



EcoHimal Nepal, supported by The Glacier Trust (TGT) UK

Climate Change Adaptation in Solukhumbu, Nepal

Integrated Sustainable Tree Cropping and AFRC Programme

Annual Report, August 2020 to July 2021

A. Objectives Achieved

Overall Goal: Sustainable rural livelihoods through the promotion of tree cropping and organized marketing of the produce

The majority of the local communities of Deusa and Waku have adopted crop diversification and tree cropping as well as high value low labour-intensive systems, and are slowly substituting subsistence practices with commercial technologies, while improving their management of local resources. Tree cropping by local farmers has been particularly successful in shaping a new form of sustainable livelihoods. Agroforestry is considered a win-win model for the communities, and as a result, the local government has adopted the model as it provides multiple benefits and reduces pressure on the community forests.

The local farmers are able to select the right tree crops according to the climatic and soil conditions, and over the last 4 years, the introduction and acceptance of tree cropping throughout the communities in the project area has resulted in increased local resources, an expansion of the cropped area, and increments in income.

It is noted that the altitude at which, for example, orange, coffee, and pecan nut trees can be grown is shifting up. The area under multi-purpose forage crops, such as broom grass, in marginal lands has significantly expanded which has helped mitigate soil erosion. The new tree crop products have encouraged middle men to the project areas, thus access to markets has greatly improved through strengthening the links to buyers. The income of 368 local farmers is recorded as over NPR 2.7 million within 5 years, mainly from the sale of coffee and gooseberry.

Other factors that have improved the cropping systems, marketing and livelihoods include the establishment of a cooperative, organic certification of coffee, a student exchange programme, the involvement of volunteers, and continuous training and field support for the local farmers.

Specific Objectives

a) To raise families out of poverty through the promoting sustainable production and marketing of the produce

The project contributed to an increase in income of the local farmers due to sales of tree crop products such as coffee, fruits, and vegetables: incomes range from NPR 6,000 up to 1.1 million, the higher incomes generated by our model farmers. Other particularly successful introductions and initiatives include:



- a) the farmers maximising the use of their farms through layer farming - tree crop coverage has significantly increased;
- b) polyhouse cultivation for non-seasonal vegetable production, which improved both incomes and dietary nutrition;
- c) rainwater harvesting and plastic pond construction for irrigating crops in the dry season;
- d) the increase in fodder and forage plantations reducing the workload of women and the harvesting of forested lands, while contributing to livestock health;
- e) the considerable support provided by the local government for local people to establish coffee orchards;
- f) the problem of pest and disease prevalence in crops is decreasing, due to the project initiatives, training and support;
- g) improved local employment opportunities were generated at village level with 156 local youths now engaged in sustainable production.

Overall, farming systems have improved and there is now greater focus on high value crops and long-term benefits, both environmental and financial.

The move from traditional subsistence farming to tree crop farming, as well as learning new skills such as layer farming, polytunnel farming and bio-intensive techniques has beneficially impacted incomes, and raised many families out of poverty.

b) To capacitate farmers on tree cropping technology and its extension and promotion:

Since June 2017, a total of 1,369 local farmers were capacitated through different trainings, orientations and workshop on tree cropping technologies. They are now skilled in plantation techniques with knowledge on multi-layer inter-cropping and on-farm tree diversification. They have demonstrated their acquired skills and knowledge through planting high value tree crops on their farms using climate smart agriculture techniques, such as bio-intensive practices and layer cropping. More than 50% households in Deusa and 25% in Waku have planted tree crops on their farmlands.

The satellite nursery system has ensured that the availability of tree seedlings in Thulung Dudhkoshi RM (TDRM) is good, which has encouraged many farmers to plant a variety of tree species.

B. Outcomes and Results Achieved

1. Approximately 200 farmers trained in tree crop production and supplied with appropriate tree crop planting materials.

Since 2017, 1,293 local farmers (62% male, 38% female) have been provided with extensive tree cropping skills and technologies; of the 1,293, 341 farmers attended more than one training. They were trained in plantation techniques, climate change adaptation techniques, organic farming, multi-layer intercropping, biological pest and disease control, and nursery management.

In the year 2020/21, 622 local farmers (66% male and 34% female) have been trained in nine other aspects of improved farming, as shown below in Table 1. Besides the training, the farmers were supported with distribution of high value seeds and seedlings of suitable nuts and fruits.

Table 1: Summary of Farmer Training in 2020-2021

#	Training Provided on:-	Male	Female	Total
1	Mustard Cultivation	121	85	206
2	Banana Farming	10	2	12
3	Bee Keeping	48	28	76
4	Pest Management and application of Bordeaux Paste on Fruits	9	6	15
5	Tree crops cultivation	127	40	167
6	Book Keeping	25	7	32
7	Bio-intensive plantation	54	34	88
8	Kiwi farming	8	1	9
9	Animal health	11	6	17
Total		413	209	622

Further details are provided in [Annex 1](#).

Out of the 622 farmers trained in 2020-'21, 466 participants attended one training while 156 participants attended more than one training, as presented in Table 2 below.

Table 2: Frequency of Participation in Different Trainings

#	Particulars	No. of trainees	No. of trainees on the basis of attendances	Remarks
1	Participants attended one training	466	466	466+156=622
2	Participants attended 2 trainings	60	120	60p*2t =120
3	Participants attended 3 trainings	12	36	12p*3t =36
Total		538	622	

2. Tree Crop Seedlings Distributed and Planted

105,855 seedlings (high value tree crops, fodders and forages) have been planted since 2017 – the widespread planting of these fruits, nuts, fodders, forage, and multi-purpose plants have made the Deusa and Waku villages green. During 2020-2021, 20,845 seedlings have been planted as recorded in Table 3.

Table 3: Summary of Seedlings Planted in the Project Area

#	Description of Seedling Distribution	Quantity
1	High value tree crops planted by local farmers (eg. apple, cheery, peach, almond and apricot) provide by the project	189
2	Seedlings distributed directly from DAFRC to local farmers	14,501
3	Seedlings grafted and promoted at local level	6,155
Total seedlings planted		20,845

Further Details are provided in [Annex 2 and 3](#).

3. The Satellite Nurseries

7 satellite nurseries in TDRM have been established, out of which, 4 are generating an income from the sale of seedlings. 2 nurseries have been revitalized and have established nurseries for seedling production, and the 7th nursery in Nele has just come into operation. The 6 established satellite nurseries are now well managed.



A summary of the income generated by the 4 well-established nurseries is provided in Table 4, while the details of the sales are provided in Section C Activities, below.

Table 4: Income Generated by the 4 Well-Established Satellite Nurseries

#	Satellite Nursery	Amount in NPR
1	Lokhim Satellite Nursery (LSN), Ward no. 9	92,500
2	Panchan Satellite Nursery (PSN), Ward no. 3	69,230
3	Mugli Satellite Nursery (MSN), Ward no. 6	12,700
4	Kangel Satellite Nursery (KSN), Ward no. 2	13,700
Total Income Generated		188,130

All the nurseries are equipped with basic physically infrastructure like land for nurseries, green houses for seedling production, plastic ponds for irrigation, and all nursery management committees are active and working well.

4. The Self-Sustaining Nature of the Deusa Agro-Forestry Resource Centre (DAFRC)

Institutional sustainability

The DAFRC is well equipped with the necessary capital, land, infrastructure, furniture and other materials necessary for training and accommodation, with sufficient kitchen facilities, training logistics and tools. All necessary structures are in place to run the institution smoothly.

The DAFRC is institutionally sound with established essential administrative and managerial capabilities and requirements which are strengthened annually. In 2021, financial support was received from the *Spices for Health* project to construct and manage a spices collection and training centre.

The institutional sustainability of the DAFRC is ensured as follows:

- annual auditing is carried out every year and on time; for the fiscal year 2020-2021, the appointed auditor currently carrying out the annual audit;
- the Board of Directors is fully functional, and held 6 period meetings in fiscal year 2020-2021. 90% of the decisions taken are development oriented, and more than 65% decisions have been acted upon;
- DAFRC has properly managed and accounted fixed assets;
- organizational personnel and financial policies are in operation;
- social media is used for dissemination and sharing of progress and activities;
- the human resources are capable of handling overall administration and management;
- have sought and received support and resources from the local government, line agencies and like-minded organizations.

Financial Sustainability:

In line with the 3 year business plan, all scheduled activities have been implemented and targets achieved, even during 2020-2021, a year much hampered by the pandemic and lockdowns. The income side of the fiscal year 2077/078 (2020/21) is stronger than the expenditure. The income generated by the DAFRC from various sources – such as seedlings, seeds, agro-products, coffee, training, and hospitality. A summary of income and expenditure is provided in Table 5.

Table 5: Profits of the DAFRC in Fiscal Year 2076/077 (2019/20)

#	Particulars	Amount in NPR
A	Income from:-	
1	Sale of seedlings/saplings	1,010,885.00
2	Sale of vegetable seeds	20,305.00
3	Agro products collection and sale (coffee parchment and veg. products)	662,440.00
4	Training and demonstrations	12,500.00
5	Guest hospitality	266,565.00
6	Sale of agricultural tools	12,915.00
7	Financial support from local government	650,000.00
8	Financial support from the PM's Agriculture Modernization Programme	1,000,000.00
9	Others	100.00
	Total Income	3,635,710.00
B	Expenditure on:-	
1	Production of seedlings and saplings	495,046.00
2	Agro products collection (coffee parchment and vegetable products)	770,510.00
3	Training and demonstration management	38,430.00
4	Guest hospitality	145,705.00
5	Office running costs	30,400.00
6	Capital investment (building construction and others)	620,892.00
7	Human resources management	416,000.00
8	Others	1,632.00
	Total Income	2,518,615.00
	Balance of Amount	1,117,095.00

Further details on the DAFRC balance sheet, income and expenditure is provided in Annex 4.

C. Activities Carried out and Brief Narrative on Accomplishments

C1 Coordination with Local Government and Concerned Stakeholders

i. Coordination with the local governments:

In this reporting period, coordination with the local government continued by both the project management and DAFRC management. Two meetings were held with Mr. Ashim Rai, the chief of the RM, in Kathmandu on 11 September 2020 and 7 January 2021. Discussion topics included cooperative establishment, coffee promotion, and product marketing, and following a brief discussion on the history of coffee cultivation in Deusa, the concept of “Hub and Spoke” for coffee promotion and marketing was also shared. A detailed plan for coffee promotion in TDRM and the surrounding municipalities was discussed and submitted to Mr. Rai, along with planned activities and estimated budget for each activity. Mr Rai was positive on resource sharing and fund support for coffee promotion in TDRM.

Other coordinated activities with the local government were as follows:

- the local government provided subsidies and resources for various trainings – eg. bee keeping, mustard farming and cooperative financial management. In addition, mustard seed was provided for the promotion of a mustard pocket area;



- an Environment Committee was formed within the local government comprising 10 members to promote climate change adaptation in the project area - a list of members is provided in [Annex 5](#);
- a lead farmer, Mr. Amar Deep Rai, was provided with a 15 day bee keeping at the National Bee Keeping Training Centre in Godawari to prepare him as local resource person. Since his return to the Municipality, he has already conducted training on bee keeping for 29 local farmers;
- an animal health camp, supported by the local government with a budget of NPR 50,000, focusing on dehorning, deworming, veterinary and animal health treatment was organised. To date, 33 animals have been treated and the health camp continues;
- a cooperative management and book keeping training from 11 to 13 March 2021 was conducted with the financial support of the local government and in coordination with the District Cooperative Association. The local government provided funding support of NPR 100,000 to the DAFRC to cover the costs of this training;
- 26 local farmers were provided 312 walnut seedlings, funded by the local government;
- a 5 day bee keeping training was conducted from 24 to 28 March 2021, with the financial support of the local government. 26 local farmers were trained and 200 local farmers of Ward no. 8 were supported with 400 improved bee hives. Mr. Ashim Rai, the Chairperson of TDRM, was present at this DAFRC programme on 28 March 2021 – see the following media link:

<https://www.himalsamachar.com/2021/03/29/9713?fbclid=IwAR0d3X2plbmsoQ7Co0yefFLNf5NbvJExi1xUa0eTSvHU4owNuKidjRaj4dY> . A translation and summary of the event is provided in [Annex 6](#).

ii. Coordination with INHURED International

The project is jointly implementing different agro-forestry initiatives in cooperation with INHURED International, sharing the funding and resources. Through this shared initiative, 22 local people have been trained on seedling production, and nursery establishment and management.

iii. Coordination with the Prime Minister's Agriculture Modernization Programme (PMAMP)

With the support of the PMAMP, DAFRC has carried out agriculture promotion programmes, focusing on bee keeping and mustard farming at the local level; this programme, was jointly funded, 50% from the PMAMP, and 50% from the DAFRC with the active participation of the local community. Ward 8 has been nominated as a mustard production pocket area.

iv. Coordination with the Horticulture Centre Phaplu

Improved Potato Seed (IPS) was produced locally in cooperation with the Horticulture Centre at Phaplu, Solukhumbu. 4 local farmers (Mr. Dhan Bahadur Tamang, Mr. Man Bahadur Tamang and Mr. Janga Tamang, together with the DAFRC staff member Mr. Keshav Kumar Rai) were trained and mobilized as IPS resource persons; Mr. Rai has already conducted 3 trainings on IPS production at the DAFRC.

3,000 kiwi scions were also obtained from the Horticulture Centre, Phaplu for grafting purposes.



C2 Sharing of the Achievements

The Chairpersons of 2 rural municipalities in the neighbouring district of Khotang, Mr. Bishwanath Niraula (from Aiselukharka RM) and Mr. Lilanath Niraula (from Rawa Besi RM) visited the DAFRC on 8 and 9 March 2021 with their teams¹.

The main purpose of the visit was to provide a brief overview of the AFRC model – eg. its structural development, an agro forest demonstration, climate change adaption initiatives – and to encourage replication in their municipalities in cooperation with EcoHimal. As a result of the successful visit and the good visual impression of the AFRC model, they committed to provide appropriate land resources and to co-finance the AFRCs planned in both RMs. In addition, newly appointed staff for this Khotang project observed all the developments and received a first extensive exposure of our project area. The media coverage can be found at: <https://www.himalsamachar.com/2021/03/09/8600?fbclid=IwAR2KDYiz58gWKC7FoFH7TRv7dw-L6APnuszDIIViZI-TyouMV-gdLpBVXao>

An unofficial translation and summary of the media coverage is provided in [Annex 7](#).

C3 Physical upgrading of the AFRC

Due to its increasing popularity as a training centre, the DAFRC facilities have been upgraded. The main building of DAFRC has been renovated, with the existing balcony (*Bartali*) refurbished with new wood planks, and 3 pillars added to the balcony to add strength. The CGI sheet above the balcony was replaced with new CGI sheets. In addition, the roof height of the dining hall was increased with a wooden beam addition; water leakage problems have also been solved.

A new spices and local product collection centre has been constructed next to the kitchen building. The collection centre was constructed in support of EcoHimal's *Spices for Health* project, which contributed NPR 300,000 to construction of the building; our project contributed a further NPR 135,000 to promote DAFRC as a training centre.

The PMAMP provided the support to construct a high-tech green house at the DAFRC, which now boasts 3 high-tech green houses.

C4 Market and Value Chain Research and Surveys

These surveys were carried out to identify the most profitable tree crops for Solukhumbu district, an integral part of our strategy after we have proven that different species are suitable and are adapted to the geo-climatic conditions of the area.

The project management continued research visits to various agro-based enterprises, nurseries and suppliers to ensure reasonable price of products for local farmers. This was coordinated through correspondence and meetings in Kathmandu to ensure market access of products, especially coffee and gooseberry, ginger, and turmeric. The linkage with the Nepal Organic Coffee Pvt. Ltd (NOC) was strengthened for the marketing of coffee following a visit together with TGT Co-Director Mr. Richard Allen to the company's outlet shop and processing units. Discussions were positive for future cooperation. 1,200 kg of parchment coffee from the 2021 harvest in Solukhumbu has to date been supplied to the company. Further details of coffee parchment supplied by TDRM farmers is provided in **Annex 8**. Local farmers will be

¹ Mr. Rajendra Kumar Poudel, the Inspector from Ainselukharka RM, Mr. Pankaj Acharya, the Chief Accountant of Ainselukharka RM, Mr. Puskar Binod Pokhrel, the Administrative Officer Rawa Besi RM, Mr. Prashant Niraula, a representative teacher from Ainselukharka RM, Mr. Ramesh Gurung, a Teacher and Social Worker, and Mr. Dinesh Karki, a Policeman from Ainselukharka RM.



encouraged to sell their coffee directly to NOC, providing the price is acceptable. NOC provided 10 kg of light roasted coffee to TGT in August 2021 for a trial export to the UK.

C5 Procurement of Seedling Materials and Production

Purchased: procurement and distribution of seedlings continued also in this year in winter to promote sustainable tree crop farming. The project, in cooperation with the DAFRC, coordinated with Everything Organic Nursery and purchased 240 seedlings of 8 tree crop varieties; the seedlings were distributed to 21 local farmers.

Production: different varieties of seedlings were produced and distributed from DAFRC nursery to the local farmers. As in past years, the DAFRC produced and distributed seedlings of vegetables, fruits, nuts, fodders, forage and other plant species; in the reporting period, DAFRC produced and sold 29,149 seedlings of different varieties, as summarized in Table 6.

Table 6: A Summary of Plant Sales

#	Seedling Varieties	Quantity	Amount in NPR
1	High value tree crops	6,728	857,705
2	Vegetables	12,395	14,430
3	Ornamental	155	5,150
4	Fodders and forages	9,780	124,600
5	Spices	91	9,000
Total		29,149	1,010,885

C6 Grafting and Cutting of Seedlings

Apart from production, DAFRC grafted saplings, planted them at the DAFRC, and sold them when ready. The details of this grafting exercise is provided below:

- 1,670 seedlings (1,000 apple, 200 pear, 200 orange, 200 peach and 70 dragon fruit) have been grafted.
- A further 3,265 seedlings were later grafted: 1,200 kiwi, 1,500 orange, 150 almond, 200 nectarine, 200 peach and 15 Mexican Lime.
- Scions of different fruits were managed in coordination with the Horticulture Centre, Agriculture Knowledge Centre and the Agriculture Section of the local government.
- 1,120 cuttings for seedlings were sown at the DAFRC: 1,000 tea, 25 gooseberry, and 15 various fruits, and 80 Nepali pepper.

C7 Trainings

Capacity building of local farmers through various trainings in connection with climate change adaptation have been continued in 2020-2021, but due to the COVID-19 pandemic, not all planned trainings were possible. Training of over 120 farmers was provided in all aspects of tree crop production – for example, nursery management, land selection and preparation, nutrients requirements and crop management, together with special aspects of each species selected by the farmers. The trainings carried out in this reporting period are summarized below.

- Mustard cultivation; trained 206 local farmers through 7 training sessions.
- Banana farming; trained 12 farmers in one training session.
- Bee keeping; trained 76 farmers in 3 training sessions.
- Pest management and application of Bordeaux Paste on fruits; trained 15 farmers in a single training.
- Tree cropping; trained 167 farmers in 8 training sessions.
- Bio-intensive techniques; trained 88 farmers in 2 training sessions.
- Kiwi farming; trained 8 farmers in a single training.
- Animal health; trained 27 farmers in a single training.



- Book keeping; trained 32 farmers in a single training.

Details of these trainings are provided in the worksheets of [Annex 1](#).

C8 Field Extension and Supervision of Hazelnut Orchard and Plantation Development

In this reporting period, the hazelnuts received manure 3 times and regular weeding and irrigation. The growth and survival status of the planted hazelnut seedlings was assessed: 329 out of 430 young trees are active, 42 are dormant, 19 are inactive and 40 spots are empty. 5 varieties of hazelnut have been planted; the tallest variety is Yellow (A) with average height 57.8 inches and shortest variety is Cochlet (P1) with average height 33.2 inches.

C9 Progress at the Satellite Nurseries in Tree Crop Seedling Production

Coordination with the management committees of the 7 satellite nurseries is on-going. Each ward committee and satellite management committee are regularly contacted and technical suggestions and feedback provided by the DAFRC. Due to the travel restrictions caused by the pandemic, physical observations have been limited during this reporting period. Progress in this reporting period is summarised in Table 7.

Table 7: Status of satellite nurseries

#	Location	Achievements
1	<u>Ward no 9: Lokhim</u>	The following seedlings have been produced and sold: <ul style="list-style-type: none"> • 2,300 forest seedlings: generated an income of NPR 33,500 • 4,000 vegetable seedlings: NPR 16,200 • 7,050 other seedlings (6,000 coffee, 450 mendola, ipil ipil 250 and niwaro 350): NPR 42,800 The total income generated was NPR 92,500
2	<u>Ward no 5: Jubu</u>	Nurseries for vegetables, forest and fruit species have been established, but no income is reported during this reporting period.
3	<u>Ward no 2: Kangel</u>	The following seedlings have been produced and sold: <ul style="list-style-type: none"> • 500 seedlings of banana: generated an income of NPR 5,000 • 1,000 seedlings of Mandela: NPR 2,000 • 600 seedlings of Khanayo (Ficus camia): NPR 3,000 • Cabbage (600) and cauliflower (1,000) seedlings: NPR 3,200 • 100 lemon grass slips: NPR 500. The total income generated was NPR 13,700. The following seedlings are currently ready for sale and distribution: nebaro (60 seedlings), mulberry (50), cauliflower (1100), cabbage (900), chilly (400), tomato (40), banana (10)
4	<u>Ward no 6: Mugli</u>	The following seedlings have been produced and sold: <ul style="list-style-type: none"> • 500 seedlings of Nevaro (Moraceae): NPR 1,000 • 500 seedlings of Rai khanayo: NPR 2,500 • 700 peach: NPR 7,000 • 1,100 seedlings of mulberry: NPR 2,200 The total income generated was NPR 12,700.
5	<u>Ward no 3: Panchan</u>	The following seedlings have been produced and sold: <ul style="list-style-type: none"> • 1,800 coffee seedlings: NPR 27,000 • 2,200 Akabare chilly seedlings: NPR 22,000 • 3,915 cauliflower seedlings: NPR 7,830 • 600 cabbage seedlings: NPR 1,200 • 850 chilly seedlings: NPR 1,700 • 500 banana seedlings: NPR 5,000 • 500 mandela seedlings: NPR 2,500 • 1,000 tomato seedlings: NPR 2,000



		The total income generated was NPR 69,230 The following seedlings are currently ready for sale and distribution at the nursery: lime (22 seedlings), sage (300), various vegetables (5,000) and banana (30).
6	<u>Ward no 7:</u> <u>Deusa</u>	<ul style="list-style-type: none"> • 3 nurseries established for vegetables, forest and fruit species.
7	<u>Nursery at Nele</u> <u>ward no. 4</u>	<ul style="list-style-type: none"> • Management committee formed and are in planning phase for seedling production in 2021-2022. • Training on nursery establishment has been just delivered.

Other lead farmers have also established small nurseries: these individual farmers are generating income from the sales of fruit and fodder seedlings. Agri-materials, seeds and technical support have been regularly provided by the project to these farmers.

All 6 satellite nurseries and DAFRC have also been supported with the necessary agri-materials, tools and vegetable seeds, and regular coordination with the nursery management committees, and technical support has also been provided. Due to the COVID-19 pandemic and subsequent lockdowns, there were gaps in field visits and physical monitoring by the project management; no visit has been possible between March and September 2021, but contact with nursery managers and committees is maintained by phone calls.

C10 The Cooperative

The Cooperative oversees the development of enhanced tree crop production and product marketing, and is called “*The Sustainable Organic Coffee, Orange, and Fruits Cooperative Limited*” is in process of institutionalization. Regular meeting of the cooperative is organized to discuss about seedlings production, resource pooling and for market linkage creation.

72 local farmers (33 females and 39 male) have been enrolled as Cooperative members to date. The Cooperative is funded as follows:

- a) from membership fees = NPR 7,200
- b) from the Prime Minister Agriculture Modernization Programme = NPR 150,000

In the reporting period, NPR 123,800 was spent on cooperative and financial management training. The current fund balance is NPR 33,400 (last year’s balance = NPR 123,000).

The project staff members along with DAFRC management committee and cooperative staff were trained on proper book keeping and financial management by the Project Manager; topics included a short orientation on cooperative management, principles of cooperatives, and management and financial plan formulation. An additional weeklong cooperative and financial management was planned together with the Ward Office but due to the nationwide lockdown, this was not possible.

C11 Compost Manure Production and Use

6,000 kg of compost manure was produced at the DAFRC; this compost was utilized in the nurseries for seedling production. Demonstrations of proper compost manure production were regularly provided to local farmers.



C12 Eco Art Competition for School Children of Thulung Dudhkoshi RM

In cooperation with INHURED International, DAFRC conducted a one day eco-art competition, part of a 3 day orientation to 17 selected students from 5 secondary schools of TDRM, which was conducted in coordination with Budhanilkantha School, Kathmandu (<https://bnks.edu.np/#/>). An expert from the Budhanilkantha School visited the project area, conducted an orientation to the students, and facilitated the competition on 5 March 2021.

D. Monitoring by the Project Management

During the reporting period, the project management carried out 3 monitoring visits: a) December 17 & 18, 2020, b) January 28, 2021, and c) March 8 & 9, 2021.

In December 2020, the project management monitored the hazelnut plantation, carried out orientation and training to staff with a focus on computer-based reporting, photo documentation and financial report preparation,

In January 2021, project management carried out a short monitoring visit to track project progress. During this monitoring visit, all staff members were oriented on the monthly plan preparation and execution.

In March 2021, project management carried out a 2 day monitoring visit in Deusa, during which the Chairpersons of Aiselukharka and Rawa Besi Rural Municipalities (Khotang District) joined the team. The project manager explained all the achievements of the project to the Chairpersons.

During all monitoring visits, the project manager oriented all project staff about the plan of action, and discussed with them about the challenges in meeting the objectives, and potential solutions.

E. Difficulties

Due to the rapid spread of the second wave of COVID-19 and the second national lockdown, the implementation spirit of the programme was significantly disrupted. Despite its remoteness and relatively few cases, our programme area was subject to these strict lockdowns, and travel bans, and was under prohibitory orders for more than 3 months with restricted movement and a ban on meetings and trainings. This has of course impacted our regular operations and delayed our training activities. Some training courses were held on-line, and a new training schedule has been prepared in order to catch up with the planned training programme.

Due to a severe hailstorm in early 2021, the nursery plants that were outside the DAFRC greenhouses were completely destroyed – this included fruits, nuts, fodder and vegetable seedlings, and other saplings and forage plants. It is estimated that the damage amounted to about NPR 700,000, which represents a huge loss for the AFRC.

F. Next Steps

1. Winter plantation of tree crops.
2. Further institutionalization and development of the satellite nurseries.
3. 16 trainings to train around 250 local farmers on tree cropping and best practices.
4. Capacity building of farmers on integrated pest management and disease control.



5. Resumption of the regular monthly farmer trainings at the DAFRC.
 6. Capacity building of 5 local youths as lead trainers to provide training in improved tree cropping - including management practices, establishment, diversification, and intensification.
 7. Focus on improved management of the hazelnut plantations and orchards.
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