TERMS OF REFERENCE (TOR)

for

Consultancy Service for " Conduct detailed hydrogeological study and develop an integrated water resource conservation & use plan targeting community-based water supply system"

Organization	:	Renewable World
Deadline for application	:	4th February 2022
Start Date	:	1st March 2022
Anticipated Date for Deliverables	:	30th September 2022

1 Background

Renewable World (RW) is a not-for-profit international development organization that aims to alleviate poverty through access to clean, reliable renewable energy. We specialize in developing and deploying effective ways of bringing off-grid renewable energy solutions to the most remote and underserved communities, empowering them to achieve sustainable and resilient lives. Our mission is to "*lead in developing and deploying effective ways of bringing renewable energy at scale to poor communities, empowering them to achieve sustainable and resilient livelihoods*".

RW with its partners Local Initiatives for Biodiversity, Research and Development (LI-BIRD), Support Activities for Poor Producers of Nepal (SAPPROS), Sundar Nepal Sanstha/Beautiful Nepal Association (BNA), Dalit Development Society (DDS), and Working for Access and Creation - Nepal (WAC-Nepal) are implementing different renewable energy, livelihood, and conservation nexus projects in Surkhet, Salyan and Achham districts of Nepal under Renewable Energy for Change (RE4C) program. Under RE4C program, RW together with LIBIRD, BNA, and DDS is implementing a project named Renewable Energy Access for Livelihoods in fragile buffer Zones (REALiZe) in Surkhet and Salyan district. Similarly, in Achham district RW together with SAPPROS and WAC-Nepal is implementing Using Renewable Energy to Kickstart Agriculture in Achham (UREKA) project. These projects include access to water component either utilizing renewable energy i.e., solar powered water lifting schemes, and gravity water supply schemes, which is then linked to other components of the project such as livelihood and income generating activities, conservation etc.

Springs are the primary water source for millions of people in the mid-hills of the Hindu Kush Himalayas (HKH) and supply most of water needs for domestic uses. In addition to springs other sources of water for HHs and domestic purpose that are seen in rural communities of Nepal are spring fed streams, water well (shallow and deep), etc. Therefore, springs fed streams and rivers are critical to hills and mountain ecosystems. In the recent year's attention towards spring revival and protection, ground water recharge is growing with the increasing concern of these water sources drying up and their discharge is reducing over the time, though the quantitative evidence for this is low. The decline in discharge in springs and other water sources has a direct impact on remote villages who rely on these water sources for domestic and other productive uses such as agriculture thus threatening the water security of these hilly rural communities. Water scarcity coupled with poverty and limited options for alternative livelihood will further decrease the resilience of the people to deal with extreme climatic conditions in the long run. Therefore, there is a pressing need to protect and conserve the springs and underground flows. Spring revival efforts using the principles of

hydrogeology has become the most widely accepted model of springshed management by several non-governmental organizations (NGOs) and governmental agencies in the Himalaya.[1]

Thus, RW is calling for proposals from interested consulting firms and organization to support its projects in conducting a detailed hydrogeological study in potential twelve rural communities' water sources and their surrounding micro-catchment area and develop an integrated water resource conservation & use plan. As per Lenton and Muller (2009), good water management requires integration of economic efficiency and viability, social equity, and environmental sustainability. Integrated water management constitutes the development of appropriate infrastructure for the allocation of water, incentives and techniques for efficient water use and conservation, and financing of all these activities. Therefore, we would like the plan to be comprehensive, viable and developed through an approach of integrating the social, technical (scientific), financial and institutional parameter.

2 Objective of the Work

The overall objective is to provide RW with specialized technical support to develop a comprehensive an integrated water resource conservation & use plan through a scientific study and assessment of current and future availability of water resources in the light of anticipated climate change impacts.

3 Scope of Work

The scope of this assignment is outlined below:

- Conduct a detailed hydrogeological study and prepare integrated water source conservation and use plan for **12 water supply scheme communities** (3 in Salyan, 4 in Surkhet, and 5 in Achham) with a view to ensuring long-term, sustainable, water resource management. We envisage the following activities to be carried out for this assignment:
    a. Desk work: Understand the project; its area and targeted communities; identification and collection of relevant data from secondary source;
    b. Field work:
        - **Consultation Workshop:** Consultation workshops with local stakeholders (community, local user groups, local government etc.) to understand the existing practices and gaps in water source management; and the social dimensions of water use and management in the community;
        - **Spring/Water source Inventory:** Spring and/or other water source inventory in the micro-catchment geographical area of the water supply schemes the project/s is working in; (References to Water Use Master Plan (WUMP) will be useful where WUMP is already developed or is in progress.)
        - **Data Monitoring:** Discharge measurement to identify and examine the water availability, existing condition and vulnerability of the water source potential recharge areas;
        - **Hydrogeological assessments and recharge** intervention: Undertake detailed hydrogeological study to understand the hydrology of springs and their linkages to groundwater and water recharge systems and collect all required baseline data and information for recharge area demarcation;
    c. Propose and design appropriate cost-effective intervention measures outlining in detail the type of intervention (Trenches, recharge ponds, check dam, gabion structure, biological/ vegetative measures etc), proposed location, reason for recommendation, and

[1] Resource book on springshed management in the Indian Himalayan Region, IWMI, NITI Aayog (GOI), SDC, 2021

cost breakdown for the protection and conservation of water sources within the micro-catchment of the water source based on the study findings and assessment for each water supply schemes;

d. Prepare an overall comprehensive "Integrated water resource conservation & use plan" for each water supply schemes (both in Nepali and English) using participatory approach with communities within the vicinity of the study area and share the plan with the respective water user group/community;
e. Conduct a workshop to share the findings and supporting the organization and community to endorse and implement the devised "comprehensive an integrated water resource conservation & use plan" with the local government.

4 Expected Deliverables

i. The consultant will provide a daily workplan including the methodology and detailed activities to the focal person for this assignment (Project Manager/s).
ii. Monthly updates of progress against the initial workplan should be shared with the focal person.
iii. The consultant will give a presentation on the findings, including analysis and recommendations of the study to the project team to collect feedback and suggestions before devising the site specific "integrated water resource conservation & use plan".
iv. The consultant will deliver a draft and final study report and "Integrated water resource conservation & use plan" with site specific plan for the given communities in Nepali and English.

Note that the consultant shall provide electronic versions of documents: in both MS Word and Pdf formats.

5 Duration

The expected commencement of the assignment is 1st March 2022. After the agreement is signed by both parties, all assigned activities must be completed within three months from the date of contract signing.

6 General Qualification of the Consultant/Firm

The consultant is expected to have:

- Master's degree in water resources engineering or relevant field;
- Minimum five years of working experience in hydrogeological field;
- Experience of developing and implementing water source protection and conservation plans/activities at least in two project sites, including consideration of climate change;
- Expertise and knowledge of hydrology and hydrogeological models;
- Ability to work independently and within a team to achieve project targets.

7 Budget and Payment Schedule

The interested consultant/ consulting firm shall submit a budget sheet with a detailed breakdown including applicable taxes at the time of proposal submission as attached in Annex-1. The budget should cover consultancy fee plus travel and accommodation costs and other applicable budget lines, the amount of which shall be agreed between RW and the consultant. The price can be negotiated between two parties, and thus agreed budget will be the final contract value. The consultant shall bear all tariffs, duties, and applicable taxes or charges levied at any stage during the execution of the work.

RW will release 40% of the agreed amount upon signing of the contract. 30% of the contract amount shall be delivered after submission of the draft report and final payment (30% of the contract amount) shall be paid on submission of the final report.

8 Acceptance of Proposal

All rights to accept/reject proposal without giving any reason, shall be reserved with RW. If deemed necessary, the consultant/firm shall be asked for modifications to the proposal before approval.

9 Termination of the Contract

RW may terminate the agreement if the consultant/firm commits a breach in the performance or observance of any of its obligations under this ToR. The consultant/firm shall be notified in writing seven days prior to the termination of the agreement.

10 Confidentiality

The consultant is not allowed to share any data provided by RW without taking written consent. Any documents developed under this contract will be the property of RW and the consultant is not allowed to share these with any external parties except mentioned under this contract.

11 Copyright

RW will have copyright in all the documents developed under this contract by the consultant/firm.

12 Documents to be Submitted by the Consultant

A. Technical and Financial Proposal

- *Technical Proposal- Explaining the organization capacity and experience, methodology and approach that will be used to carry out this assignment.*
- *Financial Proposal- Detailed budget with breakdown including applicable Tax as presented in Annex 1.*

B. Detail of the Consultant/firms

- *Organization/ consultant profile with relevant experience*
- *A copy of consultant/firm registration*
- *Signed CV of all team members by the Team Leader*
- *A copy of Tax clearance certificate*
- *VAT/PAN registration*
- *Audit report*
- *Any other relevant documents*

The Bid documents should reach the following address via email or post **by 4th February 2022, 15:00 Hrs (Nepal Local Time)**. The evaluation of the proposal will be based on the criteria set in Annex 2. Please, enclose the proposal in an envelope, do seal and mark it with **"Conduct detailed hydrogeological study and develop an integrated water resource conservation & use plan targeting community-based water supply system"**. For any queries you can contact at the following address.

Renewable World

Chakupat, Lalitpur, Nepal Tel: +977 1 526 1138

Email: jobs@renewable-world.org

Annex 2: Evaluation Basis

Evaluation basis	
A Technical Proposal	**60**
1. Specific Experience of consultant related to the assignment	**20**
1.1 General experience on water sector (last 5 years)	2
1.2 Experience in developing water source conservation and management plans (include publications, links of previous works)	10
1.3 Experience working in similar geographical area	3
1.4 Experience in advocacy works in water sector with focus in water source conservation and management	5
2. Methodology to carry out the proposed task and effectiveness	**20**
2.1 Proposed methodology to carry-out the tasks	10
2.2 Proposed manning and work schedule	10
3. Qualification and competence of the key staffs for the assignment	**20**
3.1 General qualification of the team leader	5
3.2 Experience of team leader and proposed team composition in similar assignments	10
3.3 Experience of proposed team in working in similar geographical regions	5
B Financial Proposal The financial proposals of the consultants securing at least 70% score in the technical proposals will be considered for further assessment.	