

## **U.S. Government Global Food Security Strategy Refresh (GFSS-R)**

### **Proceedings of the Provincial Consultation Workshops on Food and Agriculture System Transformation in Nepal**

**22, 24, and 26 May 2023**

**Karnali, Lumbini and Sudurpashchim Provinces**

#### **Prepared by**

**Mamata Pradhan, Aruna Palikhe, Madan Adhikari, Meera Pandey, Shalini Gupta and Anisha Mohan**

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International Food Policy Research Institute (IFPRI) - South Asia Regional Office  
NASC Complex, CG Block, Dev Prakash Shastri Road,  
Pusa, New Delhi - 110012, India.  
Phone: +91 11 42244545  
<https://southasia.ifpri.info/>

Institute for Integrated Development Studies (IIDS)  
Dhumbarahi  
Phone: +977014371006  
<https://iids.org.np>

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## Contents

Abbreviations.....	1
About the Organizers .....	2
Background.....	2
Provincial Consultation Workshop .....	5
Consultation Workshop at Surkhet of Karnali Province.....	5
Consultation Workshop at Nepalgunj of Lumbini Province.....	12
Consultation Workshop at Dhangadhi of Sudurpashchim Province.....	20
Annex I.....	31
Annex II .....	41

## Abbreviations

AKC	Agriculture Knowledge Center
CGIAR	Consultative Group on International Agricultural Research
COVID-19	Coronavirus disease 2019
CSA	Climate Smart Agriculture
CSISA	Cereal Systems Initiative for South Asia
GESI	Gender Equality and Social Inclusion
GFSS	Global Food Security Strategy
GFSS-R	Global Food Security Strategy Refresh
GoN	Government of Nepal
IFPRI	International Food and Policy Research Institute
IIDS	Institute for Integrated Development Studies
KISAN	Knowledge-Based Integrated Sustainable Agriculture and Nutrition
MOLMAC	Ministry of Land Management, Agriculture and Cooperatives
NSAF	Nepal Seed and Fertilizer
NGOs	Non-Governmental Organizations
PMAMP	Prime Minister Agriculture Modernization Project
SDGs	Sustainable Development Goals
USAID	United States Agency for International Development
USG	United States Government

## About the Organizers

### **United States Agency for International Development (USAID)**

USAID leads international development and humanitarian efforts to save lives, reduce poverty, strengthen democratic governance, and help people progress beyond assistance. In Nepal, USAID is partnering with the Government of Nepal (GoN) and local organizations to boost food security, expand and broaden economic growth, sustainably manage natural resources, improve quality health care and education systems, bolster democratic governance, and strengthen its capacity to mitigate and respond to natural disasters. Three themes are at the core of USAID's work: supporting federalism; promoting inclusion; and strengthening institutions and resilience.

### **International Food Policy Research Institute (IFPRI)**

IFPRI provides research-based policy solutions to sustainably reduce poverty and end hunger and malnutrition in developing countries. IFPRI was established in 1975 to identify and analyze alternative national and international strategies and policies for meeting the food needs of the developing world, with particular emphasis on low-income countries and on the poorer groups in those countries. It is a research center of the Consultative Group on International Agricultural Research (CGIAR), a worldwide partnership engaged in agricultural research for development.

### **Institute of Integrated Development Studies (IIDS)**

IIDS is an independent, non-partisan, and not-for-profit think-tank headquartered in Kathmandu, Nepal. Since its inception in 1979, it has proven its commitment to research and policy advocacy based on evidence and a holistic approach to sustainable development.

Leading up to 2030, the vision of IIDS is to build on its storied legacy of over 40 years to reorient and consolidate policy priorities across Nepal and South Asia. Its goal is to seek greater development impact through research, advocacy, and incubation of innovation. It seeks to be one of the region's leading institutes that contributes to evidence-based policymaking, trains professionals, and broadens public understanding of sustainable development challenges and solutions in the 21st century.

## Background

The United States Government's (USG) Global Food Security Strategy (GFSS) is an integrated whole-of-government approach that aims to end global hunger, poverty, and malnutrition through the Feed the Future initiative. Launched in 2010 across Africa, Asia, Latin America, and the Caribbean, Feed the Future aims to stimulate agriculture-led growth, resilience, and nutrition in countries with significant needs and opportunities for improvement. Through partnerships that invest in agriculture, build resilience, and improve nutrition, the USG has provided the basic dignity of food to millions of families worldwide. This initiative has delivered impressive results, including an estimated 23.4 million people lifted to above the poverty line, 3.4 million children no longer stunted, and an estimated 5.2 million families overcoming hunger. Additionally, Feed the Future has unlocked \$3.5 billion in financing for food security (2011–2019), generated \$13.7 billion in agricultural sales, and developed and deployed over 1,000 innovations.

However, the Coronavirus disease 2019 (COVID-19) pandemic, climate change, and international conflicts have significantly hampered the achievement of Sustainable

Development Goals (SDGs). As a result, the USG has developed the Global Food Security Strategy Refresh (GFSS-R) 2022–2026 that emphasizes the following five new areas of focus:

1. Equity and inclusion
2. An ambitious approach to climate change
3. Countering the long-term impacts of COVID-19
4. Employing systems thinking and working across the food system
5. Integration of conflict management, peacebuilding, and social cohesion

This strategy refresh has significant implications for the Feed the Future initiative; therefore, all Feed the Future countries have now embarked on refreshing the country strategy to incorporate new programs and initiatives aligning with the GFSS-R. The strategy involves implementing a multi-faceted whole-of-government approach, assignment of ownership, and empowerment of country leadership to lead and guide the efforts for progress. The strategy refresh invokes partnership with a wide range of stakeholders, and harnesses the advancement of science, technology, and innovation to achieve these objectives. The Feed the Future interventions in Nepal ensured a very close partnership with the Government of Nepal and emphasized greater involvement of the private sector.

Nepal is one of the oldest and most successful Feed the Future countries. Although efforts have been made to ensure food security in Nepal, the country still faces nutritional deficiency. Agricultural productivity in Nepal is comparatively low, and most of the farmers are still engaged in subsistence farming. Further, Nepal is highly vulnerable to climate change, natural disasters, pests, and diseases, exacerbating food insecurity leading to the prevalence of nutrition deficiencies, especially among marginalized populations who rely heavily on agriculture for their livelihoods.

The USAID mission in Nepal commissioned the IFPRI to support the drafting of the new GFSS Nepal Country Plan. In this regard, provincial consultation workshop has been planned in collaboration with IIDS to generate constructive ideas and feedback on the past and existing interventions implemented in Nepal under Feed the Future and identify a way forward for strengthening and leveraging food and agriculture system transformation in Nepal.

**The objectives of the consultation workshop are:**

- To make a concerted effort to facilitate public exchanges across all relevant stakeholders to voice their thoughts collectively towards a well-functioning food system. This requires consultation with diverse stakeholders that are part of the system and who may hold different viewpoints to steer the debate along food system transformation pathways;
- To cocreate the ways forward based on mutual understanding and knowledge sharing. The goal is to foster and sustain a discourse towards a food systems approach which will enable the convergence of different thematic areas, bringing out the interdependencies and linkages comprising the agrifood systems;
- To develop a shared vision for USAID/Nepal's strategies ensuring local buy-in and solutions which contribute to the successful implementation of GFSS, Country Development Cooperation Strategy, and Automated Directives System by aligning efforts to achieve an agricultural transformation within Nepal's economy; and

- To generate recommendations that can help guide USG investments in agriculture, food security, and nutrition over the next five years in Nepal.

## **Themes for National Consultation Workshop on Food and Agriculture System Transformation in Nepal**

The project comprises a wide array of tasks and activities. A review of the current GFSS Nepal Country Plan, ongoing project documents, and interviews with Feed the Future officials and implementing partners identified five thematic areas for interventions in alignment with GFSS-R and Government of Nepal's Agricultural Development Strategy:

### **Risk and Resilience Capacity**

- o Shocks and Stressors
- o Climate Change Adaptation and Mitigation
- o Sequencing and Layering

### **Innovation**

- o Digitalization
- o Productive Technology Transfer
- o Financial and Insurance Instruments
- o Research

### **Markets and Trade**

- o Formal and Informal Trade
- o Private Sector Engagement
- o Financial and Insurance Instruments

### **Food System Outputs and Outcomes**

- o Diets, Consumption, and Behavior
- o Nutrition and Food Safety
- o Income Generation

### **Food System Governance and Control**

- o Gender, Equity, and Inclusion
- o Leveraging Federalism
- o Policy Enabling Environment

Using the “whole system in the room” meeting methodology, the one-day consultation workshops were organized on May 22, 24, and 26, 2023, at Karnali Province, Lumbini Province, and Sudurpashchim Province respectively. The objective was to generate a diversity of perceptions across participants who can facilitate an opportunity to collaborate, work together, and engage among stakeholders across the food and agricultural systems transforming pathways.



Photo 1. “Whole system in the room” meeting arrangement during a consultation workshop.

## Provincial Consultation Workshop

### Consultation Workshop at Surkhet of Karnali Province

The consultation workshop in Karnali Province was held on May 22, 2023. It was primarily built on the discussion in national consultation workshop held on May 18 and 19, 2023, to further refine themes at the provincial level. The formal inaugural session, followed by “whole system in the room” approach workshop, was held at Hotel Namaste, Birendranagar, Surkhet. The key stakeholders from the government, the private sector, farmers, and Non-Governmental Organizations (NGOs) participated during the workshop.

The formal inaugural session started with a welcome address and introduction of the food and agricultural systems transforming pathways by Dr. Aruna Palikhe, Team Leader, IIDS. The concept and importance of food system transformation in the present context was raised in this session. Further, the planned strategy shift of Feed the Future in Nepal and proposed Zone of Influence of USAID Feed the Future initiatives were highlighted.

Thereafter, Ms. Neha Thapa, Senior Area Coordinator, KISAN II project, provided a brief overview of KISAN II initiatives in Karnali Province. It was pointed out that the priority of KISAN II has been limited to Surkhet district only because of its prioritization in paddy production, while other districts of the province such as Jajarkot and Rukum have been left out during the implementation.

Mr. Chitra Bahadur Rokaya, Director, Directorate of Agriculture of Karnali Province and the chief guest of the inaugural session, criticized the developing partners and programs such as KISAN I and KISAN II for being limited to accessible towns/areas where as Cereal Systems Initiative for South Asia (CSISA) program is being confined to Surkhet District only. The need for developing partners to mobilize in rural areas for the holistic development of the region.

The inaugural session was formally concluded by Dr. Mamata Pradhan, Senior Research Coordinator, thanking all the participants.

Following the inaugural session, Mr. Ramesh Khadka, Agriculture Officer, Ministry of Land Management, Agriculture and Cooperative, presented on “Organic Policy, Program and Vision of Karnali Province.” Mr. Khadka apprised that Karnali Province had decided during the first cabinet meeting to transform Karnali into an organic province and shared details about the agroecology model for



Figure 1. Mulyawan Logo promoted by Karnali Province.

the proposed transformation. Promotion and diversification of indigenous crops such as Marsi Dhan and apple of Jumla, organic certification, and geographical branding with “*Mulyawan*” logo are some of the strategies incorporated for the transformation into an organic province. Support to small and medium organic fertilizer producers’ program, subsidy in transportation of organic fertilizers, support to the municipalities for promotion of organic farming, demonstration, and farmer school programs to encourage use of organic fertilizers are some incentives planned for nutrient management during the production process.

The workshop was facilitated by Dr. Mamata Pradhan and Dr. Aruna Palikhe. The workshop started with an icebreaker session where two adjacent participants were requested to introduce themselves. The principle guiding the “whole system in the room” approach was briefed by the facilitators after the icebreaker. The whole workshop was organized into five sessions.

During the first session, participants were asked a broad question: “How do we strengthen and leverage food and agriculture system transformation in Karnali Province?” Following the question, their views were categorized into the aforementioned five thematic areas.

In the second session, based on the themes, one group leader was voluntarily elected and the participants were requested to divide into five groups depending on their interest within the provided themes. After the group formation, the participants were provided one hour for detailed analysis of each theme.



Photo 2. Participants engaging in group discussion.

After the analysis of the theme, the participants were given time for gallery walk through all the themes and were provided sticky color indicators to prioritize the top three recommendations according to their priority across all themes.



Photo 3. Participants prioritizing recommendations with sticky color indicators.

Following the prioritization exercise, the participants prepared the action plan to achieve the top three prioritized recommendations.

The closing session ended with feedback from the participants. All the discussions and recommendations from the participants from Karnali Province are shared below and the action plans developed are available in Annex I.

## Workshop Discussion: Surkhet, Karnali Province

### Theme 1: Risk and Resilience Capacity

#### Issues Raised:

- Current agricultural insurance policies are ineffective.
- The concern and approaches to promote soil conservation are not enough.
- The efforts towards water resource conservation are not in line with the amount of water practically required.
- Farmers find it difficult to get loans and/or financing; even those who do manage to access the services have to go through tedious administrative procedures in the process.
- Agriculture information system needs improvement.
- The adoption of early protection practices from newer species of pests has not been facilitated properly.
- Farmers still have inadequate knowledge pertaining to pests, insects, and diseases.
- Climate-smart agriculture practices are still not common knowledge.
- Early warning systems for weather and climate disasters are needed.
- Conflict between human and wildlife has become increasingly common with each passing year and none of the concerned authorities are taking any steps/strategy to avoid/prepare for such situations or plan any compensation for farmers who suffer crop losses due to the phenomenon.
- Indigenous crops need to be promoted.
- Although there is a dire need for the introduction of agricultural technology, farm machineries and its digitalization, no significant progress has been made so far.

#### Current Status:

- ✓ Farmers lack access to current agriculture insurance schemes.
- ✓ Lack of an early warning system to assist the farmers in protecting the produce.
- ✓ Water resources are drying up.
- ✓ Increase in pests, insects and crop related diseases due to climate change.
- ✓ Lack of conservatory, promotional, and consumption practices for indigenous crops.
- ✓ Destruction of food crops by wildlife.
- ✓ Lack of knowledge on soil fertility.
- ✓ Lack of knowledge and skills in utilizing chemical fertilizers, insecticides, and pesticides.
- ✓ Increase in fallow land due to short-term migration and foreign employment opportunities.

#### Recommendations:

- ❖ The government must focus on monitoring the agricultural insurance system to make it effective within its three tiers.
- ❖ Need to implement advanced early warning systems and communicate via farmer-friendly media such as text messages, Facebook, TikTok etc.
- ❖ Afforestation, bioengineering, drip irrigation, rainwater harvesting, and water recharge facilities should be provided or made accessible at affordable rates to farmers.
- ❖ Use of vermicompost and integrated pest management should be promoted to improve climate adaptation capacity.
- ❖ Focus should be given to habitat conservation to mitigate conflict between wildlife and humans.

- ❖ Coordination among all stakeholders is a must through the formulation of a unified action plan to minimize risk.

***Prioritized Recommendations:***

- ❖ Focus should be given to habitat conservation to mitigate conflict between wildlife and humans.
- ❖ Afforestation, bioengineering, drip irrigation, rainwater harvesting, and water recharge facilities should be provided or made accessible at affordable rates to farmers. Use of vermicompost and integrated pest management should be promoted to improve climate adaptation capacity.

**Theme 2: Food System Innovation**

**Issues Raised:**

- Lack of cold storage facilities to store the surplus produce.
- The efforts and strategies to improve soil fertility status to enhance agricultural productivity are not pronounced.
- Lack of access to farm machinery (like combined harvester).
- Women-friendly farm machinery is not commonly available.
- Need for modern agriculture systems and improved agriculture practices.
- Farmers are reluctant to adapt to newer technology due to poor risk-bearing capacity.
- Farmers are unaware of technology for organic production (they only know exclusion of chemical pesticides as the concept of organic agriculture) and ecological farming.
- Transfer of new and effective technologies from research centers to farmer level has not been effective.
- Although agriculture harbors prospects of tourism, farmers are not getting an advantage from it due to poor investment capacities.
- Seed replication technology has not been implemented properly as there is still a scarcity of seeds when the sowing season begins.
- Data driven agricultural solutions have still not come into practice.
- Farmers are circumscribed by traditional crop management practices and there's a lack of farm mechanization.
- Farmers still have a low level of technical knowledge on vegetable farming.

**Current Status:**

- ✓ Farmers are not knowledgeable about quality seeds.
- ✓ Unavailability of need-based innovative technology and equipment in the agriculture sector.
- ✓ Lack of awareness about climate-friendly cultivation systems and technology.
- ✓ Lack of access to women-friendly technology.
- ✓ Early weather information system is lacking.
- ✓ Gender discrimination in food consumption; females often have their food after feeding all household members and only get to eat whatever is remaining.
- ✓ Introduction of new insects and diseases in crops.
- ✓ Underutilization of locally available crops and fruits.
- ✓ No price differentiation for organic and other food.
- ✓ Issues related to lack of cold storage and shortage of electricity.
- ✓ Lack of production of organic pesticides, insecticides, and manure.

### **Recommendations:**

- ❖ To boost production, information on quality seed varieties should be communicated in collaboration with the relevant authorities, including agro vets, agricultural cooperatives, and municipal governments.
- ❖ Climate-friendly agriculture systems should be developed like soil conservation and Integrated Pest Management.
- ❖ Information associated with weather forecasts must be shared through social media sites.
- ❖ There's a need to change the traditional socio-cultural consumption patterns and to reduce gender-based discrimination in food consumption.
- ❖ Identify and disseminate information on new pests, insects, and diseases that have appeared due to climate change.
- ❖ Come out with guidelines to standardize the produced crops.
- ❖ Identify and disseminate information on locally available fruit crops and the advantages of growing them.

### ***Prioritized Recommendations:***

- ❖ To boost production, information on quality seed varieties should be communicated in collaboration with the relevant authorities, including agro vets, agricultural cooperatives, and municipal governments.
- ❖ Climate-friendly agriculture systems should be developed like soil conservation and Integrated Pest Management.

## **Theme 3: Market and Trade**

### **Issues Raised:**

- Lack of effective marketing of agricultural products.
- Lack of market access due to rough roads and long distances to the market spots.
- Subsidized agricultural loans are not easily available to all farmers.
- Farmers rarely receive financial assistance to cultivate agricultural products and there's no linkage between production and marketing.
- The perishability of agricultural commodities and the lack of commercialization of agricultural products result in agricultural commodity wastage. Branding and marketing of indigenous products is very low.
- Organic crops production, marketing, and storage is not adequate.
- Involvement of the private sector in efforts to improve the agriculture sector is not enough.
- Improvement and management of value chain in agricultural products is low; provisions for transportation are not enough.
- The Nepali market is dominated by the import of agricultural inputs from nearby nations, and prices for Nepali commodities are insufficient to even cover the production costs.
- Lack of agricultural trade with other countries.
- Assess and identify the high demand for commodities like fine rice (in comparison with coarse rice) in the market so that farmers can produce the in-demand crops and sell their products without wastage

### **Current Status:**

- ✓ No provision for community or local markets (except the main markets in existence).
- ✓ Lack of good road system to help transport agricultural produce in a timely manner.

- ✓ Involvement of cooperatives at the local market level is not sufficient.
- ✓ Need for more market-driven production.
- ✓ The government minimum support price (MSP) is limited to only a few commodities.
- ✓ Lack of financial institutions
- ✓ Lack of agriculture processing skill
- ✓ Due to low quality and high production cost of agricultural commodities in Nepal, the farmers are unable to compete with imported products resulting in price collapse of vegetables.
- ✓ Insufficient storage facilities.
- ✓ Lack of proper branding and marketing of the products.
- ✓ Inadequate post-harvesting practices resulting in losses.

**Recommendations:**

- ❖ Identification of market needs and orient production accordingly.
- ❖ Government, private, and cooperative sectors need to work together to allocate budget for market development.
- ❖ Management and development of efficient collection and processing and cold storage infrastructure at the local level.
- ❖ Awareness-raising programs associated with market demands and focus on need-based market production.
- ❖ Guarantee of minimum purchase price by the Nepal government.
- ❖ Promote collaboration with financial institutions for loans based on agricultural entrepreneurship.
- ❖ Agreement between farmers and traders should be facilitated to sustain their relationship between them and improve farmer-market linkages.
- ❖ Development of proper post-harvesting systems

***Prioritized Recommendations:***

- ❖ Management and development of efficient collection and processing and cold storage infrastructure at the local level.
- ❖ Focus on need-based, demand driven market production

**Theme 4: Food System Outputs and Outcomes**

**Issues Raised:**

- Farmers need to be motivated (and incentivized) to improve agricultural productivity.
- No assurance of quality of agricultural inputs.
- Farmers have low access to high-yielding varieties of seeds.
- Access to irrigation is not enough in accordance with the cropped land.
- Lack of timely availability of quality seeds, fertilizer, and organic pesticides and insecticides
- Need to include gender equity and social inclusion aspects in agricultural interventions by introducing steps like gender friendly machinery, equal wages etc.
- Ineffective post-harvesting practices cause heavy loss of crops.
- Access to agricultural machinery is low among farmers.
- No provision of cold storage at local level and poor management of existing cold storage.
- A paucity of quality seeds and fertilizer and adulteration of seed.
- Promote the processing of organic products to increase organic productivity.

**Current status:**

- ✓ Insufficient production
- ✓ Indigenous crops are getting extinct.
- ✓ Haphazard use of pesticides, insecticides, and inorganic fertilizer.
- ✓ Shortage of adequate information on nutrients requirement of the soil.
- ✓ Unavailability of quality season-appropriate seeds
- ✓ Incorrect tillage practice
- ✓ Local quality seeds not conserved.
- ✓ Lack of market for locally produced agricultural products.
- ✓ Inefficient utilization of the organic manure produced locally.
- ✓ Gender-based discrimination on wage rate
- ✓ Inadequate irrigation facility
- ✓ Lack of collective farming practice or contract farming
- ✓ Lack of awareness on post-harvesting systems
- ✓ Inappropriate storage system
- ✓ Insufficient access to the modern agricultural techniques
- ✓ Lack of access to women-friendly agricultural equipment

**Recommendations:**

- ❖ Facilitate production of quality seeds at the local level
- ❖ Declaration of specified areas for the production of nutrient-rich and indigenous crops.
- ❖ Focus should be on optimizing the use of organic fertilizers.
- ❖ Provide subsidies on organic fertilizer, pesticides, and insecticides.
- ❖ Facilitate information dissemination on nutrient-rich food among the consumers
- ❖ Use of fertilizer, pesticides, and insecticides based on soil requirement.
- ❖ Provide special subsidy on Gender Equality and Social Inclusion (GESI)-friendly agricultural equipment.
- ❖ An efficient land bank should be established.
- ❖ Improve cold storage system at the local level.
- ❖ Reduction in import of goods which are already produced in ample quantity within the country.
- ❖ Import fertilizers only after testing

***Prioritized recommendation:***

Reduction in import of goods which are already produced in ample quantity within the country.

**Theme 5: Food System Governance and Control**

**Issues Raised:**

- Policy and governance inefficiencies
- Gender equity and social inclusion are still not adequately addressed.
- Limited multi-sectoral collaboration
- The governance of the agriculture system needs to be improved.
- The institutional arrangement needs to be strengthened for better governance.
- Ineffective food distribution system and inefficient investment by government in agriculture
- Better planning and government programs for crop production are required.
- Lack of interest among youth in agriculture
- Insufficient and poor condition of infrastructure facilities for production, marketing and storage of agricultural commodities.
- No provision of incentives to the farmers to engage in agriculture for improved productivity.
- Policy to minimize consumption of unhealthy food is needed.

- Processing of agriculture products at the local level is not proper and efficient. The by-products of agricultural products are not converted to useful materials.

**Current Status:**

- ✓ Poor implementation of existing laws, rules, and regulations
- ✓ Inefficient GESI-related laws, rules, and regulations at the local level of the agricultural system
- ✓ Inefficient government institutional structures in the agriculture sector
- ✓ Capacity building of human resources is required in the agriculture sector
- ✓ Inadequate awareness and information in the agriculture sector
- ✓ Human resources is in short supply at service delivery level
- ✓ Limited coordination between stakeholders
- ✓ Youth do not prioritize agriculture as an employment avenue.
- ✓ Lack of willingness from government to implement evidence and experience-based planning

**Recommendations:**

- ❖ Advocacy on the practical implementation of laws, rules, and regulation
- ❖ GESI should be mainstreamed in every sector.
- ❖ Building capacity of existing human resources and increment in human resources.
- ❖ Increase access of farmers to information, technology, and service
- ❖ Improve inter-governmental coordination among different tiers of government
- ❖ Development of policies and institutions for quality control
- ❖ Need-based participatory planning process
- ❖ As agriculture is perceived as a “dirty” task and farmers are depicted as ‘poverty stricken’ in textbooks and other publications, the perception of the farmers' image is not good. The importance of farming and the role farmers play as food-producers and businesspersons should be established by raising awareness among general public.
- ❖ Agriculture needs to be incorporated into the school textbooks as a separate subject
- ❖ Ensure that farmers have access to information regarding plans, processes, and policies of the local government.

***Prioritized recommendations:***

- ❖ Need-based participatory planning process
- ❖ Increase access of farmers to information, technology, and service
- ❖ Advocacy on the practical implementation of laws, rules, and regulation
- ❖ Promote dignity of labor in agriculture through insightful explanation on farmers and agriculture in coursebooks for schools.

**Consultation Workshop at Nepalgunj of Lumbini Province**

The consultation workshop in Lumbini Province was held on May 24, 2023. The formal inaugural session followed by “whole system in the room” approach workshop was held at Hotel Kalptaru, Nepalgunj, with the participation of officials from government, the private sector, farmers, and NGOs.

The formal inaugural session started with a welcome address and introduction of the food and agricultural systems transforming pathways by Dr. Aruna Palikhe, Team Leader, IIDS. The context of the workshop and details about USAID's planned shift in country plan were then presented. Dr. Palikhe was followed by Mr. Navaraj Acharya, Senior Area Coordinator of KISAN II. Mr. Acharya put forth the KISAN II project modality and mentioned the collaborative effort with the government in a Joint Rice Intervention Program for promotion of fine rice. The drafting of Lumbini Province Agriculture Development Strategy has been initiated through joint effort by both the government and the development sector stakeholders.

Mr. Mahesh Regmi, Senior Agriculture Officer, Prime Minister Agriculture Modernization Project (PMAMP), briefed on the farm mechanization project implemented under PMAMP in financial and technical collaboration with CSISA project under USAID Feed the Future initiative in Lumbini Province. 2500–3500 hectares of area under maize have been expanded with successful hybrid seed production through this collaboration. Farm mechanization, agri-industrialization, and crop intensification from traditional rice–wheat cropping pattern to Rice–Mustard–Maize cropping pattern are some of the activities being promoted by PMAMP. He recommended the government and non-governmental sector to come together and work in collaboration, especially in view of scattered resources.



Photo 4. Mr. Mahesh Regmi, Senior Agriculture Officer, PMAMP, was a keynote speaker.

Mr. Chabilal Tharu, Mayor, Barbardiya Municipality, began with the challenges in achieving SDGs owing to the geography, social structure, ramifications of climate change, lack of irrigation facilities, and unavailability / untimely availability of agricultural inputs, all of which have severely impacted the agricultural economy of Lumbini Province leading to an increase in poverty and hunger in the region. The intervention of KISAN II has, however, boosted farmers' confidence in commercial agricultural production, especially with promotion of fine rice and maize. This, along with the involvement of the private sector, has led to a positive change in the livelihood of the farmers. Mr. Tharu also recommended the promotion of organic farming with homestay for agricultural tourism promotion, streamlined agriculture insurance process, and standardized agricultural policies at local and central level for the betterment of livelihood of the farmers.

Mr. Himalaya Tripathi, Chairperson, Badhaiyatal Rural Municipality, recalled initiation of KISAN II in the Municipality in 2019. The area of cultivation of fine rice since the project intervention has increased from 30–35 percent to 70 percent. Additionally, the rural municipality has allocated a budget of Nepali Rupees 3 million to encourage the national fine rice production as a substitution for imported rice, especially from India. Along with cereal crops, the rural municipality is encouraging the farmers in the production of safe and healthy green vegetables. Considering inter and intra migration being one of the major issues for declining agricultural workforce, Mr. Tripathi urged USAID to implement entrepreneurship programs addressing unemployment.

Dr. Mamata Pradhan, Senior Research Coordinator, IFPRI, officially concluded the inaugural session by thanking all the participants. Dr. Pradhan highlighted CGIAR's role in green revolution and the need of collective efforts to ensuring food security in Nepal.

All the discussions and recommendations from the participants from Lumbini Province are shared below and the action plans developed are available in Annex I.

## Workshop Discussion: Nepalgunj, Lumbini Province

### Theme 1: Risk and Resilience Capacity

#### Issues Raised / Current Status:

- For poor farmers, finance is a major issue and accessing loans comes with a tedious process.
- Agricultural land is used for non-agricultural purposes, for example, housing due to unplanned urbanization.
- Farmers are facing huge crop loss due to the effects of climate change, including erratic rainfall, floods etc.
- Unavailability of seed and fertilizers at the time of requirement.
- Agriculture insurance is not effective; suffering farmers are not getting compensation.
- Human–wildlife conflict instances are on the rise.
- Inadequate irrigation caused decreased crop production because of water stress.
- Farmers do not have access to climate-resilient seeds due to poor extension services.
- Paucity of information regarding crop management practices among farmers.
- There is a shortage of market information for farmers due to lack of digitalization system targeted towards the farmers.
- Farmers do not get advance weather information resulting in heavy loss of crops (special mention made of the recent rainfall during just one-week before harvesting time that resulted in heavy losses of crops)
- Access to soft loans for farmers is not adequate.
- Soil conservation practices are not implemented at farm level.

#### Recommendations:

- ❖ Provincial government should manage stray cows through measures such as establishment of cattle ranches. Wild animals can be managed by using wire and fences around jungle areas.
- ❖ Provision of effective agriculture insurance and compensation for any loss of agricultural crop.
- ❖ Awareness-raising programs on prioritizing agriculture among youth.
- ❖ Promote the use of biofertilizers and biopesticides.
- ❖ Maximum use of green cover crops, and organic manure (Cover crops such as Sorghum, Mustard is used as secondary crops to increase soil nutrients and limit disease and pest outbreaks)
- ❖ Facilitate availability of quality seeds in accordance with the agriculture production area
- ❖ Encouragement or support for quality seed production to cooperatives, farmers' groups, and others
- ❖ Emphasis on locally available and indigenous food products at market level
- ❖ Establishment of fertilizer industry at the national level
- ❖ Establishment of irrigation as a 'national pride' project which can be prioritized by GoN.
- ❖ There should be the provision of subsidies for ground and subterranean irrigation.
- ❖ Installation of weather forecasting devices at the local level is urgently required.
- ❖ Formation of immediate, mid-term, and long-term agriculture improvement strategy is required at local level.
- ❖ Conduct interactive training, workshops and capacity development programs for the farmers and other relevant stakeholders on sharing new ideas and technology.
- ❖ Conduct regular meetings at the local level, as well as with Agriculture Knowledge Centre, INGOs, private organizations, and agriculture cooperatives.

- ❖ Monitoring agriculture and food security, technical extension support, and agriculture cooperatives

***Prioritized Recommendations:***

- ❖ Encouragement for quality seed production to cooperatives, farmers' groups, and others
- ❖ Emphasis on locally available and indigenous food products
- ❖ Use of biofertilizers and biopesticides.

**Theme 2: Food System Innovation**

**Issues Raised / Current Status:**

- Insufficient use of agriculture technology by farmers
- Agriculture mechanization is still low.
- Inadequate effort on conservation of local varieties.
- Lack of extension service.
- There is supply of seed varieties as per farmer's demands rather than environment factors which is not effective.
- Adulteration is common - seed quality is affected due to mixing of hybrid and indigenous seeds.
- Inadequate research in improvement of cropping system and increase in crop intensification.
- Unavailability of irrigation facilities in most parts of the agricultural fields.
- Organic production and marketing are not common.
- Indiscriminate use of pesticide
- There is a need for the establishment of modernized seed centers.
- More investment is required for agriculture modernization and mechanization.
- Lack of high-yielding and improved variety of seeds; Insect, pest, and disease-resistant varieties are not in access to farmers.
- Vermicompost production is limited to only research centers and farmers are not using vermicompost because neither do they have resources to prepare it nor are they accessible via market.

**Recommendations:**

- ❖ Installation of shallow tube wells to overcome the problem of irrigation.
- ❖ Developing water storage for irrigation and formation of ponds from small rivers and rivulets
- ❖ Invest more on water lifting systems as enormous sources of water is available.
- ❖ Practice drip irrigation and sprinkle irrigation
- ❖ Flow regulation should be achieved by building large dams, while artificial ponds should be constructed for irrigation.
- ❖ Another option is to invest in solar irrigation where these is a problem of electricity.
- ❖ Machine exhibition, knowledge, and training on repair and maintenance of farm machinery should be given to both men and women.
- ❖ Import, promote or develop women friendly farm instruments as more agriculture is practiced by women these days.
- ❖ Promote crop-specific macroeconomics and development of linkage between local level agrovets and big companies of seed importers, variety exhibition, and active participation of NARC.
- ❖ Emphasis should be on the marketing of local varieties as well.

- ❖ Encouraging farmers to apply three crop systems in a year and facilitate an efficient agriculture extension system for them.
- ❖ Focus on growing short duration crops.
- ❖ Support farmers to develop and implement private storage technology as government public storage is not functioning well.
- ❖ Support farmers to establish small-scale industries at local level (emphasis on agri-business)
- ❖ Marketing of locally available and indigenous crops

***Prioritized Recommendations:***

- ❖ Water Storage for irrigation and formation of ponds from small rivers and rivulets
- ❖ Marketing of locally available and indigenous crops
- ❖ Promote crop-specific macroeconomics and development of linkage between local level agrovets and big companies of seed importers, variety exhibition, and active participation of NARC.
- ❖ Connect farmers with small-scale industries.

**Theme 3: Market and Trade**

**Issues Raised / Current Status**

- Inaccessibility to seeds and fertilizers in time for planting of agricultural crops
- Production cannot meet increasing market demand and income.
- No provision of small cold storage in the local level
- Very tedious marketing and huge post-harvest loss
- Provision of license to seed and pesticide sellers is not effective.
- Insufficient establishment of warehouses
- Paucity of chemical fertilizers during production period
- The middlemen get huge profit margins and farmers do not even recover the cost of production from their agricultural produce.
- No promotion of Nepali indigenous products representing Geographical Indicators
- Farm mechanization is not adequate.
- Lack of market guarantee for the produce or no market
- Price fluctuation of agricultural commodities occurs due to open border between India and Nepal
- Access to finance for farmers is low.
- Inefficient facilities of plant quarantine
- Absence of government-led marketing channel to balance demand–supply chain
- Market insecurity for produced goods due to the poor condition of road causing delays in transit.
- Agri-processing and storage facilities are not enough.

**Recommendations:**

- ❖ Strict monitoring of illegal trade should be done which is occurring due to open borders.
- ❖ There is a need to establish strong relationship with market actors, for example traders, middleman, wholesaler to ensure the market guarantee.
- ❖ Market-oriented production
- ❖ Continuation of the investment in production and marketing
- ❖ Introduction of technology that reduces production cost to the farmers is required.
- ❖ Improvement of processing unit in support of government
- ❖ Support of marketing infrastructure (cold storage, warehousing, transportation)

***Prioritized Recommendations:***

- ❖ Strict monitoring of illegal trade occurring due to open border
- ❖ Strong relationship with market actors
- ❖ Development of technology that reduces production cost.

**Theme 4: Food System Output and Outcome**

**Issues Raised / Current Status:**

- Insufficient irrigation facilities due to which there is a competition to irrigate land from water canal.
- Paucity of quality seeds and fertilizers
- Scarcity of fertilizers, seeds, and irrigation facilities that hinder the optimization of agricultural production.
- Lack of information on protecting occupational health of farmer; for example, use of personal protective equipment during farming.
- Contaminated seeds, pesticides, and chemical fertilizers threaten sustainable agriculture production.
- Low quality of farm products decreases their marketability.
- Agriculture course is not included in the syllabus at school level.
- Promotion of alternative use of chemical fertilizers (replacement with biofertilizers, crop rotation, etc.) is not implemented and this negatively affects the soil health and soil integrity.
- Lack of production-based incentives to farmers deviate them from good agricultural practices and engage in negative agricultural practices.

**Recommendations:**

- ❖ Preservation and promotion of locally available agricultural crops
- ❖ Discourage consumption of junk foods
- ❖ Encourage use of recommended fertilizers and pesticides only
- ❖ Development of physical infrastructure for irrigation and its equal accessibility to farmers.
- ❖ Selection of appropriate variety of seeds, location-specific varieties
- ❖ A mechanism to measure the quality of seed needs to be established.
- ❖ Inspection of imported foods and improving their assessment standards.
- ❖ Plan programs and policies that can reduce the negative impacts of agriculture policy of neighboring countries.
- ❖ Decide on climate-friendly pocket area (10 Ha of land as classified by the GON)
- ❖ Increase awareness of crop cycles
- ❖ Improve technical knowledge and skills for post-harvest management
- ❖ Extension of women-friendly technologies
- ❖ Extension of consolidatory (*Chaklabandi*) farming or combining small pieces of land to increase the economics of scale.
- ❖ Coordination among intergovernmental bodies, agriculture cooperatives, private sector, farmers, and others for implementation of food security strategy

***Prioritized Recommendations:***

- ❖ Development of physical infrastructure for irrigation and make it equally accessible to farmers.
- ❖ Improve technical knowledge and skills for post-harvest management

- ❖ Coordination among intergovernmental bodies, agriculture cooperatives, private sector, farmers, and others for implementation of food security strategy

### **Theme 5: Food System Governance and Control**

#### **Issues Raised / Current Status:**

- Dearth of agriculture labor due to migration of youth
- Need for provision of contract farming options for landless farmers.
- Ownership of arable land by the government decreased land holdings for agricultural purposes.
- Lack of policy to facilitate chemical fertilizer trade by the private sector.
- GoN's not promoting and prioritizing the private sector.
- The grant programs (both govt. and donor) are not accessible to poor farmers.
- Illegal import of different seed varieties is replacing indigenous crop seeds threatening the loss of these species.
- There is a need to fast-track seed variety registration process as seed replacement takes longer time (2-4 years and even more).
- The government front-line service delivery for financial support is very tedious and farmers are reluctant to take their services.
- Implementation and provision of farmers' credit card (Kisan Credit card) for agri-business was sub-par and needs to be re-looked at. *(The Kisan Credit Card scheme launched by the government allowed farmers to purchase agricultural inputs and farm tools from designated vendors up to Rs 2,00,000 via credit card with subsidized interest rate).*
- The capacity development of government and extension personnel at the local level is not adequate.
- Traders are making higher margins and farmers are compelled to sell their products at low prices (There is no payment guarantee agreed upon in the beginning by traders).
- Agriculture grants are not easily reachable to farmers in need.
- Lack of clear policy from the provincial and federal government toward crop promotion
- Although the government has prioritized the agriculture sector in development, the efforts are not adequate. Agriculture is still perceived as a 'dirty' task and farmers are depicted as poor with mended clothes in textbooks and other publications.
- Agriculture should be included in the textbook as a separate subject.
- Government policy needs to be revised to provide easy access to seeds and fertilizers to farmers.

#### **Recommendations:**

- ❖ There should be standard directives and procedures for distribution of agricultural subsidies through all three tiers of government).
- ❖ Increase taxes of readily usable goods and decrease taxes on raw materials while importing from other countries.
- ❖ Decrease taxation to agribusiness firms and industries by categorizing them as service-oriented industry.
- ❖ Implement youth-centric programs to stop their migration, especially to other countries (goat rearing, off-seasonal vegetable production, slaughterhouse, custom hiring center, and other measures)
- ❖ Promote area-specific high-value crops.
- ❖ Promotion of riverside farming, use of public land, and buffer zone farming for landless farmers.
- ❖ Incorporating private agrovets in the distribution of fertilizers and manure

- ❖ Strengthen public–private partnerships and encourage private sector to lead these partnerships (poultry sector, rice mill, etc.)
- ❖ Connect lead farmers and local-level leaders in bulk SMS system for efficient flow of agriculture information.
- ❖ Monitor illegal import of seeds.
- ❖ Conduct regular training, workshops, exhibitions, and farmers’ tour to enhancing the capacity of the farmers.
- ❖ Fix minimum support price for agriculture commodities.
- ❖ Need to adopt fast-track registration process of high-yielding and better performing crop varieties (cereals, vegetables).
- ❖ There is an urgent need to implement farmers identity cards.
- ❖ Government should assure the procurement of cereals whose Minimum Support Price has been announced.

***Prioritized Recommendations:***

- ❖ Decrease taxation to agribusiness firms and industries by categorizing them as service-oriented industry.
- ❖ Conducting regular training, workshops, exhibitions, and farmers’ tour
- ❖ Monitor illegal import of seeds.

**Issues, recommendations and feedback collected from representatives of various stakeholder organizations during the opening session and closing circle**

**Representative of KISAN II**

- ✓ We are collaborating with the government in a Joint Rice Intervention Program for promoting production of fine rice. We also provide the necessary technical assistance.
- ✓ Lumbini province is preparing its Province Agriculture Strategy.

**PMAMP**

- ✓ We work in farm mechanization, agri-industrialization, and crop intensification. We are working on crops such as maize and mustard in Dang.
- ✓ We have an informal collaboration with CSISA project under USAID Feed the Future initiative. We had the financial resources, and they supplied the technical skills.
- ✓ We have been able to significantly expand the cultivated area of maize to 2500–3000 hectares and also been successful in hybrid seed production since last two years
- ✓ It is important for the government and non-government sectors to come together and work in collaboration because all the resources are not in the same place.
- ✓ There is a problem of less prioritization of agriculture industrialization and agriculture mechanization.
- ✓ We have financial resources but are short of manpower for agriculture development.
- ✓ Our focus should not only be on cereal crops. PMAMP has been promoting oilseed crops like rapeseed in Banke district.
- ✓ There were not any differences between thick and fine-grained rice at the policy level in Badhaiya rural municipality, though there are differences in the present context.

**Barbardiya Municipality**

- ✓ It is challenging for us to achieve the SDGs because of our geography, social realities, as well as agricultural economy. Poverty and hunger still prevalent here People are dependent on daily wages.
- ✓ KISAN I project helped in boosting farmers’ confidence in production. Earlier, when producing in a limited area, the farmers were unable to enter commercial production.

- ✓ KISAN I provided market guarantee and brought farmers to community farming. They also supported the farmers with seeds.
- ✓ KISAN II is collaborating with PMAMP in promoting fine rice and maize. This is beneficial and is encouraged by farmers.
- ✓ While coarse rice can have three harvests in a year, it is not possible with fine rice production. We have an excess supply of coarse rice, but fine rice is in low supply.
- ✓ KISAN II has also included the private sector and therefore the farmers' produce has market guarantee.
- ✓ In areas that do not have irrigation facilities, farmers are unable to sow the seeds on time. Rainwater remains unreliable due to climate change.
- ✓ Farmers are unaware of the appropriate amount of pesticides that should be applied.
- ✓ There is demand for organic agri-products even locally, for example, in the homestays. However, there is a problem pertaining to regulation, with products that have been produced with urea sometimes being called organic. We have also had problems with pest infestations such as the onslaught of the American armyworm.
- ✓ Agricultural insurance process is cumbersome for farmers. Our policies are designed to look at the experience of one municipality, but we must be able to study the entire province.
- ✓ Storage facilities can help farmers fetch higher prices.
- ✓ We are engaging in livestock and livelihoods program with Heifer. We look forward to partnerships with big NGOs and manage programs jointly.
- ✓ We were able to come up with good feedback from a participatory process, including general farmers, industrialists, traders, NGOs, and experts. Now, it is time where policies/budget are made, in which the feedback from the workshop will be helpful.

### **Badhaiyatal Rural Municipality**

- ✓ KISAN II got implemented in Badhaiyatal Rural Municipality in 2019. Farmers were unaware of the distinction between coarse and fine rice at the time of implementation.
- ✓ It was found on research that the municipality is suitable for fine rice production. The area of cultivation of fine rice has been increased from 30–35 percent to 70 percent.
- ✓ The Rural Municipality made a policy to displace the imported Indian rice with local production and has allocated a budget of 30 lakhs to that end. This money is spent on imports because our food tastes and preferences have changed.
- ✓ The imported green vegetables have pesticides in them; we are trying to be independent in production of greens.
- ✓ 25–30 percent youth from our municipality have migrated for work; we want to include them in productive farming. We see USAID KISAN II as important in achieving that goal.

### **Consultation Workshop at Dhangadhi of Sudurpashchim Province**

The consultation workshop in Sudurpashchim Province was held on May 26, 2023. The formal inaugural session, followed by “whole system in the room” approach workshop, was held at Afno Ghar Temple Resort, Dhangadhi, with the participation of officials from government, the private sector, farmers, and NGOs.

The formal inaugural session started with a welcome address and introduction of the food and agricultural systems transforming pathways by Dr. Aruna Palikhe, Team Leader, IIDS. The context of the workshop and details about USAID's planned shift in country plan were then put forth. Dr. Palikhe was followed by Mr. Khagendra Prasad Sharma, Chief, Agriculture Knowledge Center, Kailali. The need for participation from individuals working at the policy level was stressed upon for effective outputs for the workshop. The shift in people's food habit from indigenous nutritious food to junk foods was thereby mentioned. It was also iterated that importance needed to be given to production of fruits and vegetables along with cereal crops to bring about food security. Various actors, including government, non-government, and private sectors, working on food systems are required to work in close coordination to achieve food security in the country.



Photo 5. Mr. Khagendra Prasad Sharma, Chief, Agriculture Knowledge Center, was a keynote speaker.

Mr. Tikaram Thapa, Chief of Planning and Evaluation Division, Ministry of Land Management, Agriculture and Cooperatives (MOLMAC), Dhangadhi, highlighted the need for a multi-sectoral approach in reducing malnutrition problems of the country. The diminishing youth labor force in agriculture and the need of youth-centric programs for the revival of agriculture sector was mentioned. Although the farming system in Nepal is risk-centered, the additional risk from monkeys, cows, and other wildlife has made the issue worse. The need for mechanization in post-harvest and value addition of agriculture commodities for loss minimization and profit maximization was also stated.

Ms. Bhagwati Chaudhary, Vice Chairperson, Kailari Rural Municipality, praised the effort made by Feed the Future initiatives and appreciated the soil testing camps which was supported by Nepal Seed and Fertilizer (NSAF) project to inform farmers about suitability of the crop choice and optimize investments. Further, the need for soil test facilities after harvest of each season's crop was also stressed. Kailari Rural Municipality has already declared maize and rapeseed production zones based on production feasibility and is working on price mechanism and market support for farmers. It was suggested that the minimum support price needed to focus spreading to other agriculture crops besides just cereal crops.

The inaugural session was formally concluded by Dr. Mamata Pradhan, Senior Research Coordinator, IFPRI, thanking all the participants. She mentioned the special potential for agriculture in Sudurpashchim Province because of its unique market linkages with neighboring countries.

All the discussions and recommendations from the participants from Sudurpashchim Province are detailed below and the action plans developed are available in Annex I.



Photo 6. Dr. Mamata Pradhan, Senior Research Coordinator, giving vote of thanks in Sudurpashchim Province.



Photo 7. Group photo after the consultation workshop in Lumbini Province.



Photo 8. Group photo after the consultation workshop in Sudurpashchim Province.

## Workshop Discussion: Dhangadhi, Sudurpashchim Province

### Theme 1: Risk and Resilience Capacity

#### Issues Raised / Current Status:

- Early Warning System services are still not reaching farmers everywhere.
- Agriculture insurance among the farmers is not effective; they are not getting compensation for crop loss.
- Unavailability of loan at low-interest rate for poor farmers.
- Lack of information systems on value chains available to farmers.
- Wildlife-human conflict and animals like wild boar, monkey, and nilgai straying into the fields and destroying the crops has been resulting in a large amount loss.
- No provision of climate resilient seeds to farmers
- Climate change impacts (deluge, landslide, drought) are harshly affecting crop production.
- There is a lack of agricultural and market information among farmers.
- Poor access to soft loans faced by economically challenged farmers.
- Lack of proper interventions for controlling soil erosion in hilly regions.

#### Recommendations:

- ❖ Use of mobile apps and social media to efficiently disseminate early weather warnings and information on value chains.
- ❖ Enable provision of compensation to farmers for crops damaged by weather hazards.
- ❖ Awareness-raising programs on climate change impacts, disasters, early warning systems should be conducted effectively.
- ❖ Facilitate increase in government investment to motivate insurance companies to launch easily accessible agriculture insurance programs. The companies also need to be strictly monitored to ensure promised payouts to farmers in a timely manner.
- ❖ Fix the minimum support price for produce.
- ❖ Generating awareness among people on plant diseases and insects, and the effective utilization of pesticides
- ❖ Provision of agriculture ambulance to be reinstated (the ambulance facilitated the pickup of produce from farmers and sale in other areas during the time of COVID-19)
- ❖ Cooperatives should efficiently mobilize to help the farmers right from production to marketing stage.

- ❖ Provide year-round availability of irrigation facilities to agricultural land.
- ❖ Use of lift irrigation systems in hilly regions.
- ❖ Development of women-friendly agricultural technology.
- ❖ Promotion of locally produced agricultural products.
- ❖ Declare production pockets in hilly areas to consolidate production areas for mass production of agricultural products.
- ❖ Improvement of storage facilities and technology in accordance with production areas.
- ❖ Develop capacity for agrovets.

***Prioritized Recommendations:***

- Agriculture Ambulance: Provision of agriculture ambulance at ward level, for ease of marketing during times of shocks, crises, and stresses and can be adapted to other areas.
- Fix the minimum support price.
- Easy access to agriculture and livestock insurance

**Theme 2: Food System Innovation**

**Issues Raised:**

- Little effort goes into preservation, development, and promotion of indigenous and local seeds.
- Inadequate availability of farm machinery tools.
- Development and extension systems for climate resilient seeds are neither efficient, nor sufficient.
- Need to promote new and appropriate agricultural technology imported/learned from other nations.
- No provision of loans to farmers at affordable interest rates.
- Lack of research and development in indigenous crops like local millet varieties (e.g., *kaguno*-foxtail, buckwheat).
- Lack of resource centers for research and development.
- Less production of organic foods and cannot meet the consumer demand.
- Lack of awareness/knowledge to farmers regarding recent technology and cultivation practices.
- Lack of access of agriculture insurance to poor and marginalized farmers
- Karnali is a hub for high value medicinal and aromatic plants like chamomile, citronella, mentha, palma rosa but there's a lack of investment in their production and promotion of these plants.
- Inadequate transfer of agricultural and industrial technology has caused farmers to rely on traditional agriculture practices.
- Not much priority is given to crop production during the offseason.
- Insufficient focus on farm mechanization due to slopy and fragmented land.
- Decreasing crop productivity due to poor agricultural inputs, lack of market and manpower in agriculture

**Recommendations:**

- ❖ Recruit more technicians, specifically those with expertise in food and agriculture, into the agriculture research and development wings.
- ❖ Timely availability of fertilizers and seeds should be made part of the agricultural policy as this is a major concern for most farmers.
- ❖ Agrovets should only sell the seed varieties recommended by the GoN as per geographical location and climatic condition instead of randomly importing and selling seeds that will not benefit the farmers.
- ❖ Fragmented land should be consolidated for agricultural production.
- ❖ Provisions for subsidies, modern agricultural technology, farm machinery, and custom hiring should be made available at the local level.
- ❖ Establishment of research centers at the provincial level which will work on improvement, promotion, and preservation of local and indigenous foods.
- ❖ Provision for agricultural grants should be made available according to production.

***Prioritized Recommendations:***

- i) Development of Research Centers at province level
- ii) Provision of grants according to the production

**Theme 3: Market and Trade**

**Issues:**

- No provision for training and raising awareness related to modern farming systems so that farmers can make efficient use of existing resources.
- Most farmers are engaged in subsistence farming due to which there's no marketing and no income generation from agriculture products.
- Lack of timely availability of seeds and other agricultural inputs delays sowing of seeds.
- Lack of market information to the farmers due to which they end up selling their products below cost of production. Even commercial farmers do not get a market for their products due to poor access to roads and lack of a market system.
- People tend to consume imported rather than locally produced foods and products, and also, there's less focus on marketing of locally available products.
- Open border between Nepal and India is affecting agriculture as the Nepali market is filled with Indian agricultural commodities.
- Farmers do not have a strong knowledge of the complete value chain of agricultural products; this could have been provided by cooperatives and local bodies.
- Poor distribution pattern of seeds and fertilizers among farmers.
- No price fixation on agricultural products except on few cereal crops.

***Recommendations:***

- ❖ Plant quarantine office should function efficiently to regulate the unnecessary import of random seed varieties.
- ❖ Provision of easy marketing for agricultural products produced by local farmers.
- ❖ Government should facilitate easy and safe transportation options for farmers.
- ❖ Provision of farmer's credit card and loan at low-interest rates.
- ❖ Development of efficient information system for early warnings and climate risks.
- ❖ Regulation of open border trade which creates issues like low market prices for locally produced agricultural commodities.

***Prioritized Recommendation:***

- ❖ Regulation of open border trade which creates issues like low market prices for locally produced agricultural commodities.

**Theme 4: Food System Output and Outcome**

**Issues Raised / Current Status:**

- Lack of concern for the production, promotion, and preservation of indigenous and locally available foods produced in different agroecological zones of Nepal.
- Priority to be given to agriculture subsidies over free water; electricity provisions given to farmers is not adequate.
- Deviation from traditional food habits due to consumption of packaged and junk foods.
- Absence of focus on production of low-duration crops and diversified crop rotation in the field. Low quality of agricultural inputs is an impediment to producing optimum quantity of agricultural products.
- Soil improvement and conservation are not accorded priority at the farmers' level.
- Ineffective action of cooperatives in supporting farmers with farm machinery and inadequate reach of farmers to such facilities that support farm mechanization.
- Lack of site-specific nutrients and inefficient water management and irrigation facilities.
- Lack of market management and regulation; there is a dominance of Indian products in Nepali market.
- Unavailability of timely agricultural inputs which affects productivity.
- No promotion of vermicompost and the priority given to chemical fertilizers is evident.
- Excessive reliance on neighboring countries for chemical fertilizers and absence of fertilizer plant in Nepal.
- Lack of soil tests to assess the nutrient status of land for agriculture production.
- Dearth of quality seeds for achieving optimum agricultural produce.
- Monopoly of governmental bodies in import and distribution of fertilizers and exclusion of private sector for buying and distribution of chemical fertilizers in Nepal.

**Recommendations:**

- ❖ Agriculture needs to be established as a respected and commercially profitable profession. It is generally perceived as a “dirty” task and farmers are depicted as ‘poverty stricken’ even in textbooks and other publications. The importance of farming and the role farmers play as food-producers and businesspersons should be established by raising awareness among general public.
- ❖ Introduce awareness-raising programs on nutritional value of traditional foods for the young.
- ❖ Improve and raise the efficiency of supply chain management for agricultural inputs.
- ❖ Identification and categorization of actual farmers’ should be improved and only they should supported with provisions like subsidies (often incorrect categorization leads to people wrongly identifying themselves as farmers to get unfair benefits).
- ❖ Emphasis should be given to integrated farming system of crops and livestock, with due importance given to soil health.
- ❖ Climate resilient planning should be part of policy and agriculture should be practiced according to the suitability of climate of the production area.
- ❖ Proper coordination is needed between agriculture education, agricultural research, and agriculture extension officials and offices to promote holistic advancement and transformation of the food systems.

- ❖ Grant more independence to the seed sector through provisions for soft loans, capacity building, insurance, lab facilities, tax concessions, modern technology, etc.
- ❖ Provide easy access to finance for agriculture production and agro-food industries.
- ❖ Establish reliable post-harvest facilities and introduce women-friendly farm mechanization.
- ❖ Land feasibility assessment of barren land should be undertaken to support poor, landless farmers.
- ❖ Establishment of fertilizer industries at the provincial level.
- ❖ Internships should be made mandatory for agriculture students, inspiring them to take an interest in the development of the sector for a better future for Nepal.
- ❖ Locally available foods should be compulsorily used in places like army and police camps, hostels, hospitals, hotels, marts, among others to improve provincial market systems.

***Prioritized Recommendations:***

- ❖ Proper coordination is needed between agriculture education, agricultural research, and agriculture extension.
- ❖ Grant more independence to the seed sector through provisions for soft loans, capacity building, insurance, lab facilities, tax concessions, modern technology, etc.
- ❖ Easy access to finance for agriculture production and agro-food industries

**Theme 5: Food System Governance and Control**

**Issues:**

- Seasonal migration of farmers including youths to other parts of Nepal to cope up with climate change impacts and threat of natural calamities.
- Open border between India and Nepal is one of the hindrances to trade and business for the people living near border area and surrounding districts.
- Unavailability of manure and fertilizers in time to apply it in appropriate cropping stage in the field.
- Not enough government support for improving production on the national level.
- Lack of manpower in the agriculture due to migration of youths to other nations.
- Lack of provision for subsidy as per categorization of farmers.
- Inadequate access to financial service due to tedious and long administrative procedure to get loans.
- Minimum support price fixed only for few cereal crops, and there is no provision for a minimum support price for other horticultural crops and cereals.
- Lack of coordination between intergovernmental bodies create wavering policies and inefficient services to the farmers.

**Recommendations:**

- ❖ Effective steps need to be undertaken to improve coordination between intergovernmental bodies.
- ❖ Increase quality seed production in coordination and collaboration with governmental bodies, private sector, and cooperatives.
- ❖ Correctly identify and support the actual marginalized farmers who need government help and subsidies to improve their production.
- ❖ Emphasize the production and utilization of organic manure.

- ❖ Campaign on “One Village, One Product” should be carried out to increase commercial production of agricultural outputs.
- ❖ Regular inspection of imported goods to control illegal trade through the open border.
- ❖ Establishment of agriculture research center in each province
- ❖ Establishment of fertilizer industry in partnership with central, provincial, and local government bodies
- ❖ Carry out youth-centric programs on economically viable, sustainable agriculture to attract youth to agricultural sector.

***Prioritized Recommendations:***

- ❖ Correctly identify and support the actual marginalized farmers who need government help and subsidies to improve their production.
- ❖ Establishment of fertilizer industry in partnership with central, provincial, and local government bodies
- ❖ Effective coordination between intergovernmental bodies

**Issues, recommendations and feedback from organizational representatives during opening session and closing circle**

**Agriculture Knowledge Center, Kailali**

*Issues:*

- ✓ Consultation workshop will not be effective until and unless there is participation of people working at the policy level; the presence of the chief minister and other ministers would be more fruitful as they are primarily responsible for the planning.
- ✓ People at the local level cannot implement the collected suggestions and recommendations on their own, and because many issues collected are multidimensional.
- ✓ Emphasis should not only be on production of cereals and grains but also the production of fruits and vegetables.
- ✓ Food habits of people are one of the main drivers of food insecurity (rice-based eating habits and people’s attraction to junk foods)
- ✓ No priority is given to indigenous foods
- ✓ Need to increase crop intensity as we have less land
- ✓ Problem of poor research and paucity of infrastructure in Nepalese agricultural system
- ✓ The main problem is the transportation of agricultural commodities, but the concerned authority is unaware, and instead blames to Department of Agriculture for the lack of road maintenance.
- ✓ Proper and effective coordination between intergovernmental bodies required.
- ✓ Less people were able to attend the workshop due to the peak phase of the budgeting and planning process of officials of Nepal government.

*Recommendations:*

- ✓ Coordination between donor agency, cooperatives, governmental and non-governmental bodies, NGOs, INGOs
- ✓ Transformation of agriculture sector is not possible until and unless there is commitment and willingness to develop the sector by governmental bodies and leaders of the country.
- ✓ The citizen should advocate and be the watch dog for the leaders of the nation to ensure that they are committed towards the goal of sustainable agriculture production.
- ✓ The report, recommendations, and prioritized issues from USAID funded GFSS-R should be submitted to the central government’s Ministry of Agriculture and Livestock

Development so that the concerned authority is focused on implementation of recommendations collected from the workshop.

- ✓ Coordinated meetings and dissemination of findings with Planning Commission, Ministry of Finance, and other concerned authorities should be conducted for effective implementation of the collected recommendations. (Collaborative approach is needed)

**Chief, Planning and Evaluation Division, MOLMAC**

- ✓ Briefed on the reasons behind “How are we being malnourished?”

*Reasons:*

- a. Rice-based food habit
  - b. Poor knowledge of nutrition and nutritious food
  - c. Food Waste
- ✓ Influence of social and other media (advertisement for noodles; people tempted to buy noodles while selling soybean in their homes)
  - ✓ All seven provinces are working on drafting the Agriculture Development Strategy (ADS), 2015–2035
  - ✓ The actual demands of farmers, markets, and the country should be known. The agricultural sector of Nepal should focus on fulfilling the demands of the people. This is possible only when multi-stakeholders work hand in hand.
  - ✓ We should be concerned about how to attract youth back to agriculture.
  - ✓ One of the primary problems of barren land is wildlife conflict, and attacks by monkeys, nilgais, and birds.
  - ✓ Vertical farming should be considered.
  - ✓ People should be aware of planting avocado, lime, colocasia, turmeric, and ginger. Similarly, promote processing of high value crops like ginger candy, Colocasia to “*Masyaura*” and many others.
  - ✓ Provincial government should lease barren land if people are willing to cultivate crops on it.
  - ✓ People are spending a lot of time, effort, and energy in manually husking rice, shelling corn, and dehulling millets although there is a combined mill that can make their life easy and save time; these processing units should be operated at the local level.
  - ✓ There should be focus on product diversification; Europe is making potato chips and other products from potatoes, and if we can similarly diversify our existing agricultural commodity, there would be a high prospect for prosperity.
  - ✓ There are traditional varieties/dish made of locally produced crops. Shifting from processed food to preparation of traditionally produced dishes should be promoted for example: Chyakhla,” “Gundruk,” and “Masyaura”
  - ✓ The Badimalika Municipality are promoting locally grown millet and providing training to make biscuits, cookies and cakes from the home-grown millet which are the pioneering activities of Badimalika municipality.
  - ✓ The habit of consuming corn should be ingrained from childhood (promotion of locally produce food crops)
  - ✓ At least one cold storage should be made available at each local level.
  - ✓ The conclusion and ideas collected in this workshop will help in the development of the far western province.

**Vice Chairperson, Kailari Rural Municipality**

- ✓ The work of KISAN I and II was appreciated; farmer meter program is being implemented which provides a subsidy on the electricity charges for irrigation.
- ✓ Distribution of rice seeds is being done at the rural municipality.
- ✓ Monitoring of 88 entrepreneurs who have been working in business associated with ponds.

- ✓ Kailari has already been announced as a maize and rapeseed zone.
- ✓ Farming as per agroecological zone suitability should be started.
- ✓ A soil test should be conducted after each harvesting of the crop.
- ✓ Minimum support price should be fixed for agricultural crops apart from cereals.
- ✓ Resurgence of measles in the municipality in recent days

*Recommendations:*

- ✓ i) Effective implementation of existing rules, acts, and regulations
- ✓ ii) Proper coordination between intergovernmental bodies

**Representative KISAN II Project**

- ✓ Facilitate provision of agriculture ambulance at the time of stresses and shocks
- ✓ If there is skilled manpower, there is quality production which assures nutrition and food security which helps the farmer to be independent, making the nation prosperous as a result.

**Feedback from the Private Sector**

- ✓ Survey should be conducted for undertaking a feasibility study to establish research centers in different parts of the country; for this, access to land requirements, resources (human, finance, time), physical infrastructure, and budget allocation should be initiated; this should be completed within three years by intergovernmental bodies, NARC, and donor organizations.
- ✓ There should be provision of donation to farmers according to production.
- ✓ Market should be allocated by governmental bodies.
- ✓ Training should be given to farmers according to seasonal crops.
- ✓ Custom centers should be established at the local level.
- ✓ Most importantly, women-friendly farm mechanization and tools should be brought.

**Representative from iDE Nepal**

- ✓ Untimely availability of fertilizers and other agriculture inputs
- ✓ Negative effects of climate change common; development of crop varieties resilient to the effects of climate change
- ✓ Threats to human health due to indiscriminate use of chemical fertilizers and pesticides
- ✓ No provision for buffer stock of agricultural inputs
- ✓ No identification of actual farmers; facilities taken by others in the name of farmers
- ✓ Control of plotting of land

*Recommendations:*

- ✓ Agriculture should be established as a respected profession
- ✓ Improve and raise the efficiency of supply chain management for agricultural inputs.
- ✓ Identification and categorization of farmers
- ✓ Development of climate resilient crop species
- ✓ There should be proper coordination between agriculture education, agricultural industry, research, and extension

**Feedback from Unique Seed Company**

- ✓ 88 agriculture officers and 88 veterinary officers are required for 88 rural municipalities.
- ✓ Need for research centers in different ecological zones of Nepal.
- ✓ Requirement of scientists, researchers, and extension workers
- ✓ Trainings, tours, workshops should be periodically conducted for capacity building of the farmers

- ✓ Facilitate distribution of highly productive seeds
- ✓ Develop better post-harvest technology and storage facilities
- ✓ Fixation of Minimum Support Price
- ✓ Give priority to local food production
- ✓ Provision and extension of agriculture insurance
- ✓ Production of highly skilled manpower (food technologist, farm machine operator, agriculture engineer, nutrition analysis of agricultural commodity)

### **Feedback on the overall program from the participants**

- ✓ Good time management
- ✓ Liked the way country plans and book of proceedings were produced.
- ✓ Loved the facilitation.
- ✓ The workshop would become more effective with the presence of more stakeholders.
- ✓ Strict prioritization conducted and implementation of the recommendations is expected
- ✓ Focus on practical and real problems of the farmers was very impressive
- ✓ The document prepared will be helpful for the local government in addressing the problems of farmers.
- ✓ There is a threat to the continuation of rice mills as there is a decline in paddy production. People from rice mills are afraid their mills will close because of the low supply of inputs (paddy) to their rice mills in the next five years. Some of the major drivers for this problem are:
  - a. Trend of migration of youths to other nations
  - b. Categorization of land and use of agriculturally productive land to other purposes
- ✓ There is unplanned and rabid urbanization in Kulariya and Ranijaman areas, which should be acted on timely.
- ✓ Land management should be done immediately; policy should be made for land management and for consolidated farming. There is a chance of higher and better production and increased productivity with consolidated farming through use of modern agricultural tools and farm mechanization.

## Annex I

### Action plans developed by participants<sup>1</sup> as part of their theme's group work during the workshops

LOCATION: SURKHET, KARNALI PROVINCE

#### Theme 1: Risk and Resilience Capacity

##### Action Plan:

##### *Prioritized Recommendations:*

- ❖ Focus should be given to habitat conservation to mitigate conflict between wildlife and humans.
- ❖ Afforestation, bioengineering, drip irrigation, rainwater harvesting, and water recharge facilities should be provided or made accessible at affordable rates to farmers. Use of vermicompost and integrated pest management should be promoted to improve climate adaptation capacity.

##### *Objectives:*

To reduce stressors to food security and to enhance resilience capacity.

##### Activities:

SN	Activities	Time	Source	Feasibility	Monitoring and evaluation
1	Soil conservation through bioengineering and afforestation	June to September every year	Government Organizations, NGOs, Budget, Human capital	Yes	Continue
2	Recharge water	Regular		Yes	Continue
3	Rainwater harvesting	Regular		Yes	Continue
4	Drip irrigation	Regular		Yes	Continue
5	Environment-friendly infrastructure	Regular		Yes	Continue

##### *Responsible stakeholders:*

Community forests, Division Forest Office, Watershed Management Office, community based organizations (CBO), NGOs

<sup>1</sup> The participants were requested to discuss, prioritize recommendations, and develop an action plan within a fixed time period during the workshop; the plans shared here may be in various stages of completion and of varying detail depending on how each team finished the task.

## Theme 2: Food System Innovation

### Action Plan:

#### *Prioritized Recommendations:*

- ❖ To boost production, information on quality seed varieties should be communicated in collaboration with the relevant authorities, including agro vets, agricultural cooperatives, and municipal governments.
- ❖ Climate-friendly agriculture systems should be developed like soil conservation and Integrated Pest Management.

#### *Activities:*

- Identify high value commodities.
- Identify human resource:
  - Meet with thematic stakeholders
  - Capacity building of staff and beneficiaries on production, inputs supply, and marketing

#### Infrastructure

- To identify place, people, and resources
- To create proper market systems

Activities	Target
<ul style="list-style-type: none"> <li>○ Need assessment</li> <li>○ Feasibility study</li> <li>○ Preparation of guidelines</li> <li>○ Preparation of a detailed implementation plan</li> <li>○ Action plan</li> <li>○ Budget</li> </ul>	<ul style="list-style-type: none"> <li>○ Time-bound</li> <li>○ Implementation</li> <li>○ Monitoring and evaluation</li> <li>○ Matching funds with the government and private sector</li> <li>○ Strategy</li> </ul>

## Theme 3: Market and Trade

### Action Plan:

#### *Prioritized Recommendations:*

- ❖ Management and development of efficient collection and processing and cold storage infrastructure at the local level.
- ❖ Focus on need-based market production

#### *Activities:*

- 1) Questionnaire development
- 2) Focus group discussion
- 3) Preparation of business plans
- 4) Providing training
- 5) Mapping
- 6) Group Discussion:
  - Identification of the resource
  - Sub-sector analysis
  - Mapping
- 7) Plan of Action:
  - Detailed implementation plan
  - Budget
  - Budget breakdown
  - Activities
  - Targets - Quarterly, semi-annual, and annual plan

## **Theme 4: Food System Outputs and Outcomes**

### **Action Plan:**

#### ***Prioritized recommendation:***

Reduction in import of goods which are already produced in ample quantity within the country

#### ***Objectives:***

- To formulate and implement necessary policies by the government
- To measure the extent and level of products produced and document it
- To motivate people for local production
- To promote organic food production

#### ***Activities:***

- 1) Discussion on draft of the required policy
- 2) Effective monitoring and checking of borders.
- 3) Data collection in every municipality
- 4) Increase access of farmers to new innovative technology
- 5) Provision of cold storage in every ward of the palikas.
- 6) Awareness program for promoting local production
- 7) Market assurance for local products
- 8) Proper provision of transportation
- 9) Production cost-based minimum price mechanism needs to be established and followed

***Time duration:*** Regular

***Responsible stakeholders:*** Government, NGOs, International Non-Governmental Organizations (INGOs), farmers, cooperatives, and traders

***Feasibility:*** The activities are economically feasible as well as environmentally friendly. They are also supported by the availability of human resources among responsible stakeholders.

***Limiting constraints:*** Lack of the appropriate policy, ineffective monitoring mechanism, lack of access to technology, and lack of access to loans

## **Theme 5: Food System Governance and Control**

### **Action Plan:**

#### ***Prioritized recommendations:***

- ❖ Need-based participatory planning process
- ❖ Increase access of farmers to information, technology, and service
- ❖ Advocacy on the practical implementation of laws, rules, and regulation
- ❖ Promote dignity of labor in agriculture through insightful explanation on farmers and agriculture in coursebooks for schools.

#### ***Objective:***

To involve governmental bodies responsible for policy formulation to take up the ownership for agricultural planning.

#### ***Activities:***

Government should be involved in every step of the 7-step planning process.

Government representatives should allocate designated time in planning workshop.

**Time Duration:** No time limitation/Regular

**Resources:**

- Human capital (government employees)
- Time

SN	Activities	Time	Source	Feasibility	Monitoring and evaluation
1	Baseline study	First three months of fiscal year	Government Organizations, NGOs, Budget, Human capital	Yes	Continue
2	Participatory Plan	One month		Yes	Continue
3	Review and reflection	Quarterly		Yes	Continue
4	Joint monitoring	End of fiscal year		Yes	Joint

LOCATION: NEPALGUNJ, LUMBINI PROVINCE

**Theme 1: Risk and Resilience Capacity**

**Action Plan:**

**Prioritized Recommendations:**

- ❖ Encouragement for quality seed production to cooperatives, farmers' groups, and others
- ❖ Emphasis on locally available and indigenous food products
- ❖ Use of biofertilizers and biopesticides.

**Objectives:**

- i) To maintain the purity of seeds
- ii) Increase in production
- iii) Knowledge of germination percentage
- iv) Support in the marketing of locally produced and indigenous agriculture produce

SN	Activities	Who does it? Where?	Sources	Responsible Stakeholder(s)
1	Crop production	Farmers have to produce crops on fertile land	Training, orientation, technical assistance	Farmers' groups, Agriculture Cooperatives, companies, Nepal Agricultural Research Council (NARC)
2	Grants in seeds	To farmers		Central, province, and local governments, NGOs/INGOs

3	Uphold quality assurance	Production area and storage	Processing, field inspection, technical knowledge, crop inspection	NARC, farmers' groups, laboratory
4	Marketing	Famers, private companies, agrovets, distributors	Coordination, advertisement, orientation, facilitation	Agrovets, distributors, cooperatives, farmers' groups
5	Agriculture insurance	Concerned insurance companies	Request for agriculture grants to government bodies, contacts to the insurance company	Cooperatives, farmers, seed-producing companies, local government

## Theme 2: Food System Innovation

### Action Plan:

#### *Prioritized Recommendations:*

- ❖ Water Storage for irrigation and formation of ponds from small rivers and rivulets
- ❖ Marketing of locally available and indigenous crops
- ❖ Promote crop-specific macroeconomics and development of linkage between local level agrovets and big companies of seed importers, variety exhibition, and active participation of NARC.
- ❖ Connect farmers with small-scale industries.

#### *Objectives:*

- i) Increase in productivity by improving irrigation of agricultural land
- ii) Formulation of policy and regulations for water distribution

SN	Activities	Time	Source	Responsible Stakeholders	Monitoring and evaluation
1	i) Identification of sources ii) Planning should be done considering possible extension of agricultural land iii) Formation of committee by knowing details of beneficiaries to increase farmers and other stakeholders' participation iv) Estimation of technology according to water availability v) Carry construction work vi) Formulation of policy and regulations for water distribution	5 years	i) Budget allocation by local government, development partners (governmental and non-governmental), other organizations ii) Human resources	Local government, consumer committees, any concerned authority related to irrigation	Local government

▪ **Marketing of locally available and indigenous crops**

**Objective:**

Increase in income by linking high-value and nutritious indigenous and locally available crops to the market

SN	Activities	Time	Source	Responsible Stakeholders	Monitoring and evaluation
1	i) Identification of indigenous crop species according to regions ii) Extension of value and importance of indigenous crop species iii) Identification of indigenous crop species according to the market iv) Identification of private sector for branding, packaging, and marketing of indigenous crop species v) Agreement on producers and private sectors for marketing of agricultural products vi) Assistance on agricultural technology for production of indigenous crop species (seeds, technical knowledge, irrigation, etc.)	Continuous	i) Budget allocation by local government, development partners (governmental and non-governmental), other organizations ii) Human resources (local government, agriculture research center, development partners, private sector)	Local government, consumer committees, any authority related to irrigation	Local government, Development Partners

**Theme 3: Market and Trade**

**Action Plan:**

**Prioritized Recommendations:**

- ❖ Strict monitoring of illegal trade occurring due to open border
- ❖ Strong relationship with market actors
- ❖ Development of technology that reduces production cost

SN	Activities	Time	Resource
1	i) Monitoring, checking, and punishment ii) Awareness-raising programs iii) Provision of security mechanism	Regular, specially prior to the main season of crops	Budget allocation, human resources
2	Market linkages Interaction program (Businessman-Businessman / Businessman-Farmers / Businessman / Governmental body and farmers)	Always	Human resources, budget, digital technology

#### Theme 4: Food System Output and Outcome

##### Action Plan:

##### Prioritized Recommendations:

- ❖ Development of physical infrastructure for irrigation and make it equally accessible to farmers.
- ❖ Improve technical knowledge and skills for post-harvest management
- ❖ Coordination among intergovernmental bodies, agriculture cooperatives, private sector, farmers, and others for implementation of food security strategy

SN	Activities	Time	Resource	Responsible Stakeholder
1	Coordination and networking with provincial stakeholders, groundwater irrigation project, and line agency of MOEWI	1 year	NGO/INGO/local Civil Society Organization (CSO), Ministry, and agencies	Groundwater irrigation project
2	Feasibility study at district and local levels	2 months	NGO/INGO/local CSO, local government	Farmers, cooperatives, and local government
3	Need assessment of location-specific irrigation system	2 months	NGO/INGO/local CSO, local government	Shallow tube wells, water reservoir, rainwater harvest, lift irrigation
4	Support irrigation system to increase access of irrigation to farmers	8 months	Government of Nepal/NGO/INGO/cooperatives/farmers' groups	Leverage resources from the Government of Nepal/NGO/INGO

#### Theme 5: Food System Governance and Control

##### Action Plan:

##### Prioritized Recommendations:

- ❖ Decrease taxation to agribusiness firms and industries by categorizing them as service-oriented industry.
- ❖ Conducting regular training, workshops, exhibitions, and farmers' tour
- ❖ Monitor illegal import of seeds.

SN	Activities	Time	Responsible Stakeholders
1	Coordination/dialogue with Ministry of Agriculture and Livestock Development, provincial, and federal stakeholders	3–6 months	District, local, and provincial agriculture stakeholders, FNCCI
2	Meeting with agriculture firms, industry, private limited companies, stakeholders	2 months	Firm, proprietors, processors, agro-farms

LOCATION: DHANGADHI, SUDURPASHCHIM PROVINCE

### Theme 1: Risk and Resilience Capacity

#### Action Plan:

##### *Prioritized Recommendations:*

- Agriculture Ambulance: Provision of agriculture ambulance at ward level, for ease of marketing during times of shocks, crises, and stresses and can be adapted to other areas.  
**Responsible stakeholders:** Donor organizations, Ministry of Agriculture, local level
- Fix the minimum support price.  
**Responsible stakeholders:** Central and Provincial government
- Easy access to agriculture and livestock insurance  
**Responsible stakeholders:** Central and Provincial government

### Theme 2: Food System Innovation

#### Action Plan:

##### *Prioritized Recommendations:*

- i) Development of Research Centres at province level
- ii) Provision of grants according to the production

SN	Activities	Time	Source	Feasibility	Monitoring and evaluation
1	Budget allocation in productive and essential land, physical infrastructure, other resources	3 years	Intergovernmental bodies, donor organizations, NARC	Yes	Continue
2	Data Collection of agricultural products Management of selling center	According to season	Intergovernmental bodies, donor organizations	Yes	Continue
3	Women-friendly farm mechanization	2 years	Intergovernmental bodies	Yes	Continue

### Theme 3: Market and Trade

#### Action Plan:

##### *Prioritized Recommendation:*

- ❖ Regulation of open border trade which creates issues like low market prices for locally produced agricultural commodities.

##### *Objective:*

- To minimize problem of low market price for locally produced agricultural commodities due to open border

SN	Activities	Responsible entities	Sources	Time
1	Police mobilization	Intergovernmental bodies	Ward police, Municipality police, Border Security Force	Within 2 years

2	Conduct a customer awareness program			
3	Import of agricultural products from neighboring country without any problem to marketing of farmers' products			
4	Regular monitoring of markets by department of food technology and quality control			
5	Proper and strict quarantine of imported agricultural products			

#### Theme 4: Food System Output and Outcome

##### Action Plan:

##### Prioritized Recommendations:

- ❖ Proper coordination is needed between agriculture education, agricultural research, and agriculture extension.
- ❖ Grant more independence to the seed sector through provisions for soft loans, capacity building, insurance, lab facilities, tax concessions, modern technology, etc.
- ❖ Easy access to finance for agriculture production and agro-food industries

##### Objectives:

- i) Production of quality seeds
- ii) Ensure food and nutrition security
- iii) Improvement of economic status of the country

SN	Activities	Sources	Time	To be done
1	Development of human resources	i) Nepal Government ii) Agriculture University iii) Donor Organizations iv) Citizens Society v) Agriculture extension workers vi) Land Management vii) Ministry of Agriculture and Cooperatives viii) Local government ix) Cooperatives x) Agriculture Development Bank	i) 5 years ii) 1 year iii) 1 year	i) Development of research center ii) Agriculture Extension iii) Development of agriculture technologies
2	Development of organizations and industry producing agriculture products	i) Production Group ii) Cooperatives iii) Nepal Rastra Bank iv) Agriculture Development Bank	1 year	i) Timely availability of agriculture inputs ii) Capacity Development Programs

				iii) Proper marketing center and storage facilities  iv) Development of Post harvest technology  v) Agriculture insurance  vi) Provision of farm machinery
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### Theme 5: Food System Governance and Control

#### Action Plan:

#### *Prioritized Recommendations:*

- ❖ Correctly identify and support the actual marginalized farmers who need government help and subsidies to improve their production.
- ❖ Establishment of fertilizer industry in partnership with central, provincial, and local government bodies
- ❖ Effective coordination between intergovernmental bodies

#### *Objectives:*

- i) Identification of real farmers
- ii) Provision of subsidy to farmers according to their categorization

SN	Activities	Sources	Time	To Be Done
1	Development of proceedings	Ministry of Agriculture	3 Months	Management of manpower
2	Development of software	Ministry of Agriculture	3 Months	Budget for software development
3	Orientation and training	Intergovernmental bodies, donor organizations, NGOs, INGOs	2 Months	Management of manpower
4	Management of necessary human resources	Intergovernmental bodies, donor organizations	6 Months	Management of manpower, data collection, data verification, data authentication, budget allocation
5	Development and printing of questionnaire	Intergovernmental bodies		
6	Data Collection	Local level		
7	Data verification and authentication	Local level		
8	Categorization of farmers	Local level		
9	Printing of identity cards and distribution	Local level (according to the proceedings)		
10	Formulation of proceedings of grants and approvals	Central government		

## Annex II

### Participants List

Table 1: List of Participants during Consultation Workshop in Karnali Province

S. No.	Name	Organization	Designation
1	Aruna Palikhe	IIDS	Team Leader
2	Balkumari Rokaya	KISAN II	CBF
3	Bhumisara Khadka	KISAN II	CBF
4	Bhupendra Shahi	USAID Biodiversity	Landscape Team Lead
5	Bina Bista	iDE Nepal/CSISA	Program Officer
6	Chitra Bahadur Rokaya	Directorate of Agriculture	Director
7	Damodar Thapa	Laxmi Agrovvet	JTA
8	Dilkumari Thapa	KISAN II	CBF
9	Dipa Paudel	KISAN II	Extension Worker
10	Dipendra Karki	Kopila Agriculture and Livestock	Managing Director
11	Dr. Karan Singh Dhama	Mid-West University	Associate Professor (Coordinator)
12	Gyan Bahadur Chaudhary	KISAN II	SAMT
13	Hari Prasad Paudel	Sana Kisan Krishi Sahakari Sanstha Limited	Manager
14	Kesab Sanjel	USAID SSBH	Technical Coordinator
15	Krishna Chaudhary	KISAN II	Farmers
16	Madan Adhikari	IIDS	Researcher
17	Mamata Pradhan	IFPRI	Senior Research Coordinator
18	Meena Pandey	IIDS	Intern
19	Nanda Kumar Maharjan	IIDS	Agriculture Officer
20	Neha Thapa	KISAN II	Senior Area Coordinator
21	Nim Prasad	CSISA	Field
22	Padam Bahadur Subedi	ALBTC	HDO
23	Pradeep Pokharel	BHAKARI	Senior Agriculture Officer
24	Pushpa Raj Poudel	PMAMP	SAO (former)
25	Ramesh Khadka	MOLMAC, Surkhet	Officer
26	Rejesh Shoni	TAYAR Nepal	FC
27	Samir Regmi	Laxmi Agrovvet	Manager
28	Sangita Ghimire	CSISA	CBF
29	Shalini Gupta	IIDS	Researcher
30	Shibaji Maheto	CIMMYT	ARA
31	Silaja Poudel	iDE Nepal, Surkhet	Agriculture Program Officer
32	Tilak Prasad Panday	DOAD, Surkhet	AEO

Table 2: List of Participants during the Consultation Workshop in Lumbini Province

S. No.	Name	Organization	Designation
1	Agni Prasad Parajuli	Reva Kisan Ricemill	Proprietor
2	Anil Khadka	KISAN II	Senior Area Coordinator
3	Aruna Palikhe	IIDS	Team Leader
4	Bhaskar Kafle	Pucli Pasal Pvt. Ltd.	Member
5	Bhimsen Kurmi	Bholi K.B	Adakshya
6	Chabi Lal Tharu	Barbaridiya Municipality	Mayor
7	Champa Singh Thapa Magar	Social Development Forum (SDF)	Chairperson
8	Chandra Kumari Shahi	Raptisonari Rural Municipality	Technician
9	Ghanshyam Upadhaya	Social Development Forum (SDF)	Senior Advisor
10	Dipak Fafle	CIMMYT.NSAF	Business Development Analyst
11	Himalaya Tripathi	BBadhaiyatal Rural Municipality	Chairperson
12	Indrajeet Sunar	BEE GROUP Banke	PC-SOEH/BEE Group
13	Ishwari Bhattarai	Annapurna Suppliers	Proprietor
14	Jaman Singh Oli	Sakar Krishi S.S.L	Chairperson
15	Janak Narayan Acharya	KISAN II	Horticulture Expert

16	Jitan Prasad Kandu	Janchahana F.G	Chairperson
17	Kalpana Dhital	iDE Nepal	Field Coordinator
18	Kameshwor Chaudhary	Barbardia Municipality	Assistant
19	Krishina Dorshan	Modern Agrotech	M.R
20	Madan Adhakari	IIDS	Researcher
21	Mahesh Regmi	Senior Agriculture Officer	PMAMP, Dang
22	Mamata Pradhan	IFPRI	Senior Research Coordinator
23	Meena Pandey	IIDS	Intern
24	Nabin Bhandari	Om Shree Ram Khadya Udhyog	Proprietor
25	Nanda Kumar Maharjan	IIDS	Agriculture Program Officer
26	Narand Kurmi	Jay Bajarang	Chairperson
27	Narendra K.C	Caritas Nepal	Coordinator
28	Navaraj Acharya	KISAN II	Senior Cluster Manager
29	Pahari Chaudhary	Ganeshbaba Agro Seed Company	Managing Director
30	Ram Pheran Tharu	Barbardiya Municipality Ward –2	Chairperson
31	Ram Singh Tharu	Saurab Rice Mill	Proprietor
32	Vishwa C. Pokharel	KISAN II	Senior Area Coordinator
33	Rupak Baniya	Unique Agro Center and Rupak Vet Pharma	Proprietor
34	Salin Acharya	CIMMYT	ARA
35	Samta Ram Tharu	Shikha Agro Center	Proprietor
36	Santoshi Tharu	Milan Agrotech	Technical
37	Khadak Jung Gurung	iDE Nepal	Senior Associate
38	Shalini Gupta	IIDS	Researcher
39	Shivshanker Gupta	Sarswoti Khadya Traders	Nepalgunj
40	Sivya Gurung	Naya Srijanshil	Manager
41	Suman Kharel	IALDO Bardiya	LDO
42	Yubraj Sharma	Singha Bahini Shivashakti K.M Cooperative	President

Table 3: List of Participants during the Consultation Workshop in Sudurpashchim Province

S. No.	Name	Organization	Designation
1	Allison Shakeshaft	Jefferson Consulting USAID /RFS	Program Specialist
2	Anita Chaudhary	Deepjyoti Mahila Krishak Samuha	Secretary
3	Anjan Adhikari	World Food Programme	Program Policy Officer
4	Anup Bam	Sudur Kisan Suppliers	Proprietor
5	Aruna Palikhe	IIDS	Team Leader
6	Ashish Bogati	Farmer	Member
7	Bal Ram Chaudhary	Farmer	
8	Bandana Devi Joshi	Sana Kisan Krishi Sahakari Sanstha Limited	Chairperson
9	Bishal Sonar	H and V Trade Suppliers	TM
10	Bishnu Raj Burlakoti	Kisan Agrovet Center Dhangadhi	Proprietor
11	Bishram Chaudhary	Bishwash Cooperatives	Member
12	Deepak Joshi	iDE Nepal	Field Supervisor
13	Deepak Singh Saud	Farmer	
14	Dilmaya Chaudhary	Jay Durgye Mahila Krishk Samuha	Treasurer
15	Durga Joshi	Laliguras Krishi Samuha	Chairperson
16	Ganesh Bahadur Chand	Udayadev Multipurpose Cooperative Limited	Chief
17	Govind Raj Joshi	PMAMP, Kailali	Senior Agriculture Officer

18	Hark Bahadur Joshi	Kailali Milk Agriculture Cooperative	President
19	Hem Raj Awasthi	Veterinary Hospital, Dhangadhi	Chief
20	Hilendra Rana	Rana Agrovet Center	Proprietor
21	Hiralal Kathariya	R.H Agrovet	Proprietor
22	Jagat Bahadur B.K	iDE Nepal	Field Supervisor
23	Jeetandra Pal	NID	Information Officer
24	Jyoti Bhatta	Federation of Nepalese Chambers of Commerce & Industry	Executive Director
25	Kamal Bahadur Thakulla	Unnat Agriculture	Manager
26	Kamala Kumari Ojha	Pragatishil Samuha	Secretary
27	Karishma Chaudhary	Dauna Bebri Krishak Samuha	Secretary
28	Khagendra Prasad Sharma	Agriculture Knowledge Center, Kailali	Chief
29	Krishna Raj Joshi	MOLMAC, Dhangadhi	Agriculture Officer
30	Laxmikant Dhakal	Unique Seed Company	Chairperson
31	Lokesh Bhatt	Himalayan Seed Company	Chairperson
32	Madan Adhikari	IIDS	Researcher
33	Madhuri Chaudhary	Sana Kisan Krishi Sahakari Sanstha Limited	Manager
34	Makurma Chaudhary	Bishwash Cooperatives	Member
35	Malati Chaudhary	Jay Durgye Mahila Krishk Samuha	Chairperson
36	Mamata Pradhan	IFPRI	Senior Research Coordinator
37	Meena Pandey	IIDS	Intern
38	Mihilal Chaudhary	Ghurlal Krishi Sahakari	Chairperson
39	Milan Raymajhi	Nepal Army	
40	Naathu Ram Badayak	Nain Rice Mill	Proprietor
41	Nanda Kumar Maharjan	IIDS	Agriculture Program Officer
42	Nav Raj Joshi	Pathak Khadya	Proprietor
43	Nirmala Rana	KISAN II	Member
44	Pramod Thapa	Nepal Agro	Proprietor
45	Prem Lal Chaudhary	KISAN II	SAPM
46	Puspa Joshi	Bishwash Krishi Cooperative	Member
47	Rabindra Chand	World Food Programme	Chief of Field Office
48	Ram Bahadur Chaudhary	R.B.C Agro Enterprises	Proprietor
49	Ram Chandra Giri	Shree Shanti Batika Vegetable Processing Industries	Proprietor
50	Ram Dayal Chaudhary	Kailali Agrovet Center	Proprietor
51	Ram Kisun Chaudhary	Sunakhari Multipurpose Agriculture Farm	Proprietor
52	Sabita Chaudhary	Deepjyoti Mahila Krishak Samuha	Member
53	Sashi Shekhar Bist	KISAN II Project	Coordinator
54	Shalini Gupta	IIDS	Researcher
55	Shreejana Kumari Chaudhary	Sudur Kishan Vet Farm, Attariya	Proprietor
56	Sunita Chaudhary	KISAN II Project	Secretary
57	Surya Bahadur Khadka	iDE Nepal	Program Officer
58	Tikaram Thapa	MOLMAC, Dhangadhi	Chief of Planning and Evaluation Division