

**Layer farming for adaptation.  
(LFAP)  
(Cultivating and marketing high value crops to improve food security enhance livelihoods and  
adapt to climate change in Nepal)**



**Half Yearly Report (September 2020 to March 2021)**

***Submitted by:* Himalayan Community Development Forum (HICODEF)  
Kawasoti, Nawalparasi, Nepal**



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6(Date: 1 Sept 2020 – 15 March 2021)

## **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. Our work in this region has, to date, enabled people to increase their resilience to the growing impacts of climate change. From the year 2019 this project has been being implemented by TGT and HICODEF in close collaboration with farmers in each of the three villages (Ripaha, Matthillo Baseni and Lahape) and in cooperation with all relevant local government institutions.

Through LFAP we have reached a further the remote villages in the foothills of the Himalayas. This is an area of dangerously low food security. Climate change and inequality are exacerbating these problems significantly. In this project 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. The project intends to grow coffee using the organic 'layer farming' method so that coffee is inter-cropped with fruits, vegetables and other high value crops to vastly improve income, diet and resilience to climate change. Through this project, the farmers in the process to grow coffee commercially for the first time.

We have also work with local primary school children and teachers to give them practical and theoretical knowledge of ecosystem-based climate change adaptation and environmental conservation.

This half yearly report refers for the activities implemented during 16 Sept 2020 to 15 March 2021 in the community of Ripaha & Baseni villages of Hupsekot Rural Municipality & Lahape village of Boudikali Rural Municipality.

Whole world is being suffered by the COVID-19 pandemic during the whole year 2020. All the socio-economic condition of the people is adversely affected by the pandemic and this project is not apart. The whole country was locked down partially & fully for a long time. Due to the COVID -19 pandemic people were unable to involve in income generation activities, production, providing services, field level knowledge sharing and most of the means of transportation were halted. All Educational institution were closed for even longer period. Neither the project nor community of the project area even think of such adverse situation. During this period we became unable to delivery regular activities with regular method, tools techniques due to banned mobility and non-acceptance of any new comers in the villages. In this condition we selected pandemic friendly tools & techniques to delivery our regular activities and do their regular follow ups. Especially we used distance learning methods like use of phone, mobile, net for coaching, backstopping, coordination, facilitation of relevant project activities. Now the situation is gradually improving. As the situation improves, our project activities have gradually been started directly in the field. Follow-up monitoring & coaching for coffee cherries for pulping, Coffee Nursery follow-up & coaching for



coffee plantation. Regular follow-up & monitoring, exposure visit of farmers in coffee production, processing and marketing area, 6 OJT students selection, orientation & placement in working area, Collection and sale of the coffee parchment from the project area, are the major activities done during this period.

### **Major Activities Conducted & Achievements During this period**

- ❖ Follow-up monitoring & coaching for coffee cherries for pulping
  - ❖ Coffee Nursery follow-up & Coaching: Coffee nurseries
  - ❖ Coffee plantation follow-up & monitoring
  - ❖ OJT students' selection, orientation & placement in working area
  - ❖ Exposure visit of Farmers in coffee production, processing and marketing area
  - ❖ Collect and sale the coffee parchment.
- ❖ **Follow-up previous activities:**
- ❖ The tomato grown in tunnel farm.
  - ❖ The vegetable seeds distributed last year.
  - ❖ Broom Grass Cultivation.
- ❖ **Follow-up monitoring & coaching for coffee cherries for pulping**



This is now the right time for harvesting fresh coffee cherries and pulping them but due to traditional and unprofessional practice, people do not care it much. If we do not pick in right time the quality of coffee will not be good. So we must pick (ripe) fresh cherries within right period, so from this visit, monitoring we coached and suggested the farmers to pick and pulp fresh cherries in right time. Due to the excessive raining in flowering period of coffee, it seems the production of coffee bean is less than last year.



#### ❖ Coffee Nursery follow-up & Monitoring

Last year we had organized coffee cultivation & production training for the farmers of three sites. In this training coffee seedling production, Nursery preparation was one of the major skill provided in the training. As a result, six farmers of project site have established coffee nursery in three different sites. There are about 400 sapling in each 5 Nurseries. But there are more than 5000 coffee saplings in Lahape nursery. Most of the saplings are grown in ground so we have suggested & coached them to transplant in poly pot for better quality of seedling and transport to distant site.



**Coffee nurseries established in Lahape & Ripaha**

#### ❖ Coffee plantation follow-up & monitoring

Coffee plantation support is another major activities of the project. We made two types of coffee plantation in our project sites last year. 1. Farmers HH level coffee plantation 2. Plantation of coffee in School area by students. Last year 84 HHs Farmers (83 Janajati 1 Dalit) of 3 farmers groups were involved to plant 3255 coffee saplings. Like this 3 basic schools (Shree eLaxmi Basic Level School Bhudhikali -6, Lahape, Shree Rastriya basic school Hupsekot 5 Baseni & Shree Suryabinayak Basic School Hupsekot 4 Ripaha) planted 24 coffee seedlings in each school compound. About 90% of the coffee plants planted have survived and are growing (some are eaten up by goats/cattle and few dead). We are constantly reminding people to weed, water & manure on time. The farmers have started to do these activities as regular activities for coffee farming. Some Farmers have started to pruning old mother coffee plants. Some farmers are facing water irrigation problem for planted Coffee saplings.



Initial stage of layer maintenance in coffee planted area



Coffee planted area that are facing irrigation problem.

#### ❖ OJT Volunteers mobilization

According to our plan there are 6 OJT volunteers to be hired from project starting date (September 2021). However, due to the COVID -19 all the academic year has been postponed this year in Nepal. As a result we could hire the 6 OJT students (4 female & 2 male) from only 4 March 2021 for Six month. The 6 OJT volunteers have been joined as JTA (junior technical Assistant) volunteers in our program during this period. (All are from Kali Gandaki Technical School, Kwasoti, and Nawalparasi.) One day induction and orientation was organized for them in HICODEF office prior to deploying them to the field. Introduction of project, objectives, activities, rule & regulation of organization, project, benefits of OJT, activities implementation process & methods, their roles as volunteer and responsibilities for smooth mobilization of project were persuaded during the orientation. After orientation, these 6 plant JTA (junior technical Assistant) volunteers have been placed two project sites & assigned them in 3 farmers groups (2 volunteers in Ripaha & 4 volunteers in Lahape). The volunteers have been helped for strong social mobilization and technical support to the farmers in regular basis as well as capacity development of their own. As they live in the community, they build better relationship of trust with the farmers. The volunteers have been guided and monitored 4 PC of the project. The volunteers have massively mobilized to collect the information of farming and other social issues. They will help &



support to coffee cultivation. This initiation supports the farmers when they need in farm suggestions and also the project support to develop human resource to work in the agriculture sector.



Meeting with OJT Volunteers

❖ Exposure visit of Farmers in coffee production, processing and marketing area

A five days (during 6-10 March 2021) exposure visit was organized for representative coffee farmers of our working areas. Nine farmers (7 Male & 2 female) and 2 staff of HICODEF have participated in this exposure visit. To motivate the farmers for commercial coffee farming, to identify & access the coffee parchment markets, linkage & coordination with coffee buyer were the main objectives of the exposure visit. During this exposure visit we made visit in a coffee parchment buyer & coffee making company (High mountain Arabica Coffee company, Gimdee 7 Lalitpur), District Coffee cooperative Ltd. Lalitpur, 3 commercial coffee Garden, 1 coffee pulping center of Lekhali coffee production cooperative Mahankal RM – 6, Lalitpur, Thuladurlung. The participants have interacted with them and made, direct observation of their activities. The participants have got chance to learn, know & identify all the chain of coffee farming system. They made access, linkage for coffee parchment sell. After the visit the participant are very excited for commercial coffee farming. Participant details of visit is as follows.

Project Site	Participants			HICODEF	All total
	Total	Male	Female		
Ripaha	3	1	2		
Baseni	3	3	0		
Lahape	3	3	0		



Total	9	7	2	2 Male	11
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### Visit schedule:

SN	Proposed Activities	Visit proposed Date	Visit Site	Night stay Place
1	Travel to kawasoti	6March ,2021	Travel	Night stay at kawasoti
2	Travel to kathmandu & coffee company visit	7March ,2021	Vist to 1.Highmount Arabica coffee copmany of lalitpur 2. Lalitpur coffee	Night stay at kathmandu
3	Travel to Lalitpur sight visit	8March ,2021	Visit to Coffee Garden of Mitharam kattee jee & Pulping Center in thuladurlung	Night stay at kathmandu
4	Travel to kathmandu & coffee company visit & Return to kawasoti	9March ,2021	Important place of kathmanduVisit to Major religious site & Market of Kathmandu	Night stay at kawasoti
5	Return to on own site	10March ,2021	Travel	Return to their home



**Coffee company visit**



**Coffee Garden observation**



**Observation of pulping Center, Parchment dryer & prepared parchment**

❖ **Collect and sale the coffee parchment.**

The community of Lahape, Baseni, & Ripaha were produced coffee parchment since some years in traditional method. They have not got any market for their small scale of coffee production. They used this parchment for their domestic purpose. By keeping this in mind, the project organized coffee cultivation & processing training in these sites. We provided coffee pulper machine from the project. We made regular distant follow-up, coaching, & feedback for coffee cherry picking, pulping, to prepare coffee parchment during the lockdown period. After getting the pulper machine, regular feedback & follow-up they started fresh cherry pulping using the pulper machine first the time. Now they have started to make coffee parchment as much as possible. After coaching and follow-up facilitation, the farmers collected 76.5 kg coffee parchment and sold 54.5 KG in Kathmandu coffee company through HICODEF & the rest 22 was sold locally. They got RS 500. Per Kg in Kathmandu & Rs 400.0 per Kg locally. See the chart for details.

Project site	Totaal production of parchment	Number of HHs involved	Parchment sold through HICODEF	Locally sold
Lahape	50	8	39.0 kg	11
Baseni	22.5	6	15.5	7
Ripaha	4	3	0	4
<b>Total</b>	<b>76.5</b>	<b>17</b>	<b>54.5 kg</b>	<b>22</b>





**Discussion with coffee buyer for its quality & moisture mesurment during parchment selling at lalitpur**

❖ **Follow-up previous activities:**

❖ **The tomato farming in tunnel**

Last year the project Supported 9 units of 1000 Liters HDP Tank for irrigation and 9 units of Silpaulin (10M \* 6M) for tunnel making for the 3 farmers of Hupsekot - 4 farmers of Ripaha & 6 farmers of Bondhikali - 6 Lahape for the support to increase vegetables promotion. This was the provided in contribution share basis. In these activity 50% amounts of total cost & transportation was contributed by beneficiary farmers in HDP tank and all the tunnel making cost has been born by the famers. After support the Silpauline & HDP Tank, the farmers fixed the tank and started tunnel vegetable farming in their fields. The farmers were very excited to cultivate vegetables in tunnels. Now the tunnel is smoothly running. Farmers are cultivating tomatoes in their tunnel. The 6 farmers who grew tomatoes Lahape have earned NRs 42000.0 from tomato grown in tunnel and more than 200 Kg were used in their own homestay. Similarly, 3 farmers from Ripaha have earned NRS 28,000.0 from the tunnel farming. There are lots of tomatoes still growing in the tunnel. And the yielding is well and the farmers are encouraged as they can sell the surplus locally.



Tomato cultivation in Lahape Tunnel

❖ **Follow-up of Ground crop seed support.**

Ground crop seed support or onsite technical support/plant clinic was a major activity in the project last year. We organized 4 sessions of onsite technical support and plant clinic in each site (Lahape, Baseni & Ripaha) to develop the farmer's skill, knowledge, effective management of water in vegetables, vegetable seeding production to prepare organic fertilizer, organize pesticide & their proper use. During that period we conducted sessions in Ripaha, Baseni & Lahape to identify the plant disease and the possible solution. In this session we discussed on agriculture problems faced by farmers, diseases of vegetables plants, did practical exercises & suggested possible solution of treatment. They had been taught about the preparation of bio pesticide, preparation of organic manure & Organic farming simultaneously. Thus, during this period we have made regular follow up, feedback & monitoring of these activities. Now we can gradually see the impact of these classes & supports. More than 60 HHs farmers have started to make bio pesticide, liquid organic manure for their vegetable cultivation. Like this last year we distributed improved seeds of cauliflower, cabbage, radish, onion and green mustard to all the farmers of 3 sites. Now all the farmers have grown sufficient vegetables for their domestic use & consuming better diet. Some farmers have sold locally and earned some income as well.



Vegetables & onion cultivation in project site

❖ **Facilitating Follow-up of Broom Grass Cultivation.**

During this period we have regularly facilitated & followed-up for broom grass cultivation in our project area. This year, the production of broom grass is better than last year and also getting better price this year. Tentatively the broom grass have covered 15 Hectors of land in our project site. 84 farmers HHs 3 sites of project area are directly involved in broom grass cultivation. They have sold 7100 kg broom grass in RS 90.0 per Kg during this period and earned NRS 6, 39,000. Please see in Table for Details.

SN	Project site	Status of Broom grass sell quantity & income Rs. 90./kg			
		Sold KG	total income	Amount of land ( In Ha)	Involved HHs
1	Lahape	3200	288000	7	37
2	Ripaha	2700	243000	5	28
3	Baseni	1200	108000	3	19
Total		7100	639000	15	84



Broom Grass cultivation Area



Community for broom grass Harvest, Harvested & dried harvest for sale

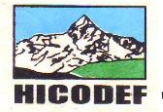
## Challenges

- ❖ Continuous Irrigation facility for Coffee cultivation for all farmers.
- ❖ There are some pertinent questions before commencing project activities proposed in 2<sup>nd</sup> phase area. (Charghare, Dulunga, Pokhari & Dhubadi of Hupsekot Rural Municipality). The main reasons behind being the following;

1. Communities are not keenly interested for coffee cultivation in the proposed area as it is time taking.
2. Some proposed areas (Dhubadi, Pokhari) are proposed as command area for Dhubadi Iron Company and hence commencing work in this area may not be sustainable.
3. Pokhari & Dhubadi area of Hupsekot RM are facing even drinking water scarcity, irrigation facility seems not possible there.

So we need to identify better area for expanding this coffee promotion project **or address the above stated problems**

**The following area will be suitable for this project of next phase, revision and consideration needed.**



1. Boundi Kali RM - 4 (Tallo Kuwakot, Mathillo Kuwakot, Chardanda and Ritthe)
2. Bulingtar Rural Municipality (Mathillo Arkhala, Sunarthumki, Chharchhare and Ramkot)

Otherwise we may need to revise working theme or sector for next phase of the project. Earlier decision would make the work more organized, so it's now time to start thinking

3. Need to support Irrigation facility to HHs level for better coffee cultivation.

#### **Future plan.**

- Conduct coffee cultivation refresher training in all sites
- Regular monitoring and field support
- Conduct school engagement program.
- Regular OJT mobilization in vegetable farming, Coffee cultivation & School engagement program.
- Information collection for next phase project development.