

TERMS OF REFERENCE (ToR)

Consultancy services to conduct capacity-building training to the provincial government stakeholders on planning and implementation of renewable energy-powered lift irrigation systems in Nepal

ToR



About ICIMOD

The Hindu Kush Himalaya (HKH) region stretches 3,500km across Asia, spanning eight countries – Afghanistan, Bangladesh, Bhutan, China, India, Myanmar, Nepal, and Pakistan. Encompassing high-altitude mountain ranges, mid-hills, and plains, the zone is vital for the food, water, and energy security of up to two billion people and is a habitat for countless irreplaceable species. It is also acutely fragile – and frontline to the impacts of the triple planetary crisis of climate change, pollution, and biodiversity loss.

The International Centre for Integrated Mountain Development (ICIMOD), based in Kathmandu, Nepal, is an international organisation established in 1983, that is working to make this critical region greener, more inclusive and climate resilient. For more information, read our [Strategy 2030](#) and explore our [website](#).

Background

Agriculture is the backbone of Nepal's economy, providing livelihoods to over 60% of the population. In fiscal year 2020-21, the agriculture sector (Agriculture, Livestock, Forestry, and Fishery) was considered a predominant sector of the country's economy as it contributed approximately 23.95% of the national gross domestic product (GDP). Agriculture, itself contributed 15.6% to the national GDP. Irrigation plays a crucial role in enhancing agricultural productivity and ensuring food security. The nation's diverse topography, encompassing mountains, hills, and plains presents both challenges and prospects for the advancement of irrigation practices.

However, agricultural productivity is heavily constrained by limited access to reliable irrigation, especially in hilly and mountainous regions. Around 60% of the land does not have access to year-round irrigation in Nepal, and 87% of land in the hills does not have access to irrigation. To address this challenge, renewable energy (RE)-powered lift irrigation systems have emerged as a sustainable solution to enhance water availability for farming communities.

The Government of Nepal, in collaboration with various development partners, has been promoting RE-powered lift irrigation systems to improve agricultural resilience, reduce dependence on fossil fuels, and support climate-smart agriculture. While the adoption of such systems has shown promising results, data gaps and capacity gaps at the provincial government level remain a significant barrier to their effective planning, implementation, and long-term sustainability.

To address the data gap on irrigation, ICIMOD, in collaboration with the Alternative Energy Promotion Center (AEPC), Nepal, developed the PURE (Productive Use of Renewable Energy) platform - an innovative digital platform specifically designed to advance RE-powered river lift irrigation planning in Nepal, especially in the mountain regions. As a decision-support tool, the platform consolidates data from multiple sources, including satellite imagery and field data, using advanced modelling to generate user-friendly insights that help identify market opportunities and support data-driven planning for RE-powered river lift irrigation systems. AEPC, in collaboration with ICIMOD, has developed a detailed feasibility study (DFS) framework for RE-powered lift irrigation systems in Nepal. This framework is intended to serve as a guide for conducting in-depth feasibility studies on RE-powered irrigation systems in Nepal, with the overarching goal of ensuring consistency and reliability in the assessment process. In addition, ICIMOD has developed a comprehensive training-of-trainer manual and a technical handbook on solar water pumps. This manual provides valuable insights to engineers and technicians to carry out the design of irrigation systems. For the widespread integration of renewable energy within the agriculture sector, it's crucial that these tools, serving as catalysts, are disseminated at national, provincial and local levels.

To strengthen the institutional and technical capacity of provincial stakeholders, ICIMOD, in collaboration with the AEPC, aims to design and deliver capacity-building training on the planning, design, implementation, and management of RE-powered lift irrigation systems. The training will equip government officials with the necessary knowledge, skills, and tools to integrate these systems into provincial and local RE-powered agricultural development plans, ensuring scalability and sustainability.

Objectives

AEPC aims to enhance the capacity of provincial and local governments in the planning, design, and implementation of RE-powered lift irrigation systems by piloting comprehensive capacity-building training. The objective of the training is to support at least three provincial governments in coordination with AEPC in planning and implementing RE-powered lift irrigation projects. The specific objectives of the training are to:

1. Promote the use of the PURE platform as a decision-support tool for planning and analysing RE-powered lift irrigation systems.
2. Harmonise the approach to detailed feasibility studies of the RE-powered lift irrigation systems through the DFS framework.

3. Enhance the technical capacity of provincial stakeholders through hands-on training in the design and implementation of solar-powered water pumping systems.

By achieving this objective, the project aims to contribute to ICIMOD's 2026 target outcome for energy interventions, ensuring that Regional Member Countries (RMC) energy nodal agencies use ICIMOD's inputs in supporting plans and implementation processes for the productive use of renewable energy.

Scope of the work

The scope of the work includes, but is not limited to:

1. Develop training materials

- Conduct an inception meeting with the ICIMOD project team to align expectations, define objectives, and clarify the scope of the training.
- Coordinate closely with ICIMOD to understand the structure, features, and application of the PURE platform, including its role in planning and implementing RE-powered irrigation systems.
- Review the AEPC DFS Framework for Renewable Energy Irrigation Systems to ensure alignment with national planning tools and processes.
- Based on the training objectives, design a comprehensive two-day training package tailored to provincial-level stakeholders. The package should include:
 - A detailed curriculum and session plan
 - Training handouts and multimedia materials (presentations, videos, etc.)
 - Pre- and post-training survey questionnaires
 - Group assignments or case-based exercises
- The training package should specifically cover the following core components:
 1. Overview of Nepal's renewable energy landscape and the current status of lift irrigation systems
 2. Design training on solar water pumping systems using the ICIMOD's training of trainer's manual on technical handbook on solar water pumps
 3. Practical guidance on using the APEC's DFS framework for development of RE-powered irrigation projects
 4. Demonstration and application of the PURE platform in project planning and analysis
- Share all draft materials with the ICIMOD project team for review, feedback, and final approval prior to implementation.
- Prepare a baseline survey tool that will be used to assess the participants' knowledge and perceptions before the training, serving as a benchmark for post-training evaluation (see Scope of work #3).

2. Conduct three training events for provincial governments in Karnali, Sudurpashchim, and one more province

- Identify the provincial and local government officials in selected provinces.
- Finalise the identified provincial and local government officials for the training.
- Coordinate closely with the provincial governments to plan training events (coordinating dates, participant list, venue etc.).
- Conduct two days of training sessions in a suitable location in each province.
- Plan and arrange for logistics related to the training in close coordination with the provincial governments. (The bidder budgets for turnkey costs, including but not limited to logistics and the event cost as per their own policy).
- Deliver training to the provincial governments and each training event shall target at least 25 participants.
- Submit training reports for each training event highlighting the details of the training event and sessions, participant selection, baseline and post-training survey of the participants, and analysis of the participant survey about the training, submitted with ICIMOD's approval.
- After completion of all three training events, prepare a draft consolidated training report summarising the training events, an overall analysis of the participant surveys and recommendations for future training improvement.
- Submit the draft report to ICIMOD for input.
- Submit the final detailed training completion report.
- Address the objectives of the training.
- Conduct any other necessary activity to effectively conduct a beneficial training and make the training beneficial.

3. Tracking the outcome of the training

- Design and implement follow-up training mechanisms to ensure the outcomes of the training are monitored by the participants.
- Liaising with the provisional government on planning and implementation of RE-powered lift irrigation systems.
- Design a follow-up survey questionnaire to learn how the training benefited the participants in planning and implementing RE-powered lift projects (irrigation, drinking water). This should take the baseline information collected during the training as a reference.
- After each survey, digitise the questionnaire and analyse the effectiveness of the training to support the planning and implementation of renewable energy lift irrigation projects.
- Conduct two follow-up surveys of training participants (i) after three months of the training event and (ii) six months after the training event.

Requirements

An organisation with the following capabilities:

- Must have experience in orientation works for subnational governments (provincial or local) in Nepal.
- Must have conducted at least ten capacity-building activities in the past five years.
- Must have experience in supporting the Nepal government in program development and policy formulation.
- Tax clearance letter for the last fiscal year.

The organisation must include the following human resources:

Team

The proposed resources must be part of the project team for the time period specified. The additional human resources can be included in the technical proposal with roles, responsibilities, and expertise.

Position	Qualification and expertise	Roles and responsibilities
Trainer	<ul style="list-style-type: none">- Minimum master's degree in the field of renewable energy- At least eight years of work experience in the field of renewable energy- Must have experience delivering at least eight training to local and provincial governments on lift irrigation systems. The training experience must be related to technical and planning works such as design, operation & maintenance, project implementation, or other similar aspects.	<ul style="list-style-type: none">- Provide overall leadership and strategic direction for project implementation.- Engage with key government agencies and stakeholders to ensure alignment with national and sub-national policies.- Ensure quality assurance, timely reporting, and effective coordination with government stakeholders and other institutions.- Facilitate high-level capacity building and stakeholder consultations.

Position	Qualification and expertise	Roles and responsibilities
	<ul style="list-style-type: none"> - Must have a published training manual related to solar water pumps. - The trainer must have experience in developing a national framework for lift irrigation systems related to feasibility study, project implementation or similar fields. - Trainer's experience in Koshi, Karnali, and Sudurpashchim provinces is preferable. 	
Provincial coordinators (2 personnel)	<ul style="list-style-type: none"> - Minimum bachelor's degree in the field of engineering - Must have experience working with the provincial government of either Koshi, Karnali or Sudurpashchim provinces while being stationed in the respective province for at least two years. - Must have experience in delivering at least five training to local and provincial governments on lift irrigation systems. - Must demonstrate the capacity of close coordination with the provincial and local governments to implement lift irrigation projects. - The provincial coordinator's past work experience with a development partner is preferable. 	<ul style="list-style-type: none"> - Assist in organising workshops, training sessions, and stakeholder consultations. - Support data collection, documentation, and reporting on project activities. - Coordinate with provincial government and other agencies for logistical and administrative support. - Maintain records and assist in the preparation of progress reports and final documentation. - Provide technical and operational support to the Team Leader in implementing activities.

Timeline and deliverables

The following are the timeline and deliverables:

Deliverables	Timeline
Develop the training materials	Four weeks from the contract
Conduct three provincial capacity-building training	Eight weeks from the contract
Consolidated training report (pre- and post-training)	Ten weeks from the contract
Impact training report (timeline includes three months and six months after the training)	28 weeks from the contract

Proposal

Technical proposal

Applicants must include the following sections in the technical proposal:

1. Technical approach and methodology:

In this section, applicants should explain their understanding of the objectives of the assignment, approach to the services, and methodology to obtain the expected output.

2. Work plan

Applicants should propose the main activities of the proposal, content and duration, milestones, and delivery date. The proposed work plan should be consistent with the technical approach and methodology. Kindly propose a management and operation plan.

3. Organisation and experts

Applicants should propose the structure and composition of their team, mentioning their qualifications and skills as requested in the section team. Applicants should list the main discipline of the assignment, the key expert responsible, and the proposed technical and support staff.

4. Relevant past experience

Applicants must include the past experience of their organisation and experts relevant to this request for proposals.

Financial proposal

The bidder should provide the financial quote with the breakdown of all the costs and include the tax in the budget (refer to the table provided below):

- Breakdown of the experts needed, number of days required, quantity, rate
- Breakdown of other costs, unit, quantity, rate

Evaluation criteria

The technical proposal will be evaluated based on the following table:

Criteria	Maximum score	Details
Quality of the proposal, understanding and approach to the proposed tasks	10	Well-structured and comprehensive, demonstrated understating of the requirements & explanation of path to review existing strategies, equip team with required skills and ensure clarity on implementation
Organisation experience	20	Past experience on similar communications and training projects
Human resources – qualification		
Team lead	5	Education qualification and years of experience
Local coordinators	5	
Human resources – experiences		
Team lead	25	Training experience, published manual, field experience, experience in using ICIMOD’s training manual
Local coordinators	20	Local/provincial-level training conducted, worked with local and provincial levels
Proposed timeline and deliverables	5	Reasonability of proposed delivery; connection of timeline with task approach
Proposed management & operation plan	10	Schedule of the engagement process/approach for training/clarity of process to develop linkages among levels of plans/clarity of implementation plans and guidelines

The service provider will be selected on the basis of the highest-ranked technical proposal (60% weightage) and the lowest-cost financial proposal (40% weightage).

The service provider will be selected on the basis of the highest cumulative scores obtained in the technical and financial proposals using the following formula:

- Technical score = Score obtained based on technical proposal (total 100)
- Financial score = Score obtained based on financial proposal (total 100)
- Total score = 60% of technical proposal + 40% of financial proposal

The service provider scoring the maximum score based on the criteria will be awarded. However, the service provider should score at least 60 points in the technical proposal.

Duration

The duration of the contract is seven months.

Reporting and supervising

The bidder will report to the Intervention Manager – Renewable Energy. The bidder will also work in close collaboration with the Renewable Energy team, Resilient Economies and Landscapes strategic group, where relevant. The reporting will be done once every two weeks with ICIMOD for the progress update. The report format must be discussed and approved by ICIMOD in advance.

ICIMOD's core values

Our core values are integrity, neutrality, relevance, inclusiveness, openness, and ambition. These values are an expression of our culture and are central to the guiding beliefs and principles of our work and behaviour. Our core values will lie at the heart of ICIMOD operations and delivery. They will underpin everything we do and frame how we work with our partners. They reflect our founding intentions and the balances we seek to hold while equipping ourselves for the future.

Ethical consideration

The consultant will be required to take all the necessary actions to handle the collected data responsibly (see ICIMOD Responsible Data Policy) to ensure data privacy, anonymity,

and confidentiality. The consultant needs to adhere to the in-country regulations while executing the project.

Our commitment to the prevention of sexual harassment

ICIMOD is committed to the prevention and redressal of sexual harassment at the workplace and promoting the welfare of children, young people, and adults, and expects all staff, consultants, and volunteers to share this commitment. We will do everything possible to ensure that only those who are suitable to work within our values are selected to work for us.

Confidentiality/non-disclosure

All material issued in connection with this ToR shall remain the property of ICIMOD and shall be used only for the purpose of this procurement exercise. All information provided shall be either returned to ICIMOD or securely destroyed by unsuccessful applicants at the conclusion of the procurement exercise.

During the performance of the assignment or at any time after the expiry or termination of the Agreement, the consultant shall not disclose to any person or otherwise make use of any confidential information which s/he has obtained or may during this agreement relating to partner organisation/ICIMOD, the respondents or otherwise.

The consultant will be required to sign a non-disclosure/confidentiality agreement as part of their undertaking of this work.

Intellectual property, copyright, and ownership of all prepared information

The consultant shall retain all rights to pre-existing (background) intellectual property or materials used by the consultant in the delivery of this study. All arising intellectual property, ideas, materials, processes, or processes formed in contemplation, course of, or as a result of this study shall be passed to ICIMOD without restriction.

The consultant shall warrant that all arising intellectual property, materials and/or products produced in pursuit of this study shall be original and shall not infringe on any third party's claim. All technical or business information, in whatever medium or format, originated,

collated, or prepared by or for the consultant in contemplation, course of, or as result of this assignment shall be transferred to ICIMOD without restriction on completion and shall not be used by the consultant for any other purpose without express written permission of ICIMOD.

Copyright of all arising documents, data, information, or reports produced by the consultant under this agreement shall belong to ICIMOD and will be passed to ICIMOD without restriction. Such documents, data, information, and reports shall not be used by the consultant for any other purpose other than in conjunction with this assignment, without the express written permission of ICIMOD's Head of Programme Funding.

Diversity, equity, inclusion, and safeguarding

ICIMOD's human resource selection process is based on the qualifications and competence of the applicants. As an employer, ICIMOD is committed to promoting diversity, equity, and inclusion, and offers equal opportunities to applicants from all backgrounds and walks of life, including but not limited to gender, age, national origin, religion, race, caste, ethnicity, sexual orientation, disability, or social status. ICIMOD strongly encourages applications from all eligible applicants, especially women, from all parts of the HKH region.

ICIMOD is dedicated to establishing and upholding a safe and nurturing work environment, where all its employees can participate fully and meaningfully without fear of violence, harassment, exploitation, or intimidation. Any type of abuse or harassment, including sexual misconduct [including child abuse], by our staff, representatives, or stakeholders is not condoned or tolerated.

Method of application

The completed proposal should be submitted through email to Consultancy.int@icimod.org by 6 PM (Nepal Standard Time), on 30 April 2025. Two separate files of technical and financial proposals should be submitted.