

Date: 4 June 2018

UNITED NATIONS DEVELOPMENT PROGRAMME
Comprehensive Disaster Risk Management Programme (CDRMP)

Terms of Reference

Expert guidance on earthquake engineering to the Government of India funded project on provision of socio-technical facilitation services to housing reconstruction in Gorkha district

Position:	Earthquake Engineering Expert
Duty Station:	Remotely from respective working institution, with visit to Kathmandu or Gorkha when needed
Duration:	Upto 60 days (from June 2018 – March 2021)
Type of Assignment:	Individual Consultant
Number of Positions:	Three
Project Title:	Socio-technical facilitation for housing reconstruction to GOI supported housing reconstruction in Gorkha District
Expected Starting Date:	June 2018

1. Background

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 is the backbone of the UNDP's disaster risk management (DRM) program, and the key ministries and departments.

Comprehensive Disaster Risk Management Programme (CDRMP) has been formulated as part of the Strategic Partnership Framework signed between the Bureau for Crisis Prevention and Recovery (BCPR) and UNDP, and in accordance with the Nepal Risk Reduction Consortium. The programme aims to strengthen the institutional and legislative aspects of DRM in Nepal, by building the capacities of Ministry of Home Affairs, other ministries, and local governments. CDRMP also establishes strategic linkages between DRM and development sectors.

programme's intervention in the area of Building Code, Risk Sensitive Land Use Plan, Safer Construction practices, climate risk management, community-based disaster risk management, and emergency preparedness and response aims to strengthen the overall system of disaster risk management in Nepal.

After 2015 earthquake, UNDP has been intensively engaged in supporting the Government of Nepal and affected communities in reconstruction and recovery efforts. UNDP coordinated Post Disaster Need Assessment (PDNA) and Post Disaster Recovery Framework (PDRF) processes, supported development of disaster resistant technologies and articulation of compliance norms, undertook large scale information education and communication campaigns through various means like TV, radio and mobile vans. UNDP also provided support through expert resource persons for strengthening institutional setup of the National Reconstruction Authority (NRA) and Ministry of Urban Development (MOUD) at national and district level to implement reconstruction program. CDRMP, through its initiatives and reconstruction projects, has focused its attention at addressing the last mile connectivity issues facing the owner driven reconstruction, to equip households with knowledge and skills to rebuild in resilient manner.

2. Context

Nepal is prone to disasters – earthquake, floods, landslides amongst others. Given widespread unsafe building practices, particularly in rural Nepal, the houses are under risk during every disaster. Building disaster resistant houses is essential to minimize the loss of lives and overall impact from the disaster on socio-economic well-being of people. The Government of Nepal (GON) has committed to a speedy earthquake recovery with support from various donors including the Government of India (GOI) with an objective of reducing future risks through reconstruction of safe houses for the affected families who have lost their houses in the 2015 earthquake. The GoN's reconstruction initiative will support about 700,000 affected households in 14 most affected districts whose houses will be reconstructed. The GOI is committed to support 50,000 house owners in two districts of Gorkha (26,912 houses) and Nuwakot (23,088 houses).

Both the GON the GOI recognize the need to facilitate the housing reconstruction process and enable the owners to undertake reconstruction in desirable and timely manner as per the established technical guidelines. The GOI, therefore, has sought UNDP's engagement in providing socio-technical facilitation to house owners constructing their houses through the GoI's financial assistance in Gorkha district. It is envisaged that the house-owners would complete the construction satisfactorily in next three years with available financial assistance and socio-technical support.

Socio technical facilitation support for housing reconstruction will be provided in erstwhile VDCs identified jointly by the GoN and the GoI. 25 VDCs and 2 municipality in Gorkha were identified covering 26,912 house owners. As per the GON's transition to the new Federal system, these VDCs and municipalities have been reorganized into 6 rural municipalities and 2 urban municipalities.

To deliver effective and high-quality socio-technical facilitation services to the 26,912 households in Gorkha, UNDP has partnered with the Owner Driven Reconstruction Collaborative (ODRC). ODRC is a network of registered institutions in India working to support national and state governments in instituting and facilitating the owner driven housing reconstruction process. ODRC in Nepal includes four participating organisations from India i) Hunnarshala Foundation, ii) UNNATI – Organisation for Development Education, iii) SEEDS Technical Services; and iv) Centre for Ecocentric Development and Peoples' Action (CEDAP). All four organisations are collectively referred as ODRC in this document.

The project interventions on providing facilitation support encompasses 6 major components, that are:

- a) Facilitation of administrative procedures regarding inclusion, grant release and certification
- b) On-site technical advice and guidance on construction technology, design options, disaster resistant features, government norms, material procurement and construction management.
- c) Technical services of design drawings, preparation for building permit process.
- d) Capacity building of all project participants, particularly house owners and masons
- e) Concurrent monitoring and quality assurance
- f) Facilitation of Use of Appropriate Disaster Resistant Technologies

3. Objectives of the Assignment

3.1 The overall objective:

Technical experts on earthquake engineering will provide technical solutions and back stopping support and guidance to Project Management Team (PMT), Core Technical Team (CTT), District Support Team (DST) and GP/NP teams on any complex aspects of construction technology and practice that would unfold on ground in Gorkha, which are hindering the reconstruction processes.

3.2 Specific Objectives:

- Provide guidance to, and when needed, undertake seismic performance assessment, and structural analysis and designing of the new buildings or those requiring correction or strengthening.
- Provide guidance and instructions regarding seismic strengthening and retrofitting measures, or any unresolved issues related to technical aspect that are hindering the reconstruction processes.
- Provide advisory support and guidance/instruction on undertaking alternative construction technologies and materials, that are appropriate to the context
- Provide guidance and instructions on various aspects of pre-dominant construction technologies and practices, especially stone in mud/cement mortar, brick in mud/cement mortar, RC construction
- Undertake field visit or review and participate, when required in meetings /workshops/seminars to articulate the technical aspects of reconstruction, achievements and learning.
- Provide any other ideas and advisory support felt necessary by the expert or UNDP for effective outcome of the reconstruction project

The Expert will be called upon to perform specific list of tasks defined in accordance to any of the above enlisted objectives, along with estimated/required efforts/inputs. The Expert will be required to submit in writing report/recommendations/drawings/illustrations, etc. of the specific tasks.

4. Expected Outputs

- Deliver outputs as per the specific objectives defined above, and in the manner prescribed.
- Noting that requests for inputs and advisory support may be received at very short notice, the Expert Consultant can work from home office and if needed make field visit to Gorkha, which will be decided by UNDP upon assessment of the complexity of the technical issue.

5. Required Qualification/ Experiences

Education:

- Master's degree or equivalent in structural engineering, civil engineering, earthquake engineering or relevant field. Ph.D. will be preferable.

Experience:

- At least 20 years of work experience in the relevant field of seismic performance assessment, structural analysis, seismic strengthening and structural designing.
- Experience and very good understanding of processes relating to post earthquake damage assessment and reconstruction, is most desirable.
- Knowledge and experience on alternative construction technologies with sound knowledge on various aspects of structural integrity and pre-dominant construction technology, especially stone in mud/cement mortar, brick in mud/cement mortar, RC construction.
- Understanding of the rural context, hilly ecological region of Nepal and challenges it poses will be an asset

Language:

- Excellent command on spoken and written English. Knowledge of Nepali language is preferred.

6. Key Deliverables, Timeline and Payment Schedule

Sn	Key Deliverables	Number of days	Payment schedule
			June/2018 – March/2021
1	Upon the submission of the task report 1: <ul style="list-style-type: none">▪ Advisory support provided on technical aspects of earthquake engineering, structural assessment/analysis, seismic strengthening, alternative technologies, remedies and corrections, etc.	Upto 10 days	10 x Daily Rate
2	Upon the submission of the task report 2: <ul style="list-style-type: none">▪ Advisory support provided on technical aspects of earthquake engineering, structural assessment/analysis, seismic strengthening, alternative technologies, remedies and corrections, etc.	Upto 10 days	10 x Daily Rate
3	Upon the submission of the task report 3: <ul style="list-style-type: none">▪ Advisory support provided on technical aspects of earthquake engineering, structural assessment/analysis, seismic strengthening,	Upto 10 days	10 x Daily Rate

Sn	Key Deliverables	Number of days	Payment schedule
			June/2018 – March/2021
	alternative technologies, remedies and corrections, etc.		
4	Upon the submission of the task report 4: <ul style="list-style-type: none"> ▪ Advisory support provided on technical aspects of earthquake engineering, structural assessment/analysis, seismic strengthening, alternative technologies, remedies and corrections, etc. 	Upto 10 days	10 x Daily Rate
5	Upon the submission of the task report 5: <ul style="list-style-type: none"> ▪ Advisory support provided on technical aspects of earthquake engineering, structural assessment/analysis, seismic strengthening, alternative technologies, remedies and corrections, etc. 	Upto 10 days	10 x Daily Rate
6	Upon the submission of the task report 6: <ul style="list-style-type: none"> ▪ Advisory support provided on technical aspects of earthquake engineering, structural assessment/analysis, seismic strengthening, alternative technologies, remedies and corrections, etc. 	Upto 10 days	10 x Daily Rate

7. Coordination and Liaison

The Expert Consultant will liaise with National Project Manager including the Project Management Team of the project in UNDP/CDRMP. The Expert Consultant should work closely with ODR partners and the project staffs.

If needed, the Expert Consultant needs to support in facilitating discussions on technical aspects with the GON counterparts in National Reconstruction Authority and MOFAGA and MOUD CLPIUs. The duration or the time management should be prioritized according to the need of the project ensuring effective implementation of the overall project and as per the requirement of project team.

8. Monitoring and Reporting

The Expert Consultant will report to the National Project Manager, who will monitor the quality of deliverables. The payment will be based on the approval of the timesheet and associated deliverables by UNDP's NPM and after verifying the deliverables.

The Expert Consultant should ensure that there will be no changes in either the technicality or the timing of key deliverables. In any unavoidable circumstances, IC should inform the situation so that right decisions can be taken on time. He/she should bear equal responsibility for monitoring of tasks under this assignment, focusing on the collection of views, experiences and feedbacks.

9. Copyright of Publication and Production of Materials

All developed products and reports under this ToR will belong to UNDP and the Individual Consultant will not have any right to publish them all or partly in any forum/print material. Any contribution made by the Consultant in publications, etc, will be acknowledged. Also with due acknowledgement to UNDP, Individual Consultant may use material (e.g. IEC material) meant for public purpose while Copyright would remain with UNDP.

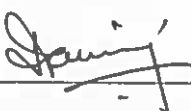
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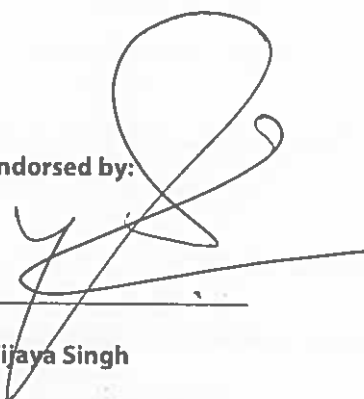
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