"Terms of Reference (TOR)"
For
Consulting Services for detail design estimates of GESI-responsive and context-appropriate renewable energy solutions integrated with springshed management for irrigation and drinking water supply

1. BACKGROUND

CEAPRED, in partnership with ICIMOD, has been implementing "**Integrated Climate Adaptation Solution for the Hindu Kush Himalaya Region" (HICAS)"** with pilot interventions in Roshi Rural Municipality of Kavrepalanchok district and Dhankuta Municipality of Dhankuta district. The project aims to improve the climate resilient and nature-positive livelihoods of rural women, and Indigenous People and Local Communities (IPLCs) – through management of springsheds, productive use of renewable energy for irrigation and dringking water, and agrobiodiversity.

THE PROJECT AIMS TO CONTRIBUTE TO ACHIEVE THE FOLLOWING RESULTS:

- Critical springshed selected for pilots and community-led institutional mechanisms established with the participatory co-design process.
- Integrated protocol implemented as part of gender-responsive integrated adaptation solution packages with the participatory co-design process in each pilot
- Training on springshed specific, gender responsive integrated adaptation solution package implementation and management provided to women's group, IPLC networks, local institutions in each pilot site.
- Outreach events organized to raise awareness of wider stakeholders and community on the implementation and management of the springshed specific, gender-responsive integrated adaptation solutions
- Evidence shared with policymakers and decision-makers to support the integration and upscale of gender-responsive, integrated adaptation solution packages into policies in Nepal.

THE PROJECT TARGETS THREE TYPES OF BENEFICIARY GROUPS:

The target groups of HI-CAS are as follows:

- **Direct - primary beneficiaries**:2000 Poor, marginalized and vulnerable individuals (60% women), actively engaged in action research, capacity building and policy advocacy.
- **Direct-secondary beneficiaries**: An additional 2000 people benefiting from increased food security, improved water access, and economic opportunities.

- **Indirect/tertiary beneficiaries:** Over 12,500 community members who will passively benefit from enhanced ecosystem services, climate resilience, and biodiversity conservation outcomes.

2. OBJECTIVE OF THE ASSIGNMENT:

A feasibility study of potential springsheds was conducted in HI-CAS project sites in Nov 2025 and potential springs for further work were prioritized in consultation with ICIMOD Springshed team. The feasibility study report with priority Springshed list is available at CEAPRED for reference. The objective of this TOR is:

To prepare the detailed design and cost estimate of the prioritized GESI-responsive and context-appropriate renewable energy solutions integrated with springshed management for irrigation and drinking water supply, including technical guidance during implementation of the schemes. The specific objectives are:

- To verify the current status, functionality, and potential of the already prioritized springs and associated water resources for irrigation and drinking water supply.
- To identify feasible and GESI-responsive renewable energy technologies that can be integrated with springshed-based irrigation and water supply systems.
- To prepare detailed design and cost estimates of the prioritized springsheds focusing on:
    - Springshed management
    - Water collection and distribution for irrigation and/or drinking water
    - Cost benefits analysis
- To recommend practical, inclusive, and sustainable renewable energy solutions tailored to local contexts for enhancing water security and livelihoods.

3. SCOPE OF WORKS:

- Conduct desk reviews and field assessments to evaluate the prioritized springs, irrigation, and drinking water systems, including community needs and GESI aspects.
- Verify and analyze technical and socio-economic data to confirm opportunities for integrating renewable energy solutions within springshed systems.
- Assess and verify the feasibility of renewable energy technologies (e.g., solar) suitable for irrigation and drinking water supply.
- Examine institutional, gender, and social inclusion dimensions to ensure equitable access, participation, and sustainability.
- Prepare detailed design and estimates of the prioritized springsheds using fully participatory approach for development and utilization of the springs for livelihood improvement
- Recommend practical, GESI-responsive methodology for implementation.

4. METHODOLOGY

Inception and Planning:

- Conduct an inception meeting with CEAPRED and stakeholders to clarify objectives, finalize study areas, and agree on the work plan and data collection tools.
- Prepare an inception report outlining methodology, field plan, and data collection framework.

Desk Review:

- Review of the Feasibility Assessment report and other project documents.
- Compile and analyze existing secondary data to establish baseline information.

Field Assessment and Data Collection:

- Carry out site visits to HI-CAS pilot sites in Roshi and Dhankuta Municipalities and review the status of prioritized springshed sites to assess and verify technical, social, and environmental conditions.
- Conduct co-design meetings with the potential beneficiaries of the springshed
- Document the needs and expectations of the beneficiaries, local irrigation methods, water use patterns, and renewable energy practices.

Technical and Socio-economic Analysis:

- Evaluate technical feasibility, cost-effectiveness, and scalability of potential renewable energy solutions through co-design meetings with the beneficiaries.
- Assess GESI dimensions, institutional capacity, and community readiness for adopting proposed solutions.

Validation and Reporting:

- Share preliminary findings in a consultation meeting with the potential beneficiaries at the Springshed sites for feedback and validation
- Share preliminary findings in a consultation workshop with stakeholders at both the pilot sites for feedback and validation.
- Prepare a detailed design and cost estimate report, incorporate feedback from CEAPRED and ICIMOD, and finalize the assessment report with practical recommendations.

5. DELIVERABLES:

- **Inception Report** will be submitted outlining the methodology, work plan, and assessment framework.
- **Field study will be conducted,** and co-design meetings and validation workshops will be organized in the field
- **Draft detail design and cost estimate report:** containing key findings, analyses, and proposed GESI-responsive renewable energy solutions integrated with springshed systems will be prepared and submitted to CEAPRED and ICIMOD for feedback.

- **Final detail design and cost estimate Report** incorporating the inputs, and feedback from CEAPRED and ICIMOD will be submitted at the end of the assignment.

6. QUALIFICATION AND EXPERIENCE

The ideal candidate for consulting service will have:

1. Master's degree in civil engineering with more than 10 years of working experience in RE sector in Nepal or Master's Degree in Renewable Energy with more than 7 years of experience in CIVIL works and RE sector.
2. Extensive knowledge and working experience in Productive Use of Renewable Energy (PURE) in agriculture sector in Nepal.
3. Proven track record in conducting design and cost estimate of GESI responsive appropriate renewable energy solutions integrated to springshed for irrigation and drinking water supply.
4. Proven track record in implementation of GESI responsive appropriate renewable energy solutions integrated to springshed for irrigation and drinking water supply.
5. Excellent communication and facilitation skills to deal with local level actors, women, youths, and indigenous and disadvantaged communities.
6. Demonstrated experience working with government agencies, local governments, NGOs, and development partners , particularly in the renewable energy, water, or climate adaptation sectors.
7. Strong understanding of national policies, standards, and guidelines related to renewable energy, irrigation, drinking water supply, and GESI .
8. Experience in community-based and participatory planning approaches, including stakeholder consultations and co-design processes.
9. Willingness and ability to travel to and stay in the remote field locations and work under challenging field conditions.
10. Good command in written and spoken Nepali and English languages.

7. DURATION OF ASSIGNMENT

The consultant will submit a cost proposal specifying duration of engagement and daily rate of remuneration excluding DSA and transportation. The DSA (food and accommodation cost) will be reimbursed separately following CEAPRED's DSA norms for actual days of stay in the field, and transportation will be arranged or actual cost paid by CEAPRED separately to cover round trip to/from Kathmandu and Field in both the pilot sites and travel within the pilot sites. The tax on remuneration will be deducted at source as per prevailing GON tax rules.

The consultant will submit schedule of work in the following format:

S. N	Activities	Days	Timeline
1	Preparation of Inception report including detailed work plan for both pilot sites (Roshi Rural Municipality of Kavre district and Dhankuta Municipality of Dhankuta district)		Feb 2026
2	Secondary data review including reviewing of Feasibility Study report, and documentation		Feb 2026
3	Field work for detail design and cost estimate in Roshi applying co-design and participatory approach+ validation workshops		March 2026
4	Field work for detail design and cost estimate in Dhankuta applying co-design and participatory approach+ validation workshops		April 2026
5	Data analysis and preparation of draft design and cost estimate report, and submission for comments		April, 2026
6	Finalization of detailed design and cost estimate report after incorporating input and Submission of final report to CEAPRED		April 2026
7	Technical backstopping support to HI-CAS team in the field for installation of the spring-based, solar powered irrigation schemes (intermittent engagement @ 1-3 days per month during construction period excluding July – Oct months)		May 2026 – June 2027
8	Assignment completion Reprot		July 2027

8. LOGISTIC SUPPORT

The project team will support in organizing meetings with communities and municipalities at project sites, districts and province levels as per need. The project coordinator and other project staff will support in data collection in the field.

9. REPORTING AND COORDINATION

The consultant will be reporting to focal person of HI-CAS at CEAPRED and work closely with HICAS/CEAPRED Project Coordinator as well as Springshed Specialist/Expert at ICIMOD. S/he will also be coordinating with M & E Manager, and GESI Manager at CEAPRED.