

Government of Nepal  
 Ministry of Forests and Environment  
**Building a Resilient Churia Region in Nepal (BRCRN)**  
 Project Management Unit (PMU)  
 Provincial Project Management Unit (Itahari – Province 1)

**Terms of Reference**

<b>Expertise:</b> Engineer	<b>Selection Type :</b> Individual Consultant
<b>Selection Method :</b> QCBS	<b>Estimated Input Days:</b> 150 days
<b>No of Position :</b> 1	
<b>Programme/Project Number:</b> GCP/NEP/076/GCF	
<b>Duty Station:</b> Provincial Project Management Unit (Itahari – Province 1)	
<b>Expected Start Date of Assignment:</b>	<b>Duration:</b> A total 6 months period up to July 15, 2023
<b>Language:</b> Language in fluency in oral and writing: English and Nepali and preferably local language	
<b>Reports to:</b> .....	<b>Title:</b> Provincial Project Coordinator

General Description of task(s) and objectives to be achieved

**Background**

The project “Building a Resilient Churia Region in Nepal” (BRCRN) was approved by the 24<sup>th</sup> meeting of the Board of the Green Climate Fund (GCF) in November 2019, and is Nepal’s first full-size GCF project. FAO, as the nominated Accredited Entity (AE) for the project, is responsible to the GCF for implementation of the project and is also co-Executing Entity (EE) with the Ministry of Forest and Environment (MoFE) of the Government of Nepal (GoN). The BRCRN project will be implemented in 26 critical river systems in the southeast region of Nepal, covering parts of Provinces I, Madhesh and Bagmati, linking the Churia hills and upper Terai, and aims to promote widespread adoption of climate-resilient land use practices, confront the challenges of deforestation and forest degradation, better maintain the forest ecosystem in the Churia hills, and build resilience to climate-induced hazards.

The Project Management Unit (PMU) has been established at the MoFE and led by a full-time National Project Director (NPD). The PMU is responsible for implementation of project activities according to the Annual Work Plan and Budget AWPB. The MoFE has established three provincial PMUs; one each in Provinces I, Madhesh and Bagmati, collectively named as PPMUs. The PPMUs will provide operational leadership in managing the Government’s co-finance and GCF funding component of the BRCRN project, within their respective jurisdictions, according to the regulations and guidance set out in project documents. They will be mainly responsible for field coordination and organizing provincial level planning to develop provincial level AWPB for delivery and oversight of project activities at the province and local level.

The Project will provide support to construct small structures that will play a crucial role in reducing community vulnerability to climate change impacts, accounting for both upstream and downstream dynamics in each of the targeted river systems. In particular, these structures will reduce erosion risk in upstream areas, and reduce sedimentation and flooding risk and water stress in mid and downstream areas. Specific sites for check dams, stabilisation measures and other local infrastructure has been identified through the Critical Ecosystem Restoration Plans (CERPs). CERPs have identified priority locations (based on extent of resource degradation and climate change-related risk including vulnerability assessment) and types of structures to be built in each river systems of Madhesh Province. Details of the sites are identified in the 13 in province #1, eight CERPs of Madhesh

Province and Five in Bagmati Province.

In this context, there is a need for technical guidance, supervision and quality control of soil and watershed conservation related structural works in BRCRN river systems. For this, PMU will be recruiting engineers at three provinces to be stationed at PPMU. The engineers will work in close consultation with the provincial technical officer in PPMU, provincial forest and agriculture ministries, municipalities/rural municipalities, Koshi river basin management centres and relevant CBO Beneficiaries to develop detailed technical specification, technical standard guidelines including bid documents to hire service providers for construction works, supervise civil works during construction of check dams, gully stabilization measures and other local infrastructure including bioengineering measures. In particular BRCRN focuses on following soil and water conservation measures for ecosystem restoration and sustainable natural resources management:

- **Siltation prevention measures of river tributaries (check dams):** To reduce disaster risks and other negative impacts on land use systems emerging from water bodies and sediment accumulation. The check dam designs to focus on siltation management and prevention that will protect the hydrological functions of river systems. The designs should consider strategic construction and maintenance approach with locally adapted structural types that effectively trap deposits and regulate water flow with proper integration of vegetative measures up and downstream of the dam sites.
- **Gully stabilization through contour bunds and stone walls :** To control surface runoff by increasing infiltration and trapping moisture, as well as soil protection measures and slope stabilization. Measures include bioengineering and physical measures such as bunding, terracing, levelling, and trenching, and building structures for diversion of surface runoff such as grassed waterways and weirs.
- **Riverbank stabilization (Physical structures) :** Physical structures such as gabion and loose stone walls in combination with vegetative measures to focus on sensitive parts of water bodies such as bottlenecks or especially steep or shallow areas. Existing best practices with locally available materials should also be explored and promoted.
- **Conservation Ponds (Embankment Type or Dugout Type):** The project focuses on new construction as well as rehabilitation of existing ponds and waterbodies. This rehabilitation can be combined with suitable agroforestry practices in order to create an integrated tree – water pond – system with multiple benefits including aspects of recreation and tourism.

## **B) Scope of Work**

Under the overall guidance from the BRCRN National Project Director, in direct supervision from Provincial Project Coordinator and in close consultation with PMU forestry specialist, PPMU forestry and/or soil conservation Technical Officer, FAO TA and in coordination with Divisional Forest Officers, Soil and water conservation officers, the consultant will undertake the following activities:

## **C) Detailed Tasks and/or Expected Output,**

Task 1: Conduct technical feasibility of the CERP recommended soil and water conservation measures including site verification:

- Review BRCRN CERP and ESMP documents for all river systems to identify and locate the sites for soil and water conservation measures.
  - Conduct site visits in close coordination and leadership of PPMU technical officers, to verify and validate the CERP recommended sites for appropriateness and technical feasibility of all soil and water conservation structures with following considerations:
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- Suitability of each structure within selected site to reduce climate vulnerability and maximize resilience benefits in response to the climate change impacts/challenges identified in the CERPs and other relevant plans.
- The owner(s) of the selected sites (whether privately owned, community owned or government owned) consent to the use of the land for the proposed structure(s).
- Submit technical feasibility field report to PPMU, PMU and FAO-TA with detailed information about structure type, location, total cost and resource leveraging possibility at local level.

**Task 2: Develop detailed technical standard guidelines for soil-water conservation related structural works :**

- Review and document existing practices of watershed, soil and water management, gully control, siltation prevention and riverbank stabilization for churia region and adjoining lower areas in close consultation and coordination with PPMU technical officers, President Chure Terai Madhesh Conservation Development Board, Koshi Basin Management Center (Udaypur), soil and watershed management offices to identify appropriate structural and soil-water conservation measures for BRCRN.
- Design appropriate structures including bioengineering measures and prepare detailed technical specifications with cost estimate for all structures.
- Prepare standard operating guideline for implementing the civil construction and soil and water management works.

**Task 3: Develop bid documents for the construction works to hire the Service Providers:**

- Prepare ToR and standard bid documents including technical specifications, drawings and Bill of Quantities for all soil-water conservation related structural measures in compliance with the Nepal government public procurement regulations.
- Perform evaluations of the bidders in close consultation with PPMU, PMU and FAO TA.
- Conduct necessary technical discussions and negotiations to hire the service provider.

**Task 4: Supervise and quality control of civil works in close coordination with provincial Project Management Unit's (PPMU) technical officers:**

- Prepare a supervision and quality control plan in close consultation with PPMU technical officers and FAO TA.
- Conduct periodic supervision (quarterly) at river system level through site visits to observe the quality of construction and restoration works,
- Check, approve and recommend for the payment of the completed work
- Submit periodic supervision and quality control report to PPMU, PMU and FAO TA.
- Submit progress reporting for monthly, quarterly, bi-annual and end of year progress report.

**Task 5: Liaison and Capacity Building**

- Liaise with provincial, district and local level organizations especially with provincial technical officers in PPMU, provincial forestry and agriculture ministry, rural/municipalities, Koshi Basin Management Centres and relevant CBO Beneficiaries to identify and document existing best practices on sediment management, slope protection, gully control, river bank stabilization for scale-up/scale-out possibilities for BRCRN.
- Participate in BRCRN organized events at provincial, district and local levels including trainings to municipalities and CBOs to orient on quality control of civil works, activity monitoring and reporting.

**Task 6: Performance and Coordination with PPMU/PMU and FAO TA**

- Timely initiation and completion the activities mentioned in AWPB
- Adherence to the project documents and AWPB
- Honor and adhere to the GESI and safeguard policy of the Government of Nepal, MoFE and Project
- Respect and honor the instructions provided by PMU, PPMU and FAO-TA

**D) Qualification and Experience of Consultant and the estimated time**

**D1) Minimum qualification and experience of expert shall be**

- Bachelor degree in Civil Engineering with at least 5 years of proven experience in related field.
- Proven experience in integrated watershed management activities planning, implementation, monitoring and evaluation will be an advantage;
- Experience on designing and delivering technical specifications, bid documents, engineering and natural resources guidelines.
- Proven track record of advising and collaborating with government institutions and other stakeholders;
- Proficiency in Microsoft office products and Engineering design software applications such as Autodesk CAD, Civil 3D, HEC-RAS and others;
- Basic knowledge of GIS and Google Earth ;
- Proficiency in both spoken and written English;
- Strong inter-personal skills and excellent oral communication skills.

Note : A higher degree in related field will get added value. Preference will be provided for highly experienced expert and the experience of expert after bachelor degree shall only be considered for evaluation.

**D2) Estimated Input Time/Days**

The consultant shall provide his/her service for 150 estimated input days in a regular basis over 6 months period. The consultant shall have to work onsite at client office. The payment of consultant shall be based on the actual input days.

**E) Time for commencement and completion of assignment by the consultant**

The expected date for the engagement of consultant for the above mentioned service is tentatively from January 2023 and up to July 2023 with possibility of extension. An extensions are subject to operational needs, consultant performance, and continued availability of funds.

**F) Details of the information, physical facilities and equipment to be provided by Public Entity to the consultant**

Client will provide the physical office space, internet connection, stationery and printing facility while working. The consultant him/her self shall arrange other requirement like transportation vehicle, laptops/computer and necessary software required etc.

**G) Details of the report, data, drawing and survey report etc. to be submitted by the consultant.**

key performance indicators

Expected Outputs:	Required Completion Date:
<ul style="list-style-type: none"><li>• Technical Feasibility Field report</li></ul>	Latest by February 2023

<ul style="list-style-type: none"> <li>• Technical standard operating guideline for soil-water conservation related structural works</li> <li>• Bid documents for the construction works</li> <li>• Supervision and Quality control report</li> <li>• Documentation report of existing soil-water conservation related best practices and scale out/scale-up designs for BRCRN</li> <li>• Capacity building training content to municipalities and CBOs on activity monitoring of civil and soil-water conservation works</li> <li>• Bi-annual and end of year progress report</li> </ul>	<p>Latest by March 2023</p> <p>As and when required</p> <p>Quarterly basis</p> <p>May 2023</p> <p>August 2023</p> <p>15 July 2023</p>
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