

# Layer Farming for Adaptation Project (LFAP)

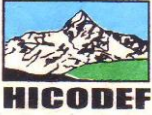
(Cultivating and marketing high value crops to improve food security, enhance livelihoods and adapt to climate change in Nepal)

## 3rd Quarterly Report (April – June 2023)



**Submitted by: Himalayan Community Development Forum (HICODEF)**

**Kawasoti, Nawalparasi East. Nepal**



## Background

The Himalayan Community Development Forum (HICODEF) has partnered with The Glacier Trust (TGT) in south-central Nepal to enable climate change adaptation in the remote mountain villages of the Siwalik range since 2009. HICODEF's works in this region have enabled people to increase their resilience to the growing impacts of climate change. Since 15 Sept 2019, the Layer Farming for Adaptation Project (LFAP) has been implemented by HICODEF with support of TGT and in close collaboration with local farmers and the local government. The Phase 1 of the project worked in three villages (Ripaha, Mathillo Baseni and Lahape) from 15 Sept 2019 to 14 Sept 2021. HICODEF and TGT reached agreement to extend the project for a second phase to be operational in the adjoining villages of Dhoubadi, Pokhari, Dulunga and Charghare. These villages fall under two adjoining Rural Municipalities, namely Hupsekot and Boundikali of Nawalparasi District (east). LFAP Phase 2 will be implemented from 15 Sept 2021 to 14 Sept 2024. This quarterly report covers project progress, inputs and outputs as well as achievements to date in the reporting period, April to June 2023.

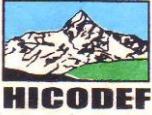
This phase of the project has allowed us to reach further remote villages in the foothills of the Himalayas. This is an area of dangerously low food security, and climate change and inequality are exacerbating these problems significantly in this area. Coffee can be grown with other high value crops, root vegetables and fruits across the Himalayan foothills as a climate change adaptation and livelihood improvement strategy. Coffee will be grown using the organic 'layer farming' method so that coffee is inter-cropped with fruits, vegetables and other high value crops to significantly improve income, diet and resilience to climate change. Through this project, we intend to enable farmers to grow coffee commercially for the first time in the locality which has already been observed in the Phase 1 communities. There were a few coffee trees in the area planted years ago, but the people did not know how to manage and process the coffee, or where to sell the product. In 2022, a few of the farmers could sell their coffee parchment that they produced as the coffee trainer himself facilitated the sale. This sale of coffee has doubled in 2023. Our project, enthusiasm and activities has gradually been able to generate a hopeful feeling among our partner farming families that coffee can be an appropriate alternative cash crop for their locality and can be sold at a good price.

This report refers to activities implemented between April and June, 2023 in the communities of Dhoubadi, Bokhara, Dulling, Baseni and Riana villages of Hupsekot Rural Municipality, and Lahape village of Boudikali Rural Municipality.

Our project activities have focused on the equipment support, coffee seedling plantation preparation, the school engagement program and coffee nursery management.

### Summary of major activities during the reporting period:

1. Equipment Support (HDEP – high density plastic - water tanks and tunnels).
2. The school engagement program:
  - planting of coffee seedlings and nursery care in the school compound,
  - litter picking and local environment care events.



3. Farmer group follow-up meetings.
4. Monitoring and coaching of coffee seedling nurseries.

## Implementation Activities and Achievements

### 1. Equipment Support (HDEP water storage tank and Silpaulin sheet for tunnel)

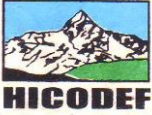
In the reporting period, we have supported 4 farmers each in Charghare, Dhoubadi, Bokhara and Dulling villages with a total of 16 x 1,000 litre capacity HDEP tanks for irrigation and 16 *Silpaulin* plastic sheets (10m x 6m) for vegetable nursery tunnels.



Farmers from Pokhari village receiving the water storage tanks and Silpaulin sheets



Farmers from Charghare receiving the water storage tanks and Silpaulin sheets



A Farmer from Dhoubadi reciving the water storage tanks and Silpaulin sheets

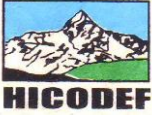


Farmers from Dulunga reciving the water storage tank and Silpaulin sheets

This is a joint venture as we ensured a 50% contribution from the farmers' side; 50% of the total cost and transportation charges have been contributed by the beneficiary farmers for the HDEP tanks, and all the tunnel construction costs are borne by the Silpaulin receiving famers. This system is used to create a sense of ownership and ensure good care of the items procured as the farmers themselves have invested their own money. The farmers have already fixed the tanks in place, and are preparing to construct their new tunnels in their fields, when they are free of crops, and ready for the autumn and winter vegetable season. The objective of this activity is to assist in increasing agriculture production, and raising of seedlings, especially vegetables and coffee. Following this support from the project, farmers are keen to move ahead with cultivating vegetables in their tunnels, according to our suggestions.

## 2. School Engagement Programme

During this period, we have continued to conduct the school engagement programme in two of the project sites, at the schools in the villages of Dhoubadi and Charghare, where we conducted two types of activities - coffee seedling and nursery weeding, and litter picking in the school compound.



- **Coffee seedling and nursery weeding in the school compound**

During the coffee cultivation training, a coffee nursery has been established in the compound of Shree Shiksha Bodhani Secondary School of Dhoubadi village, where a total of 112 coffee saplings were planted in 2022. The plantation site and nursery were in need of weeding and fertilizing, and the project team coordinated with school teachers and the management committee to involve students in the works as a part of their extra-curricular activity. The teachers and management committee agreed to conduct one event for nursery management and weeding involving the students, at which all students from Grades 2 to 10 and the teachers actively participated. All the planted coffee seedlings and the nursery have been weeded during a single day.

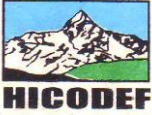
Before starting the event, we explained to the students on best practices in terms of weeding, watering and fertilizing techniques of the coffee plants and other nursery seedlings. The activities were done in groups - the students were already divided into 4 houses named Red, Yellow, Blue and Green, thus we divided the school compound into four roughly equal areas and gave one area to each house. The students were very keen to be involved in these practical classes, and we trust this will be helpful as the children take the good message to their families, the ultimate target of the project.



Students in Dhoubadi School weeding the coffee saplings



The coffee nursery before and after weeding



- **Litter picking and local environment care event**

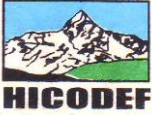
We also conducted a one day litter picking local environment care event in the school of Charghare (Ball Gagarin Basic School) during this reporting period. We again coordinated with the school teachers and management committee who agreed to engage the students in this event as an extra-curricular activity and with due care of health concerns. All the students and teachers took part in the event, before which we explained the difference of bio-decomposable and non-decomposable waste and how to dispose of the different materials. All the non-decomposable litters and plastic materials in the school compound and in the nearby village area were collected by the students during this event, leaving the school compound and surrounding area clean. This event has given a message to the community to conduct such type of events at regular intervals, to maintain the village is clean and healthy, and teach all the villagers to dispose of the different types of litter in the assigned place area.



Schoolchildren taking part in the litter picking campaign in the school compound and beyond

On the occasion of the school engagement programme, the project provided sanitary tools and materials to the school, as shown below – these included face masks and gloves, dustbins, litter/dust picking shovels, and toilet brushes.





### 3. Follow-up Meetings with the Farmer Groups

Farmer group meetings and follow-up on issues raised are a continuous project activity. In such meetings, we first review the implemented activities to identify what went well and what went wrong so that future planning can learn from this and improve implementation; we also address the individual issues of the farmers and shared the learnings amongst all participants. We then discuss, plan and decide on activities to be implemented in the coming 3 months at the field sites. During this reporting period we have conducted 6 such follow-up meetings with the groups, at which a total of 172 farmers participated (68 female and 104 male). Topics discussed included the tunnel making and HDPE tank installation and management, the weeding, fertilizing, and watering of the coffee nurseries and plants, the correct practice of digging pits for the out-planting of the coffee seedlings plantation, and other micro projects. The meetings concluded that the construction of the Silpaulin sheet tunnels receiving should start as soon as possible, and that the newly planted coffee saplings should be provided proper care, water and fertilizer.



The Farmer Group Meetings in Dhoubadi and Riana

### 4. Monitoring of the Coffee Seedling Nurseries and Field Coaching

In the previous quarter, we had conducted coffee cultivation training in four of the project sites - Dhoubadi, Charghare, Bokhara and Dulling – where in each village, a coffee seedling nursery had been established at each training site. In the current reporting period, we have regularly visited, monitored, and provided necessary feedback to the communities to ensure proper care of the coffee nurseries. The winter frost affected the coffee seedlings of Dhoubadi and Bokhara, and currently the long ongoing pre-monsoon drought has also affected the plants, and more coffee seedlings have died in the nurseries. However, there remain 3,470 coffee seedlings ready to transplant in the four established nurseries - 695 in Dhoubadi, 910 in Charghare, 390 in Bokhara, and 1,475 in Dulling. Due to the long drought, we cannot expect many coffee seedlings from these nurseries next year, as we have not been able to plant coffee seedlings to date.



The Coffee Nurseries of Dhoubadi, Charghare, and Dulling where seedlings await conditions suitable for transplantation



Newly established coffee nurseries in Dulling and Charghare are suffering from by prolonged drought

## Challenges faced

- There is a serious scarcity of water in Dhoubadi and Pokhari, where it will be a challenge to scale-up coffee plantation areas unless we organise alternative means of irrigation. There are no water sources nearby available to provide even small amounts of water for irrigation.
- Due to a long period of drought, gravity water sources are declining in an extensive area of the Siwaliks, and has created problems for even drinking water in our project communities. There is thus great difficulty in sourcing water for irrigating the nursery seedlings, the young transplanted coffee seedlings, and other crops. The mortality rate of the seedlings is thus most likely to increase this season in both the nurseries and after planting out.





Maize and coffee plants suffering from the long drought in the project area

### **The Way Forward – activities in the next quarter**

- Regular support to be provided to the farmers for their coffee nurseries and seedling plantations – in terms of water management, and plant and soil management.
- Continued regular farmer group meetings.
- Regular support to be provided to the farmers in their tunnel vegetable farming enterprises.
- Continued school engagement programme.
- Stakeholders meetings in all project communities with local officials.