical processes that cause the earthquake cannot be changed, the best way to manage earthquake vulnerability is through intervening on the urban development process and enhancing community preparedness. The project ward of Bharatpur and Lalitpur metropolitan including Bhimeshwor municipality are densely urbanized with infrastructure and population with risk of various hazards like fire and earthquake.

Recognizing the importance of understanding physical vulnerability in such urban settings, UNDP in past studied physical vulnerabilities with the development and use of Rapid Vulnerability Assessment (RVA) tools for earthquake vulnerability assessment of the building, including development of smart tool for collection of structural and functional data using android application. Further to this, statistical model for seismic vulnerability assessment has also been developed and tested in core urban areas of Kathmandu metropolitan city.

Like the above-mentioned assessment using existing tools and software, the propose assignment also aims to identify buildings/ community infrastructures and conduct study of 2000 buildings in all project wards that are high risk to multiple hazards (earthquake and fire) using the same. Structural assessment using basic parameters for seismic resilience of the building along with use of GIS data layers to identify study area, buildings footprints in polygon and point, road in line, open space in polygon, river in line, and important landmarks in point will be carried out.

Further to this, details on vehicular accessibility during emergency (fire, earthquake), evacuation routes, open spaces distance from flood plains or landslide prone areas shall be mapped out. In addition to this, series of consultation with local communities and municipal authorities by UNDP team and implementing partners will result in information of disaster/hazard events, losses, socio economic vulnerability. The data structure of each data layers shall be designed in such a way that that various attribute information generated from the rapid vulnerability assessment and GIS based map can be integrated to the corresponding data geographic features and maps that will be developed by UNDP

Information Management officers with layers of geodata on disaster/hazard events, socio economic vulnerability, existing capacities to increase shared understanding of risk.

Together with this, maps with information on hazards, at-risk communities; social and economic environment including accumulated risk areas and extant capacities within the action wards, will be overlaid with physical vulnerabilities which will be prepared jointly with Information Management Officers deployed in respective project metropolitan and municipalities. These results can then serve as useful tools for decision makers and can be applied directly to disaster risk management plans including replication of similar assessment in other densely urbanized cities of Nepal. Likewise, with the assessments and the final product will be helpful to provide, information and snapshot to the targeted community about existing risk and physical vulnerabilities which will ultimately support for advocacy with local government to plan and support suitable mitigation measures.

3. Objectives of the Assignment

The main objective of this propose assignment is to technically support for Rapid Vulnerability Assessment (RVA) of the buildings in 6 wards of project metropolis/municipality.

The specific objective of the assignment is listed below:

- 1. Use the Rapid Vulnerability Assessment tool that has been developed by UNDP, for conducting rapid structural assessment of the buildings (houses, public buildings, community infrastructures) in the project wards to generate vulnerability map based on the set parameters using statistical model for seismic vulnerability assessment.
- 2. To create GIS based maps, with building footprint, access road and database of building inventory with structural and functional attributes.
- 3. To demonstrate/map vulnerability scenarios with regards to fire (access), earthquake and other possible scenarios for the study area.
- 4. To train and orient municipal staffs and local students from technical schools and community for conducting survey using the Rapid Vulnerability Assessment Tool

4. Scope of work

The scope of works shall include the following major components among other incidental activities:

- 1. To provide inception report and details workplan with clear methodology on physical vulnerability assessment using existing tools (developed by UNDP) on Rapid Vulnerability Assessment.
- 2. To revive and upgrade the existing web portal and android based mobile application with additional features if required.
- 3. To identify and train municipal staffs and relevant local stakeholders (in close coordination with UNDP/CDRMP team) community for conducting surveys using the Rapid Vulnerability Assessment Tool. The cost of training will be borne by local implementing partners.
- 4. To conduct rapid structural assessment of buildings in the project wards (houses, public buildings, community infrastructure, etc.) based on the already set questionnaire (in RVA tool) with tested and defined indicators/ parameters with focus on assessing vulnerability imposed by the built environment.
- 5. To prepare GIS based map on building footprint leading to identification of individual buildings at risk of multi-hazards, including details on vehicular accessibility during emergency (fire, earthquake), evacuation routes, open spaces distance from area of inundation or landslide prone areas.
- 6. To generate vulnerability scenarios with regards to fire (access), earthquake and other possible hazards in the study area.

- 7. To validate collected information through Mapathon and KII and dissemination of collected information to stakeholders.
- 8. To prepare maps and other related product to be compatible with Disaster Information Management System (BIPAD).
- 9. To work with information management officers from UNDP to prepare and embed layers of maps prepared and generated from community consultation on hazards, disaster event/loss, socio-economic vulnerability along with GIS based map generated through this assignment.
- 10. To prepare a comprehensive map atlas book for the study areas with maps generated from vulnerability assessment (functional and structural attributes) as per the inputs from respective municipality and UNDP/CDRMP team.
- 11. To validate and endorse result generated from assessment from municipality.
- 12. To prepare process documentation along with final report on assessment with key lesson learnt.
- 13. To travel to fields at least 5 times in each district (max 3-4 days per visit) during the assignment and arrange vehicle and DSA for travelling to project areas (Bharatpur and Bhimeshwor) outside Kathmandu valley.

5. Methodology

The detailed methodology will be proposed by the consultant and shall be agreed with CDRMP, UNDP team. However, for the structural assessment RVA tool, indicators and parameters shall be used, which has been used and tested by UNDP.

- Travel to project locations and work closely with Municipal Technical Officers, Information Management Officers, partners staff and municipal staff to build in information acquired from different consultations, including dissemination of methodology for RVA to municipal authorities.
- 2. To provide orientation to relevant technical staffs from ward, metropolis/municipality and project stakeholders at the respective local level, on the use of digital RVA tool for assessment of physical vulnerabilities of buildings and the built environment.
- 3. To collect data through mobilization of local communities and students from polytechnic institute and engineering colleges, as identified by the UNDP/CDRMP and Municipal staff.
- 4. To produce maps based on the data collected on building and built environment to generated vulnerability scenarios with regards to multi-hazards.

6. Expected Outputs

The key expected outputs of the task are:

- Report on Rapid Vulnerability Assessment of the buildings (houses, public buildings, community infrastructure, etc.) with inventory of their structural and functional attributes, leading to GIS based database of individual buildings and the built environment (access, open space, evacuation routes, proximity to flood and landslide prone areas) including different thematic maps on collected data from the study area
- 2. Maps and reports on the vulnerability scenarios of the buildings and the built environment, generated based on the set parameters
- 3. Comprehensive maps book with information on structural and functional attributes of buildings along with critical infrastructure within two wards and communities of three project metropolis/municipality.
- 4. Municipal staffs and community including technical institutes teachers and student capacitated, where possible, for implementation of the Rapid Vulnerability Assessment Tool.

- 5. Final report on process documentation and key lesson learnt along with recommendations of scalability.
- 6. Submission of all raw and final data including all GIS (Shape files), KML/KMZ.

7. Qualifications of the Service Provider

- Technical, research, educational and training institutes, academia, NGOs, private consultancy firms that are legally registered at national levels are eligible to submit offers
- At least 5 years of relevant experience in DRR, urban planning, hazard- risk assessment or digitized VCA or Rapid Vulnerability Assessment
- Excellent and proven track record of previous partnership, preferably with Government of Nepal, UN agencies, and local bodies, in the field of urban mapping, hazard- risk assessment
- Sufficient human and technical resources with relevant education and experience in the field of GIS, engineering and risk assessments in Nepal

Experts and Assistants	Qualification
GIS Specialist (Team	Master's degree in GIS / Geo-informatics / Computer Science / Urban
Leader)	planning / Civil Engineering or related subject with at least 10 years of
	working experience with urban spatial information, working with GIS
	for DRR will be advantage. (28 days)
IT expert	Bachelor's degree in computer engineering/computer application or
	related subject with at least 3 years of experience in preparing web
	portal and mobile application. (7 days)
Structural Engineer (1)	Master's degree in structural/earthquake engineering with at least 5
	(five) years of experience after master's degree, in structural
	assessment of buildings. Experience in delivering trainings to
	community (10 days)
Senior Statistician	Master's degree in Statistics with 5 years of experience in urban
	related data analysis, experience in spatial analysis will be advantage.
	(5 days)
GIS operator (1)	Bachelor's degree in GIS / Geo-informatics and at least 2 years of
	experience in preparing digital base maps, GIS based urban maps, GIS
	based hazard-risk assessment and mapping, (12 days)
Field Engineer (3)	Bachelor's degree in Civil Engineering / Structure Engineering /
	Architecture with minimum three years of work experience in
	assessment of building (15 of days)
Field Enumerators (15)	To be hired locally from project location in coordination with local
	polytechnic institute, communities and wards (135 person-days {15
	person* 9 days * 15 house surveyed = 2025})

8. Professional staff & Qualifications/ Experiences required

9. Expected deliverables and proposed payment schedule

Payment will be made in instalments based on satisfactory completion of the deliverables and submission of the reports:

S.N	Deliverables	Months of engagement (Target Delivery date) Within 7 days of	Payment schedule
	Inception report with methodology and detailed work plan as highlighted above in the scope of work section.	contract issuance	
2	Rapid vulnerability assessment report with structural and functional attributes with vulnerability scenarios generated based on the indicators for the study area (Intermediate progress report to be submitted)	With in 1 month of submission of inception report	30%
3.	Validation and endorsement of report and all products including submission of map atlas of GIS based products	With in one month of submission of intermediate progress report	30%
4.	Final Report with Process documentation, database including completion of capacity building activities of the ward and municipal staff on rapid vulnerability assessment	With in one month of validation and endorsement from local level	20%
	Total		100%

9. Coordination and Liaison

The consulting company shall work in closely with Project Team members in UNDP/CDRMP, under guidance of the National Project Manager and in close coordination with the Project Coordinator and respective Municipal Technical Officers. Besides, if needed consulting company should facilitate/ coordinate with the field team and information management officer in order to understand critical aspects which inform him about the work consulting company is doing as well as to ensure the sustainability of the activities. The consulting company should perform planned activities under this assignment with full professional commitment and dedication to ensure the quality and timely accomplishment of proposed activities.

10. Monitoring and Reporting:

The consulting company/firm shall work in close consultation with CDRMP team under the overall guidance of Project Manager and direct supervision of Project Coordinator. The company/firm should work very closely with CDRMP Municipal Technical Officer and Information Management Officer in respective metropolitan and municipality. Monitoring & Evaluation (M&E) will be conducted regularly by the UNDP team. Consulting company should ensure that there will be no changes in either the technicality or the timing of key deliverables. In any unavoidable circumstances, consulting company should inform the situation so that right decisions can be taken on time.

Consulting company shall bear equal responsibility for monitoring of tasks under this assignment, focusing on the collection of views, experiences and feedbacks. Feedback from CDRMP team should be incorporated into the finalization of the report.

11. Copyright of Publication and Production of Materials

All developed products and reports under this ToR will belong to UNDP and the Consulting company will not have any right to publish them all or partly in any forum/print material.