Government of Nepal
Ministry of Forests and Environment
Department of Forest and Soil Conservation
FEDERAL WATERSHED MANAGEMENT RESOURCE CENTER
Kulekhani, Makawanpur

Gandaki Basin Climate Resilient Project (GBCRP)

Terms of Reference (TOR)

for

*Hiring of **Engineer (Civil/Water Resources)** for Technical Support in Design, Estimation, Supervision, and Implementation of Small-Scale Infrastructure and Nature-Based Solutions under the Gandaki Basin Climate Resilient Project (GBCRP) at Federal Watershed Management Resource Center (FWMRC), Kulekhani*

नेपाल सरकार
वन तथा वातावरण मन्त्रालय
वन तथा भू-संरक्षण विभाग
संघीय जलाधार व्यवस्थापन श्रोत केन्द्र
कुलेखानी, मकवानपुर

F/Y: 2082/83

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POSITION TITLE: ENGINEER (CIVIL/WATER RESOURCE)

Number of Position: One (1)

Duration: Initially for the current fiscal year (2082/83), extendable based on performance and FEO Kulekhani needs.

1. BACKGROUND

Gandaki Basin Climate Resilient Project (GBCRP) is a seven-year initiative funded by the Green Climate Fund (GCF) with a total budget of USD 32.7 million, including USD 27.4 million in GCF grant and USD 5.3 million in co-financing from the Government of Nepal. The project is being implemented by the International Union for Conservation of Nature (IUCN) as the GCF Accredited Entity, in partnership with the Department of Forest and Soil Conservation (DoFSC) under the Ministry of Forests and Environment (MoFE), and the National Trust for Nature Conservation (NTNC) as executing entities.

The project aims to enhance the climate resilience of vulnerable communities and ecosystems within the Gandaki River Basin (GRB), which is home to more than 2.4 million indigenous people representing over 40 ethnic groups. The GRB is highly susceptible to the impacts of climate change, including increased rainfall intensity, floods, landslides, and droughts, disproportionately affecting women, Dalits, and marginalized communities who are highly dependent on natural resources.

GBCRP targets 19 districts across Bagmati, Gandaki, and Lumbini provinces and is structured around three key components: (i) Community Resilience, (ii) Ecosystem Resilience, and (iii) Climate Governance. It promotes a sustainable river basin approach through the integration of engineering measures and Nature-Based Solutions (NbS) such as bioengineering, bamboo check-dams, and vegetative restoration to address land degradation and climate vulnerabilities.

Field-level implementation of the project is undertaken through two Field Execution Offices (FEOs) established under the Department of Forest and Soil Conservation (DoFSC): the Basin Management Centre (BMC) in Kaski and the Federal Watershed Management Resource Center (FWMRC) in Kulekhani, which functions as one of the designated FEOs. The FWMRC, Kulekhani is responsible for implementing project activities across nine districts, namely Makwanpur, Chitwan, Nawalpur, Tanahu, Lamjung, Gorkha, Dhading, Nuwakot, and Rasuwa, in coordination with local stakeholders and executing partners.

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The project promotes the integration of engineering structures with nature-based solutions to strengthen the climate resilience of communities in the Gandaki River Basin through ecosystem-based adaptation approaches. To ensure effective implementation, technical guidance, supervision, and quality control of engineering-related works are essential. In this regard, the Field Execution Office (FEO), Kulekhani is recruiting a Engineer (Civil/Water Resource) with expertise in small-scale irrigation, water harvesting, and bio-engineering to support the planning, execution, and monitoring of project activities within its working districts.

2. JOB DESCRIPTION

The Engineer (Civil/Water Resource) will play a critical role in planning, designing, and supervising climate-resilient infrastructure interventions under the Gandaki Basin Climate Resilient Project (GBCRP), implemented by the Federal Watershed Management Resource Center (FWMRC), Kulekhani. The position requires expertise in small-scale irrigation systems, water harvesting techniques, slope stabilization, and bioengineering measures.

The Engineer will be responsible for conducting feasibility studies, validating proposed sites, preparing detailed engineering designs and cost estimates, and providing technical oversight during implementation. The role includes reviewing work by sub-engineers, ensuring compliance with government standards, integrating nature-based solutions, and supporting documentation and reporting for donor and government stakeholders. The Engineer will work in close coordination with field teams, community groups, and implementing partners to promote inclusive, climate-resilient, and environmentally sound infrastructure development across nine working districts in the Gandaki River Basin.

3. ACADEMIC QUALIFICATION:

- Bachelor's Degree in Civil Engineering or Water Resources Engineering from a recognized university
- Registered with Nepal Engineering Council (NEC)

4. PROFESSIONAL EXPERIENCE:

- Minimum 2 years of experience in design, estimation, and supervision of rural infrastructure projects.

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- Proven expertise in small-scale irrigation, slope stabilization, bund/embankment construction, and nature-based solutions (e.g., bioengineering, vegetative restoration).
- Experience in feasibility assessments, engineering drawing preparation, cost estimation, and compliance with national standards\
- Skilled in reviewing sub-engineers' technical outputs, field measurements, and verifying bills.
- Prior work in donor-funded or climate-resilient projects is highly preferred.

5. MAJOR DUTIES AND RESPONSIBILITIES:

a) Pre-Feasibility and Feasibility Assessment

- Conduct pre-feasibility and feasibility studies for proposed infrastructure interventions in coordination with FWMRC and implementing partners.
- Ensure technical, environmental, and social viability of proposed sites through site visits, data collection, and stakeholder consultation.

b) Site Selection and Validation

- Verify and validate proposed infrastructure sites identified by IUCN's consulting firm through field visits and community consultation.
- Prioritize intervention areas based on feasibility and baseline assessments.

c) Risk Assessment

- Conduct preliminary risk assessments to identify erosion-prone areas, slope instability, sedimentation issues, and other potential hazards.
- Recommend site-specific nature-based or engineered solutions based on assessed risks.

d) Engineering Design and Cost Estimation

i. Prepare detailed engineering designs and drawings (plan, cross-section, longitudinal section) for infrastructure such as:

- Diversion Channels
- Check Dams
- Bunds and embankments

- Structural Support for rural roads and Landslide Treatment
- Small-scale irrigation systems
- Water Harvesting Structure
- Nature-based infrastructure (e.g., vegetative barriers, bioengineering measures)
- Other relevant soil and watershed conservation activities as identified in consultation with the Watershed Management Officer at FWMRC.

ii. Prepare detailed cost estimates including:

- Rate analysis based on district norms
- Bill of Quantities (BoQ)
- Abstract of Costs

iii. Prepare and support documentation for procurement and implementation, including:

- Preparation of contract documents
- Preparation of work agreements with implementing user group/partners or contractors
- Assistance in maintaining proper documentation and record-keeping for construction-related activities

e) Technical Review of Sub-Engineers' Work

- Review and verify technical designs, cost estimates, and Bills of Quantities (BoQs) prepared by sub-engineers
- Cross-check field measurements, calculation sheets, and estimated material quantities
- Incorporate measures for quality control, safety protocols and sustainability principles into the technical specifications to ensure the long-term effectiveness and resilience of the community and the ecosystem.
- Prepare the specification of construction materials and work units (eg. Gabions, Boulders, Brick-work, RCC, PCC, etc) as per GON guidelines.
- Ensure quality control and compliance with national standards and project guidelines in all technical documents

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- Review and verify measurement bills prepared by sub-engineers for accuracy, completeness, and alignment with actual work done on-site
- Provide necessary technical guidance and feedback to sub-engineers to ensure consistency and quality in outputs.
- Prepare work completion reports compiling final measurement, summary of cost and work executed in accordance with the approved design and specifications.

f) Compliance with Standards and Inclusion

- Ensure all designs follow Government of Nepal codes, norms, and standards
- Integrate gender responsiveness, safety, and universal accessibility into infrastructure planning and design
- Estimate labor demand including skilled, semi-skilled, and unskilled workers

g) Material and Site Information Collection

- Gather relevant site information including topography, land use, geology, vegetation cover, and settlement patterns
- Prepare material specifications (e.g., gabions, boulders, RCC, PCC, bricks) as per GoN standards

h) Consultation and Coordination

- Work closely in consultation with the Watershed Management Officer of FWMRC during all planning and implementation stages
- Coordinate with other project's engineers, sub-engineers, social mobilizers, local authorities and users committees.
- Provide technical guidance to field teams during construction and implementation

i) Monitoring, Measurement, and Supervision

- Support and supervise construction activities ensuring compliance with approved designs
- Conduct regular site inspections and verify work progress and quality
- Ensure accurate quantity measurement and documentation

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j) **Reporting and Documentation**

- Prepare and submit technical reports, designs, estimates, and field documentation
- Maintain records of pre-feasibility studies, feasibility reports, site selection rationale, and technical verification
- Assist in reporting to project leadership, GoN agencies, and donor partners as needed
- Any other tasks assigned by FWMRC officials as per needs of the project.

6. ADDITIONAL REQUIREMENTS:

- Proficiency in AutoCAD, Civil 3D, MS Excel, and other design and estimation software
- Basic knowledge and practical skills in the use of GPS, GIS tools, and Google Earth for site selection, mapping, and spatial data interpretation related to project infrastructure and planning activities.
- Possession of a personal laptop is preferable for efficient field and office work.
- Motorbike and valid driving license (preferred)
- Ability to work in remote and rural conditions
- Strong communication and teamwork skills

7. DUTY STATION AND TRAVEL REQUIREMENTS:

- Primary duty station: FEO Kulekhani/ other areas within the GBCRP area as assigned by the Chief of FEO Kulekhani based on project needs.
- Frequent travel: Required to field locations across the Gandaki Basin for site assessments, supervision, and consultations.

8. SELECTION CRITERIA:

The consultant will be selected based on relevant work experience and qualifications. The selection process will follow the approved criteria of FWMRC/GBCRP. The main criteria for the selection will be:

- Relevant work experience in infrastructure design, supervision, and estimation in watershed or similar projects.
- Academic qualifications in Civil/Water Resources Engineering.

9. REMUNERATION AND OTHER FACILITIES

- The remuneration for Engineer position under this project shall be as per the prevailing salary scale of the Government of Nepal for equivalent positions.
- Applicable taxes shall be deducted at the source as per the rules of the Government of Nepal.
- Staff may be eligible for travel and daily allowances (TA/DA) as per project guidelines when traveling outside the duty station for official purposes.
- No additional benefits such as gratuity, pension, insurance, or other allowances shall be provided beyond the agreement.

10. APPLICATION SUBMISSION PROCEDURE:

Interested and eligible candidates are requested to submit the following documents by 19th August:

i. A cover letter indicating interest and availability.
ii. Updated Curriculum Vitae (CV) with contact details.
iii. Copies of academic certificates and citizenship.
iv. Experience and training certificates.
v. Bank voucher showing the payment of an application fee of NPR 1200 deposited into the Government of Nepal revenue account at Nepal Bank Limited (Account No. 00101000000001001001, Office Code: 329013201, Revenue Title No.: 14224).

11. Submission Email / Address:

Submit electronically to: info@fwmrc.gov.np

Or, hard copy at: Federal Watershed Management Resource Center (FWMRC), Kulekhani, Makwanpur during office hour.

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