

Terms of Reference

Revision of Climate Responsive Watershed Condition Assessment Methodologies and Guidelines for Integrated Watershed Management

Type: Consulting Firm

Location: Kathmandu with Travel to Field

Additional Category: Resilience and Climate Change

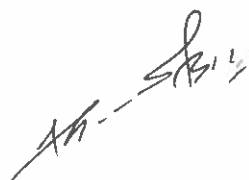
Starting Date: 01 August 2022

Duration: 20 days over 1 month

1. BACKGROUND

The Mid hill mountain catchments are prone to multi-hazards (drought, landslides and floods) and impacts are magnified by the extreme changes in climatic conditions. The increased frequency of flood and landslide disasters causing extensive damages on economy, life, properties, and consequently on livelihood. At the other extreme, water scarcity and droughts also pose a threat to the agriculture-reliant livelihoods. Climate change is increasing the temporal and spatial variability of rainfall and runoff, thus intensifying the problem of excess water during the monsoon and water scarcity during the dry season which is threatening on food security. Using an Integrated Watershed Management approach for planning, implementation, and resilient livelihood development GON/UNDP/GEF is implementing a pilot project “Developing climate resilient livelihoods in the vulnerable watershed in Nepal” (DCRL) in Lower Dudhkoshi watershed covering 8 local government units (Palikas) of Khotang and Okhaldhunga districts. The project envisioned systematic intervention of IWM programs through enabling policy, institutional arrangement, and application of modern tools and techniques. As a part of this, watershed condition assessment using modern tools and techniques is one of the important initiatives of the project to capture the essence of watershed conditions assessment through application of modern tools, techniques, and methodologies. The watershed condition assessment methodology play the vital role to understand the physical and biological characteristics and processes that affect the ecological, social, and economic functions in the context of climate change and also provide the foundational role for priority intervention using limited budget and resources.

Integrated Watershed Management is an ever-evolving practice and involves diverse management approaches for the restoration of functional integrity of watersheds through managing land, water, biota, and others resources in a sustainable way. Further, impacts of climate changes have also aggravated the problems in most of the watersheds and connecting the linkages of climate change for watershed condition assessment is becoming essential. The systematic plan of interventions to address all these multi-facets problems may effective once the watershed conditions are assessed using appropriate methodologies and guidelines. The application of previously developed guidelines, methodologies has shortcoming to address all above mentioned multifaced problems and has realized the appropriate assessment guidelines, methodologies using emerging tools and techniques. Keeping all these contexts, DCRL project has taken proactive steps to prepare the appropriate watershed conditions assessment methodologies and practical guidelines through the incorporation of modern, adaptive skills, knowledge, and techniques.



All such scenarios reflects that there is urgent need to update the existing watershed condition assessment methodology to address the multi-faced problems. Keeping this importance, this assignment is focused to review the existing methodologies to take stock of climate resilient approaches, extract the gaps and develop the appropriate guidelines and methodologies to prepare the robust and practical guidelines applicable for watershed condition assessment and effective implementation of the IWM programs in the changed context.

4. OBJECTIVES OF THE ASSIGNMENT

The main objective of this assignment is to develop the robust, comprehensive practical methodologies and guidelines for watershed condition assessment that addresses the evolving climate risk and vulnerability by providing a foundation of risk informed program planning and intervention. The specific objectives includes to;

- Assess and review the existing available guidelines and methodologies to undertake the watershed condition assessment, sub watershed planning, and take stock of gaps based on analytical evidence of available documents on watershed condition assessment.
- Prepare the robust, comprehensive practical methodologies and guidelines for watershed condition assessment for climate responsive watershed management.

5. SCOPE OF WORK

The scope of work includes;

- i. **Stock taking with Analytical work:** Proper desk study and interview/interactions, joint meeting shall be conducted to collect the existing watershed condition methodologies and guidelines available to date. The team of experts shall go through detailed review of all relevant documents. Inception report will be shared that outlines detail approach and methodology, workplan, and challenges for the assessment
- ii. **Developing Suitable Methodology:** **To assess the watershed condition, biophysical and socio-economic, climatic and other pertinent data are essential.** Based on both secondary and field based data, the watershed condition is suggested to analyse. In order to achieve this, develop the suitable methodologies and operational procedures for the following thematic areas (however, but not limited to) applicable for watershed condition assessment:
 - a. Landslide Hazard Assessment methodology*¹
 - b. Surface Erosion mapping methodology
 - c. Flood Risk Assessment methodology *¹
 - d. Drought Assessment methodology*¹
 - e. Land Degradation Assessment methodology*¹
 - f. Environmental Vulnerability Assessment methodology*¹
 - g. Climate Vulnerability Assessment

*¹ The assessment methodology developed by Institute of Engineering shall be contextualized



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SN	Activities	Deliverables	Delivery Timeframe
		make a presentation among DoFSC and concerned official and TWG	
3.	Final Report	<ul style="list-style-type: none"> Submission of final report on watershed assessment methodology and guidelines after incorporating feedback from TWG and concerned government officials in the final draft report 	Within 30 days after signing the contract

8. REQUIRED QUALIFICATION AND EXPERIENCE

The proposing consultancy firm must have the following qualification and experiences:

- At least operation for 5 years in undertaking assessments, studies, inventory, assignments related to climate change, disaster risk management, watershed management, integrated policy research, and other relevant assignments.
- Evidence of managing similar contracts value of USD 10,000 or above in the past.
- Demonstrate the analytic capacity and ability to process, analyse and synthesise complex, technical information to produce high quality reports.
- Proven expertise and experience in research initiative issue related to climate change, and watershed management issue with sector focus on the government system.
- Experience working with and in partnership with government line agencies, UN, INGOs in the field of climate change, watershed, forestry and natural resources.

9. REQUIRED QUALIFICATION OF TECHNICAL EXPERTS

EXPERTS	QUALIFICATIONS & Work Experience	ROLES & RESPONSIBILITIES
Team Leader/Watershed Expert	<ul style="list-style-type: none"> Masters in Forestry, watershed management, Natural resource Management or related field; (PhD in any of above mentioned discipline is preferred) Completed at least 3 similar assignments in the past S/he must have minimum of 10 years proven experience in the related disciplines, and prior experience in watershed condition assessment Must have strong skills on watershed related assessments and multi-stakeholder consultations; Proven experience in leading a team of experts on similar assignments as per the scope of the work 	<ul style="list-style-type: none"> Coordinate and liaison with project team, relevant stakeholders etc. Consultation with TWG, DFSC, BMCs and provincial SWMO for finalization of parameter and methodology Development/revision of watershed condition assessment methodology and guideline Ensure the quality of the assignment, track the progress. and accomplish on time Disseminate/share the revised methodology and guidelines among DOFSC and concerned officials Handover the guideline to DCRL

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Instalment	Milestone	Payments
1 st	Submission of inception report and presentation	20%
2 nd	Submission and presentation of draft version of guideline	60 %
3 rd	Acceptance of Final Report	20%

12. WORKING ARRANGEMENT

The expert will work under the overall direction of National Project Director and day to day supervision of the National Project Manager. The technical expert will work closely with and under the guidance of the Senior Technical Advisor. Additionally, will further receive guidance from UNDP Portfolio Manager and Programme Analyst in the overall guidance to complete the assignment. The technical expert will be given access to relevant information necessary of execution of the tasks under this assignment. The experts will be responsible for providing his/her own working station (i.e. laptop, internet, phone, printer/scanner etc.) and must have access to a reliable internet connection. The consultant should contact himself with the concerned officials for consultation to acquire the relevant information related to this assignment in close coordination with National Project Manager and Senior Technical Advisor. The experts should also be available for virtual meetings organized by the project with project partners.

13. SUBMISSION OF PROPOSAL

A consultancy firm/NGO needs to submit following documents while applying for the assignment:


- i. Technical and Financial Proposal (in separate sealed envelop)
- ii. Firm/NGO Registration Certificate
- iii. VAT Certificate and Tax clearance certificate
- iv. Firm/NGO Audit report
- v. Brief profile of the firm/NGO including evidence of past experiences
- vi. Signed resume of the proposed expert for the assignment

14. EVALUATION OF PROPOSAL

Applications will be evaluated on the basis of 'Combined Scoring method' that will give due consideration where the technical proposal i.e. work experience in relevant field, proven capacity on assessment on related work at national level will be weighted a maximum of 70% and combined with the financial proposal offer which will be weighted a maximum of 30%.

Prepared By:

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 Date: 20/07/2022