EcoHimal Nepal and The Glacier Trust

Mandan Deupur Agro-Forest Resource Centre (MD-AFRC) Project

Phase 1 (2019 – 2021) Summary Report

The Glacier Trust (TGT) and EcoHimal Nepal (EcoH) with the financial support of The Marr-Munning Trust have implemented the Mandan Deupur Agro-Forest Resource Centre (MD-AFRC) programme for 3 years since December 2019 in the Mandan Deupur Municipality (MDM) of Kavrepalanchowk District. The project design took into account the impacts of the earthquake of 2015, and the growing impacts of climate change on the lives of subsistence farmers.

Farmers in Mandan Deupur learn the bio-intensive tree planting method

The programme promoted alternative agroforestry systems with enhanced opportunities of local employment with the aim of improving the lives of rural families through the establishment of an AFRC, by providing trainings, education and alternative farming systems to enable them to adapt to climate change and build resilience. The AFRC concept derived from the success of TGT/EcoH's AFRC in Solukhumbu District. This project introduced multi-layer and tree cropping technologies to support local livelihoods, and introduced agro-forestry as an alternative solution for subsistence farmers who have small plots of land. It has increased awareness on biological solutions to reduce the injudicious use of pesticides and chemical fertilizers.

Originally the project was planned for 3 wards of MDM, but during its inception the local government requested to extend this concept to all 12 wards of the municipality. Despite limited resources, this proposal was agreed, and the project was extended with the great support of the local government. Within a short period of time, the local government observed the success of the MD-AFRC approach and modalities, and adopted many of the practices and

concept as the best alternative solutions for sustainable rural livelihoods in the municipality. In the project's second year, the local government proposed a matching fund (50% local government: 50% project) to expand the project. However, it was not within the financial capacity of the project or EcoHimal/TGT at the time to accept the proposal - but this support and cohesion between project and local government shows the collaborative essence of the relationship and the deep acceptance of, and enthusiasm for the project by the local government.

On the ground, the local government has provided support in ward numbers 3 and 12 for the construction of infrastructure required for seedling production and agricultural commercialization. In policy matters, the local government included the project's agro-forestry options as key strategies for crop diversification and agriculture modernization and commercialization in its Policy and Programme 2078/079 (2021/2022). Consequently, the local government provided an additional 50% matching fund to develop nurseries, green houses, and offices, for example, for 2 agriculture groups, and now considers the MD-AFRC as a local partner for agro-forestry promotion – as a result, it has provided further funds to promote MD-AFRC as a tree crop seedling production and outlet centre.

Mayor of Mandan Deupur Municipality visit MD-AFRC in 2020

In total, the project has trained 998 farmers who have been supported with 41,889 tree crop seedlings in cooperation with local government. All the planted seedlings are growing well. Key lead farmers have adopted multilayer cropping and the majority of famers are generating an income from the sale of farm produce. Our baseline survey showed that average annual mean income of families in the project area from agriculture was NPR 2,886, this has almost doubled over the three years and now stands at NPR 5,553.

The MD-AFRC is now well equipped with the necessary capital (land), physical infrastructure, furniture and other operational facilities, such as accommodation, kitchen, training arrangement, logistics and tools. The governance system has been institutionalised - the Centre is run by a Management Committee (an executive body), it is legally registered with the local government, sound administration is embedded, and trained human resources are on-site. The establishment and operation of the MD-AFRC has motivated and inspired farmers with technical knowledge on

tree-cropping and alternative cropping systems, and has introduced new affordable and resilient farming technologies. Local farmers have observed improved practices and technologies at the Centre and in multiple trainings, and have replicated them on their own farms. Key to the sustainability of the AFRC is that the local community see the MD-AFRC as their own property and institution.

EcoHimal staff join the newly formed MD-AFRC committee at MD-AFRC in July 2019

5 organic villages and 3 satellite nurseries have also been established, and are producing and supplying seedlings and vegetables. By the end of the project, 3 organic villages and 3 satellite nurseries had been registered with the local government and received the legal status of a valid local institution. Many farmers have now adopted organic production and have begun to sell their products – in this area prone to overuse of commercial pesticides and fertilizers, the production of organic vegetables and healthy disease-free seedlings is making good progress. In total, 17.44 tonnes of organic vegetables have been produced in the 4 organic villages in the three years. They have generated a collective income of NPR 171,075/- from organic vegetable sales, and have consumed about 47% of the production themselves. This is helping to improve the living standard of the people in the 4 villages, and will encourage them to become a stable and sustainable organic agro-enterprise in the future through managing their own outlet centres. We consider this a key success of the project in that parts of the Municipality are so prone to a deep reliance on pesticide use and commercial fertilizer.

All 3 satellite nurseries are in full operation. Seedlings and vegetables are being produced and incomes have been generated at each nursery from the sale of products. All satellite nurseries are well equipped with the necessary land and basic structures, and now generate sufficient income to cover the basic nursery operating costs. The 3 satellite nurseries have generated a total income of NPR 206,500/- from the sale of 19,218 seedlings and 1.74 tonnes of vegetables; thus significant progress has been made toward sustainable operation.

Other important achievements of the project include the following:

a) In total, 1,836 local farmers (56% female) are now deemed to have good knowledge on agro-forestry, climate smart agriculture practices and on-farm tree diversification.
b) A further 269 local farmers were trained in detail on improved farming techniques along with practical knowledge about different topics of farming and climate change.
c) In addition, 524 school children (66% girls) from 7 secondary schools have been educated on climate change, its effects, and adaptation measures in line with improved agricultural practices, and model agro-forestry gardens have been established at 5 secondary schools.
d) 17 of the most focused farmers in the area are in the process of organic certification for their farms and crops.
e) A very good start has been made on the adoption of agro-forestry and organic agriculture; out of a trained 929 local farmers, 790 are applying their acquired technical knowledge, and 323 are cultivating tree crops on their farms.
f) Through a close working relationship with local radio stations and journalists, the local communities in MDM are well aware of mindful climate smart agriculture practices. 168 radio episodes have been broadcast in cooperation with 3 local radios to raise awareness on climate change risks and mitigation measures, among many other topics.

MD-AFRC staff conduct interview with farmer for local radio show

We consider that this project, implemented over a 3-year duration on a limited budget, achieved a great deal, and is becoming a model project – this, despite the COVID-19 pandemic which hampered operations in 2020 and 2021. The project advanced the local farming communities with innovative farming technologies, provided a sustainable solution for income generation to support their livelihood, and strengthened the local resilience to climate challenges ahead.

EcoHimal was able to add more than NPR 3 million as additional funding to the project. Due to the close collaborative relationship, the local government also provided considerable funds, including recently, an additional NPR 0.4 million for construction of a cowshed at the Centre. This further encourages and motivates the Centre's Management Committee, who have established a revolving fund in 2021 for providing assistance to entrepreneurial farmers and farmer groups. Overall, from three years of implementation, the best project learning from the project is the adoption of the AFRC-agroforestry-tree cropping concepts by the local government and their inclusion in their policy and plans.

The support of The Marr-Munning Trust has been hugely appreciated, and despite the COVID-19 pandemic and its impact worldwide, thoroughly worthwhile. The project model has been replicated by EcoHimal in other areas of Nepal, and now even in Kyrgyzstan. In total, 8 AFRCs have been or are being developed in 4 districts of Nepal on the basis of their success in Solukhumbu and now Kavrepalanchowk. The model is highly appropriate for combatting climate change, building resilience and enhancing livelihoods and income.

The Glacier Trust has secured a 3-year grant from the Margaret Hayman Charitable Trust to enable continuation of the MD-AFRC project in partnership with EcoHimal. We are currently seeking further funding support for this project to add more depth and breadth to the work.

For more information on this project or the wider work of EcoHimal and The Glacier Trust, please contact us via our website: http://theglaciertrust.org/contact-us