



RESEARCH PROGRAM ON  
**Climate Change,  
Agriculture and  
Food Security**



# Organizational Midline Study **Rupandehi, Nepal**

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CGIAR Research Program on Climate Change,  
Agriculture and Food Security (CCAFS)

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## Introduction

This report summarizes findings from the Organizational Midline Survey (OMS) conducted in Nepal's Rupandehi district in July 2019. The findings point out many organizations collaborating and coordinating with farming communities in Rupandehi. Ten of these organizations, working directly with farmers groups, were interviewed during this study.

Nepal's Rupandehi district lies in the southern and western part of the country. The elevation of the district lies in between 100 m to 1229 m above sea level. The Rupandehi district is known as the country's breadbasket, especially for cereals. Indeed, the district possesses highly fertile soils and developed infrastructures with the rivers Tinau and Danda khola supplying water which is used by farmers for their agricultural production. The dominant cropping pattern in the research site is rice-wheat. Commercial vegetable cultivation is also flourishing. Similarly, livestock is an integral part of the farming systems. However, the district is prone to climate induced disasters such as floods, droughts, insect pests, hot and cold waves etc. which have led to losses of agricultural lands and losses in agricultural production.

The main objectives of the organizational midline study are to:

- Provide indicators to allow us to monitor changes in behaviours and practices of locally relevant organizations over time
- Understand the provision of information/services at the local level which guides farmers' decision making, including their livelihood strategies in response to climate change's impacts

## Organizations interviewed

The organizational midline study (OMS) was conducted at the organizational level and built from the previous studies conducted in the research site to identify suitable organizations to interview and analyze for this study. First, the household midline survey conducted with individual households provided quantitative data collected through the software provided by CCAFS on households' farming practices, involvement in community groups and access to information. Then, the village

midline study conducted through focus group discussions provided additional information on the organizational landscape.

During the latter study, namely the village midline study, the villagers were told to create an organizational landscape for their community by listing the most important and active organizations working in food security and natural resource management related issues in their area. Comparing with the village baseline study, the organizations which were not directly/no longer working in the area were removed and new more relevant organizations were added during the focus group discussions.

Eventually, ten different organizations were selected for interviews for the organizational midline study. The table below provides more information on the ten organizations that were interviewed.

Organizations	Main areas of work
Agriculture Knowledge Centre (AKC)	The centre provides financial support, including subsidies, to farmers to purchase agricultural inputs, support mushroom farming, banana farming or fish farming among others. The centre focuses on technologies that can increase the production and productivity of crops. It aims to help farmers transition from subsistence agriculture to commercial agriculture and then to sustainable agriculture. To do so, the centre provides training to local farmers on the cultivation of various crops, namely vegetables, rice and wheat, in addition to training on mushroom farming, beekeeping, aquaculture, etc.
Veterinary Hospital and Livestock Expert Centre	The Veterinary Hospital and Livestock Expert Centre provides technical support for livestock keepers, namely animal health services. It also provides subsidies to facilitate animal husbandry and organizes training related to animal farming for instance on fodder cultivation, with fodder saplings being subsidized, or Artificial Insemination with workshops and animal health camps held on livestock health and its development. The centre also supports efforts to improve shed management as well as providing vaccination services (PPR, HSB) and free of cost livestock supplies and medicines. The centre also assists in conducting post-mortems of dead animals
Division Forest Office (DFO)	The DFO works in forest development, collaborative management and conservation by providing technical support for scientific forest management through the mobilization of community forest user groups. It also produces saplings and provides them to farmers. Moreover, the DFO is in charge of restricting illegal encroachment in the forest and enforcing punitive measures if illegal activities are discovered. Finally, the DFO also raises awareness on forest fires and monitors the cutting down of trees.
Anucampa Agriculture Cooperative Limited	The cooperative encourages farmers to save and offers loans upon request for agricultural purposes. It also distributes chemical fertilizers to farmers at a fixed cost.
Paurakhi Women's Saving Limited	The women's group promotes savings and credits. It also organizes trainings for women on new livelihood opportunities as well as on the cultivation of vegetable in collaboration with the Women's Development Organization. The group is also instrumental in settling disputes among different parties and on raising awareness on girl trafficking.
Ward Office/Municipality Agriculture section	The office provides fertilizers, seeds, and pesticides in addition to technical support through field visits. The office also supports multiple farmers group for different agricultural activities such as fish farming by providing training on fishing as well as

	on fingerlings and liming, among others. Moreover, it provides training on mushroom cultivation as well as supporting access to the materials required. Finally, the office also provides subsidies on seeds of cereal and vegetable crops as well as on fish farming inputs to farmers.
Sana Kisan Agriculture Cooperative Limited	The cooperative's main activity is to provide fertilizers to farmers for their agricultural activities.
Madhuri Multi-purpose Cooperative Limited	The cooperative provides fertilizers to farmers as well as facilitating savings and credits mechanisms in the village.
Agriculture Development Bank (ADB)	The ASB provides loans to farmers at low interest rates. It also gives the opportunity to farmers to open savings accounts.
ABC Nepal	ABC Nepal is a national level NGO providing seeds to farmers and supporting the forming of pocket areas for various commodities like vegetables, fish, poultry etc. The NGO also provides monetary support to farmers so that they can purchase the inputs required for their agricultural activities. Trainings to farmers are also proposed, in particular to support and encourage riverbank farming and other income generating activities for farmers.

## Challenges and limitations

The interviewers identified several difficulties faced by their organizations which are summarized below:

Agriculture Knowledge Centre:

- Many cultivable lands have been converted into residential plots.
- Lack of human resource to conduct various activities
- Engaging with Terai women is a challenge as they do not freely participate in discussions and various programmes.

Division Forest Office:

- There are many cases of theft of timber from the community forest
- Forest encroachment is also a challenge with cases of landless people appropriating land from the forests.
- Forest fires remain a major concern.

Anucampa Agriculture Cooperative Limited and Paurakhi Women's Saving Limited:

- Lack of fund/ budget to conduct various activities
- Lack of technical support from the local government



Ward Office/Municipality:

- Lack of trained and sufficient manpower, for instance at the officers' level. Moreover, the staff is overburdened with for instance, one technical assistant having to look after many wards.
- Resources are in general scarce and not sufficient
- Identification of the proper beneficiaries is a challenge with some individual farmers not able to benefit from the services offered while others disproportionately benefit from the system.

Sana Kisan Krishi Sahakari Sanstha:

- Budget limitations
- Unavailability of some of the required materials to conduct various activities

Madhuri Multi-purpose Cooperative Limited:

- Lack of technical and financial support from the local government

## Summary of activities

### Natural resource management

The organizations interviewed promote multiple NRM practices. The conservation and management of water resource, for instance through irrigation, as well as the plantation of trees and the promotion of sustainable farming methods, are the key focus areas for the organizations identified in the research site.

First, the Division Forest Office provides trainings on effective management of forest resources through afforestation and scientific forest management principles. The DFO organizes forest users into community forest groups, some of which are then included in the decision-making process on the use and management of forest resources. There are currently 106 community users forest groups out of which 24 are included in the scientific forest management. They provide trainings and materials support for the selected user groups.

The DFO also actively supports tree planting and the expansion of the forest area. It provides training on tree plantation and promotes agroforestry to farmers, for instance through the provision of

subsidized seedlings or at times, free of cost saplings. The office further provides technical assistance on the plantation, including intercultural patterns, thus helping the regeneration of new saplings. The DFO also closely monitors the cutting down of trees and recommends on their felling according to their ages. The office thus regulates activities in the forest area and implement punitive measures for the theft of forest resource and other illegal activities.

The DFO also manages the community pond system and promotes riverbank cultivation to maintain the aesthetic value, develop the greenery in the area and prevent flooding. It also provides support to construct water recharge ponds and rescue wild animals such as Nilgai.

Then, the Veterinary Hospital and Livestock Expert Centre promotes the production of fodder by providing seeds and information material on various fodders such as *bajra*, *berseem*, *stylo* or *epil epil*, thus supporting the expansion of the fodders available in the area.

Moreover, the Madhuri Multipurpose Cooperative limited supports dam repairments and cleaning along with promoting the conservation of water resource for irrigation. The cooperative is also involved in activities on soil conservation and management of degraded lands.

In addition to the above organizations working in NRM, the municipality provides fruits tree saplings to expand the commercial orchards in the area. The municipality also raises awareness on efficient water use. The municipality controls the water system and regulates its use by restricting farmers withdrawing excess amounts of water from the underground source for the cultivation of rice. It encourages farmers to uplift underground water only for the purpose of nursery bed preparation.

The AKC works closely with farmers groups and provides micro-irrigation services. It also provides subsidies for the improvement of irrigation canals and the purchase of pump sets. The centre also promotes the maintenance of canals and boring holes and further supports the afforestation programme.

Finally, the Agriculture Knowledge Centre (AKC), municipality, Madhuri Multi-purpose cooperatives, Sana Kisan Agriculture Cooperative Limited and Anucampa Agriculture Cooperative Limited are all supporting sustainable farming methods and the efficient use of chemical fertilizers in order to reduce environmental pollution. The agriculture section of municipality also promotes the use of manure and incorporation of Dhaincha in order to increase the soil quality and the productivity of the crops.

## **Preparation to withstand extreme events**

In the event of a forest fire, the DFO is in charge of the fire response as it controls the response system and the maintenance of the related equipment.

Regarding food security, the following organizations are working directly or indirectly towards improving the food security situation in the area, in particular as it is threatened by climatic events. ABC Nepal and the AKC have aligned their programmes in line with these food security objectives. The AKC provides seeds of improved crops as well as implement agriculture smart village programmes to enhance agricultural production in the area. The AKC also offers crops insurance to the farmers. The DFO's tree planting activities in the river banks are instrumental in controlling flooding. Moreover, the Madhuri Multi-purpose Cooperative Limited activities surrounding the dam's construction and repairs help protect agricultural lands and settlements from floods. Similarly, the Livestock Service Centre provides saplings of improved fodders and grasses to increase the availability of feeds for livestock and thus improve the productivity of livestock which contributes to the food security of farmers groups.

## **Reduction of risk due to climatic variability**

Several organizations have been carrying on activities with the aims of reducing exposure to risks due to climatic variability and extreme events. For instance, the AKC and municipality are promoting the diversification of crops, providing drought tolerant varieties and conducting trainings on climate change and its impacts.

The ABC Nepal supports Dalit and other marginalized groups through the implementation of livelihood projects supporting income generating activities and commercial vegetable cultivation. The NGO also provides trainings on mushroom cultivation and off-season vegetable cultivation to vulnerable people. Moreover, the Municipality promotes fish production programmes and provides materials support for fish farming. The alternative agricultural activities help to increase households' income and ultimately helps to better the household nutrition. Moreover, the DFO provides technical support for the maintaining of watersheds as well as promoting the plantation of trees and agroforestry activities. In addition, the Anucampa Agriculture Cooperative Limited and Madhuri Multi-purpose Agriculture Group supports savings and credits mechanisms as well as sponsoring income generating activities. These activities help build community resilience by ensuring diversification.

The AKC has also implemented a smart model village programme. The main objective of the programme is to make farmers shift from subsistence farming to commercial farming. The programme involves various measures such as the provision of subsidies for the purchase of seeds and micro-nutrient, the distribution of drought tolerant varieties like Sukhha series 1-6 and Ramdhan as well as early maturing varieties to escape terminal drought. Various organizations work to help farmers to cope with the effects of climate change. The AKC also prioritizes works related to efficient and effective use of water for irrigation purposes. Finally, ABC Nepal provides trainings on adaptation strategies to respond to climatic hazards occurring in the area, mainly floods and drought.

## **Activities' relationship to climate change**

As described above, several organizations are implementing activities related to climate change mitigation and adaptation. Organizations such as the Division Forest Office (DFO) or the Agriculture Knowledge Centre (AKC) are raising awareness on climate change and its effects. The DFO is developing plans to strengthen the forest management programme. The office also supports the plantation of trees in riverbank areas and the expansion of the forest area to maintain greenery but also to increase carbon sequestration. Similarly, the AKC provides access to various drought tolerant varieties as well as implementing a smart agriculture village in order to adapt to the changing climatic scenarios. It also supports trees plantation to maintain the water table in different areas.

The Municipality, Anucampa agriculture cooperative limited and Sana Kisan Agriculture Cooperatives Limited are also active in raising awareness about climate change and its impacts.

Climate change has brought various hazards to the research site. Only a few organizations knew about the various adaptation strategies to cope with climate change's negative effects and were able to implement them. A large number of respondents from the organizations selected for the interviews had little knowledge of climate change, its impacts and associated adaptation strategies. However, some organizations indicated that various indigenous adaptation strategies have been implemented by farmers in the village. Following on these discussions, they also stated that these organizations will consider implementing more activities aimed at raising awareness on climate change and its effects over the next few years.

## **Potential partners**

The study concludes that the AKC, municipality, DFO, Sana Kisan Agriculture Cooperative Limited, ABC Nepal and ADB could be relevant potential partners for CCAFS to collaborate with.