

**Terms of Reference (ToR)**  
**For**  
**Consultancy Assignment for Developing and Disseminating Agro-met Advisory Services in Farming Communities in Karnali Province, Nepal**

## **1. Background**

Agriculture in Nepal is increasingly vulnerable to the adverse impacts of climate change. Farmers rely heavily on traditional practices and have limited access to timely and reliable weather, and market information. This is compounded by weak extension services, farmers limited technical capacity, improper use of agricultural inputs, and unsustainable practices such as excessive and haphazard use of chemical fertilizers and pesticides, monocropping, and market-driven production. The results have been biodiversity loss, soil degradation, environmental pollution, and increasing risks from unpredictable weather, pests, and diseases.

In this context, agroecology is increasingly recognized as a viable approach to building resilient and sustainable farming systems. It promotes ecological balance by integrating efficient, climate-smart technologies that are economically viable and socially inclusive. Agro-met advisory services are critical in this transition, as they empower farmers with timely, weather-based, and practical recommendations to adopt climate-resilient agroecological practices for managing risks and enhancing productivity.

This assignment is part of the multi-country project “*The Green Evolution: Pathways for Food System Transformation*”, funded by Welthungerhilfe (WHH) and the German Federal Ministry of Economic Cooperation and Development (BMZ). The project is implemented in Nepal, India and Bangladesh, aiming to contribute to strengthening local food systems that safeguard the right to safe and healthy food, promote food sovereignty, and build resilience to climate change (SDG 2). In Nepal, the program is jointly implemented by Local Initiatives for Biodiversity, Research and Development (LI-BIRD), Himalayan Permaculture Centre (HPC), and Asia Network for Sustainable Agriculture and Bioresources (ANSAB) in three districts of Karnali Province: Surkhet (Birendranagar Municipality, Barahtal Rural Municipality), Dailekh (Dullu Municipality, Aathbish Municipality), Jumla (Tatopani Rural Municipality).

## **2. Objectives of the Assignment**

The overall objective is to develop and provide agro-met agroecology based advisory services to the farming community that enhances their capacity to adopt climate resilient practices by improving timely access to localized and practical information and solutions.

The specific objectives are to:

- a. Establish a localized agromet advisory system that provides weather forecast (rainfall, temperature) and information on climate resilient agroecological practices and solutions in selected municipalities.

- b. Provide timely agro-met advisory services via mobile apps, SMS, and broadcast calls on weather, crop, livestock, and pest/disease management, climate resilient agroecological practices to farmers of project sites.
- c. Conduct training on the use of mobile-based free applications (weather, farming practices and solutions, market information) to lead farmers, project staff, and local government staff.
- d. Document the process of establishing a contextualized agromet advisory system and provide recommendations for the efficacy of the advisory system.

### **3. Scope of Work**

The consultant/firm will be responsible for the following tasks:

- Review existing systems of agro-met advisory in Karnali province and analyze scope of improvement.
- Develop a customized/localized, seasonal and agroecology solutions based advisory packages on weather forecast, advisory on management of farm including biological methods for pest and disease control, planting times, soil nutrient management, information on feed, vaccine, crop and livestock, that are suitable for farming communities in Karnali Province.
- Design and implement dissemination mechanisms (apps, SMS, broadcast calls) to deliver developed localized advisory services along with timely weather and market information.
- Conduct training for lead farmers, project staff, partners, and local government staff on the use of mobile-based applications for agro-met advisory systems.
- Document process, lessons learned and provide recommendations for scaling up agro-met advisory services.

### **4. Methodology:**

The consultant/firm will adopt a participatory, evidence-based, and iterative approach to ensure the agro-met advisory system is locally relevant, technically sound, and farmer-centered.

#### **Key methodological steps include:**

- **Inception and Planning:**
  - Conduct inception meetings with LI-BIRD and partner organizations to align objectives, roles, and deliverables.
  - Prepare an Inception Report detailing the work plan, timeline, and methodological framework.
- **Desk Review and Situation Analysis:**
  - Review existing governmental and non-governmental agro-met advisory mechanisms in Nepal with special focus on Karnali province.
  - Identify institutional, technological, and behavioral gaps in current practices.

- **Design and Customization of Agro-Met Advisory Package:**
  - Develop localized, seasonal, and event-based agroecology-driven advisory packages integrating weather forecasts, crop production management, livestock care, pest/disease control, and market intelligence.
  - Ensure linkage with ongoing farmer field schools (FFS) to enhance its relevancy and wider adoption.
  
- **Digital Platform Integration and Dissemination Mechanisms:**
  - Collaborate with ICT partners to design and operationalize dissemination channels (mobile app, SMS, and broadcast calls).
  - Pilot-test dissemination tools and refining based on feedback from farmers and project teams.
  
- **Capacity Building:**
  - Conduct training for project staff, partners, and lead farmers, local government staff on use and interpretation of agro-met advisories and digital tools.
  - Provide user-friendly training materials and manuals in Nepali.
  
- **Monitoring, Evaluation, and Learning:**
  - Establish a mechanism for continuous monitoring of advisory effectiveness and farmer feedback.
  - Continuous interaction and sharing with project team members and sharing learning with a wider stakeholder's circle.
  - Produce quarterly progress reports and a final process documentation report with lessons learned and recommendations for scaling up.

## 5. Key Deliverables

The consultant/firm is expected to deliver the following outputs:

Table 1: Key Deliverables.

S.N.	Deliverables	Expected Outcome	Remarks
1.	Desk Review of existing governmental and non-governmental agromet advisory services reach in Karnali Provinces	Report	Gap analysis and areas of interventions
2.	Develop a customized/localized, seasonal and event-based agroecology based advisory packages as per scope of work	Package of agromet advisory services Customized report	Weather forecast, Agroecology based Agriculture Operation, Market information, Q&A Services

3.	Provide agro-met advisory services in working palikas: <ul style="list-style-type: none"> <li>• Provide information on weather forecasts (rainfall, direction, disaster) so that farmers can take timely action.</li> </ul>	SMS Broadcast call	3000 HH Weekly basis In special condition/ emergency frequency may increase
	<ul style="list-style-type: none"> <li>• Convey information to farmers about the appropriate time and quantity of agricultural operation (irrigation, fertilizer application, pest control, sowing, crop combination, etc.) as per the weather forecast.</li> </ul>	SMS Broadcast call	3000 HH Weekly basis In special condition/ emergency frequency may increase
	<ul style="list-style-type: none"> <li>• Provide farmers with season-wise market price information about available vegetables, grains, and oilseeds.</li> </ul>	SMS Broadcast call	3000 HH Weekly basis In special condition/ emergency frequency may increase
	<ul style="list-style-type: none"> <li>• Provide information on the questions asked by farmers from time to time (group consultations with experts)</li> </ul>		Minimum 36 (As per need (inventory))
4.	Deliver training for project staff, partners, and lead farmers, Palika officials on the use of mobile-based applications for agro-met advisory system	4 Training	(100 Lead farmers and 10 project staffs)
5.	Training Material		100 Pcs
6.	Document on process, lesson learned and recommendation.	Report	Quarterly Reports

**7. Assignment Schedule and Deliverables.**

Table 2: Timeline of Key Deliverables.

S.N.	Deliverable	Months/year (2025-2027)																								Remarks
		M1	M2	M3	M4	M5	M6	M7	M8	M9	M11	M12	M13	M14	M15	M16	M17	M18	M19	M20	M21	M22	M23	M24		
1	Inception Report	W1																								
2	Desk Review of existing weather advisory practices and gap analysis, and scope for customization	W2																								
2.1	Develop a customized/localized, seasonal and event-based agroecology based advisory packages on weather forecast, advisory management of farm in coordination with project team members																									
3	Design training content and deliver training to Project staff, partners, and lead farmers (4 training)																									
4	Provide agromet advisory services (apps, SMS, broadcast calls) on weather, crop, livestock, pest/disease aligning with agroecological practices in working palikas (Expected hhs reach 3000)																								Weekly basis sms and broadcast call	
6	Quarterly progress report with statistics on advisory services and lessons learned				Q1				Q2				Q3				Q4				Q5					
7	Final report with process documentation, learning and recommendations for scaling up agromet advisory services																									

(\*M=Month) (\*W=Week) (\*Q=Quarter)

## **6. Duration of Assignment**

The consultancy service is expected to be completed within **2 years** from the date of signing the contract. The agro-met service dissemination to farmers can be renewed as needed.

## **7. Required Expertise and Team Composition**

- Lead Consultant: Advanced degree in Agriculture, Climate Science, Agroecology, or related field with at least **5 years' experience** in climate-resilient agriculture and advisory services.
- Team members: Expertise agricultural extension, developing ICT-based advisory systems.
- Proven track record in developing and delivering agromet or ICT-based agricultural services.
- Strong capacity in training facilitation, report writing, and stakeholder engagement.

## **8. Budget Information and Payment Procedure**

The consulting firm shall submit a budget with a detailed breakdown including applicable taxes at the time of proposal submission. The budget covers consultancy fees along with travel and accommodation costs and other applicable budget lines (as per the agreed budget). The final budget will be agreed upon between LI-BIRD and the consultant/firm before signing the agreement. The consultant/firm shall bear all tariffs, duties, and applicable taxes or charges levied at any stage during the execution of the work. LI-BIRD will not be responsible for providing insurance and other hidden costs for consultants. The total consultancy fee will be paid for in three installments:

- 20% upon the submission of inception report.
- 60% will be disbursed monthly/quarterly upon submission of monthly report based on the advisory delivery services as per the bills/receipt received.
- 20 % upon acceptance of the final report with recommendations.

## **9. Confidentiality**

All data, information, and reports provided or generated under this assignment are the property of LI-BIRD and must be treated as confidential. Consultants may not use the information for any purpose other than completion of this assignment without prior written consent.

## **10. Integrity Clause**

Consultants must uphold the highest standards of integrity and avoid any form of corruption. Offering or accepting undue payments or advantages will result in cancellation of the award or early termination of the contract.