

Evaluation Report

Name of the project

Homestead Agroforestry through Improved Management Practices

Implementing entity

Community Development Centre (CODEC)



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1. Executive Summary

Overexploitation of forest resources and erroneous cultivation techniques in the hills cause a huge loss of plant diversity in Sitakunda-Mirsarai area. Populations of native tree species are on the decline both from reserved forests and homesteads. Because of their increased dependence on forests and forest products for livelihood, people living in forest fringes mostly keep their homesteads neglected in that much of its productivity potential remain either unexploited or underexploited. The yield and output of homesteads of Bangladesh is very low in comparison to their potential due to the practice of traditional management. Arannayak Foundation in Bangladesh extended their cooperation for the improvement of homestead agroforestry to achieve maximum benefits. Taking this opportunity, Community Development Centre (CODEC), an NGO working throughout the country, has been implementing activities of the project titled **“Homestead Agroforestry through Improved Management Practices”** funded by Arannayk Foundation since May 2007. An evaluation of the project activities was done on 3 January 2012 to assess the project performance against the set objectives by visiting the project field office and attending to presentation delivered by project staff on project performance, and by directly meeting project participant organizations and members in project field sites to gather their responses and views regarding achievements of project objectives. The objectives of the project were: (1) Conservation of homestead biodiversity; (2) Regeneration of endangered species in and around homestead; (3) Mass awareness development for homestead biodiversity conservation; and (4) Poverty reduction through alternative income generation activities.

12 Community Based Organizations (CBOs) have been formed at Patiya and Chandanish Upazila consisting of 305 members (108 male and 197 female members). Monthly awareness/discussion meetings of the CBOs were facilitated by the Upazila Project Organizers and Project In-Charge through which CBO members learned about the importance of biodiversity conservation in forests, regeneration of endangered species, plantation establishment in and around homesteads. A baseline survey involving assessment of biodiversity and socioeconomic profiles of selected households was conducted at the homesteads of the local communities and reserved forests of Lalutia Beat, Chandanaish and Srema Beat, Patiya. Regeneration status of forest is very poor. Most of the valuable timber species such as garjan, chapalish, barta, pitraj, bandarhola, goda, gutguitiya, civit, sonalu, chatian, batna, chickrassi are on the verge of extinction. The local poor people collect timber, fuel-wood, bamboos and sungrass from forests. A total of 50,361 seedlings of 80 different (wood, fruit and medicinal plant species) plant species have been distributed to the CBO members since 2007 for planting in homesteads and other lands. Most of the seedlings planted were indigenous species (bandarhola, batna, barta, chapalish, chickrassi, civit, dharmara, gab, garjan, gutgutiya, hargoja, horitaki, kainjal bhadi, pitraj, sonalu, telsur, tentul, uriam etc.), and the seedlings survival rate is 40%. Efforts on mass awareness development for homestead biodiversity conservation were employed through motivational meetings of the CBO members with Upazila Project Organizer and Project In-Charge, debate/essay competition about the importance of biodiversity conservation among school students, arranging exposure visits of school students to the nearest forests, and exchange visits of CBO members. Seasonal vegetables (begun, gajar, misti kumra, morich, tomato, lalsak, palongsak, puinsak) were cultivated in homesteads and agricultural land (own/leased) as Income Generating Activities (IGAs) by the group members using loans from Revolving Loan Fund

(RLF). Although no capacity building trainings on organizational development were provided, the CBO members have the knowledge about how to deposit their monthly fees regularly; maintain cash books and ledger books, bank pass books etc. However, meeting resolution writing skill was very poor. Awareness about the importance of native trees was remarkable, as successful plantations of endangered tree species such as civit, garjan, arjun, telsur, bohera, horitoki, nim etc. in roadsides and lands situated in forest margins were established successfully by the group members. However, performance of native tree species in homesteads was very poor. According to CODEC report, more than 150 forest dependent people now (end 2011) have stopped visiting forests because of their engagement with different IGAs. More than 150 forest dependent men and women are now direct beneficiaries of RLF through IGAs (vegetable cultivation, small businesses- grocery shop, vegetable selling, work of hawker, pond fish culture, rickshaw van etc. However, institutional development was hampered by factors such as poor project-staff turn-out in field sites, lack of coordination between project office and field staffs, and absence of capacity building training for the CBO members.

It appears that some of the project initiated IGAs such as vegetable cultivation (using RLF) may sustain beyond project phase-out phase provided that adequate input supports (seeds, fertilizers) are available from government agencies and NGOs. Forest and biodiversity conservation objectives could be fulfilled in the long run only if cooperation at multi-stakeholder levels involving FD and village leaders and elites continues even in absence of the current Arannayk funded CODEC project interventions. Capacity building of the groups on organizational development and management is essential for enabling the groups to make effective plan for plantation development in homesteads and around homesteads for biodiversity conservation, income generation and effective management of community fund (RLF and monthly savings). Many argued that there are still quite a number of eligible forest-dependent people who need to be brought under project group formation process so as to ensure better achievement of forest conservation objective. Although the project has some failures, the importance of forest conservation in the degraded hills of Patiya-Chandanaish-Dohazari area cannot be overlooked. Therefore, the project needs to continue its current activities by putting more efforts on enhanced staff mobilization/coordination and organizational development of the CBOs. Project intervention sites may be changed for a better supervision of works and to achieve more visible outcomes.

2. Introduction

2.1 Background information

Overexploitation of forest resources and erroneous cultivation techniques in the hills cause a huge loss of plant diversity in Sitakunda-Mirsarai area. Populations of native tree species are on the decline both from reserved forests and homesteads. Because of their increased dependence on forests and forest products for livelihood, people living in forest fringes mostly keep their homesteads neglected in that much of its productivity potential remain either unexploited or underexploited. Homestead is an ideal place for implementing many income generating activities. The ecological merits of homestead agro-forestry are related to

conservation of soil, nutrients and biodiversity. The yield and output of homesteads of Bangladesh is very low in comparison to their potential due to the practice of traditional management. Arannayak Foundation in Bangladesh extended their cooperation for the improvement of homestead agro-forestry to achieve maximum benefits. Taking this opportunity, Community Development Centre (CODEC), an NGO working throughout the country, has been implementing activities of the project titled “**Homestead Agroforestry through Improved Management Practices**” funded by Arannayk Foundation since May 2007.

2.2 Evaluation methodology

An evaluation of the project activities was done to assess the project performance against the set objectives. For this purpose, project field office was visited on 3 January 2012. At the beginning of the field visit, a snapshot view on the project activities and achievements was given at CODEC, Patiya office, by the Project In-Charge, Mohammad Mamun-Ur-Rashid through a powerpoint presentation in presence of the evaluator, Project Consultant, Mohammad Zashimuddin and other project staff, and leaders of the local project participant organizations (Community Based Organizations). A discussion session followed the presentation in which various issues regarding project objectives and their corresponding outcomes were addressed by the stakeholders. Afterwards, 2 field sites of the project working area such as Uttar Kharana Ghosh Para and Lalutia were visited so that the evaluator could directly talk to the general project participants and observe the project activities in the field. This, besides helping direct observation of the project field activities, also helped to compare among the statements provided by the project management staff, key stakeholders, community leaders and general participants with regard to some project activities such as organizational/institutional capacity building, efficiency in income generation activities (IGA), awareness about forest conservation etc. that cannot be fully judged in a single visit.

3. Context and Objectives of the Project

The people of Patiya and Chandanaish of south Chittagong who live near forests are mainly dependent on agro-forestry products they get from the homesteads, agricultural products from their own or rented land and forest resources they collect from the neighbouring forests. Excessive human pressure on forests has destroyed the reserved forest areas, and ultimately the forests lost most of its biodiversity including both plants and animals. It is of great concern that most of the valuable native tree species namely, Gorjon, Chapalish, Barta, Pitraj, Bandarhola, Goda, Gutguttya, Civit, Sonalu, Chatian, Batna, Chikrassi have almost become extinct from the neighbouring forests and as a result some of the important wildlife species such as deer, rhinoceros and nil gai have become extinct. As most other resources such as timber and non-timber forests products (NTFPs) have mostly declined, the people living in the forest margins can collect fuelwood, sungrass, and other resources for sale or own consumption. They also cultivate forest land to grow agricultural crops. Therefore, through this project, CODEC attempted to reduce forest dependency of the people, create among them awareness regarding biodiversity conservation, regeneration and conservation of endangered and local species in the homesteads, and creation of alternative livelihood options through income generating activities (IGAs).

The objectives of the project were:

1. Conservation of homestead biodiversity.
2. Regeneration of endangered species in and around homestead.
3. Mass awareness development for homestead biodiversity conservation.
4. Poverty reduction through alternative income generation activities.

4. Project Activities and Outcomes

The project activities and their outcomes against each objective have been described below:

Objective 1: Conservation of homestead biodiversity.

Activity 1.1: A baseline survey involving assessment of biodiversity and socioeconomic profiles of selected households was conducted at the homesteads of the CBO members, and community and reserved forests of Lalutia Beat, Chandanaish and Srema Beat, Patiya

Outcome 1.1: Status of biodiversity and regeneration of native trees, information on lost tree species and causes of threats to forest areas were obtained. The local poor people collect timber, fuel-wood, bamboos and sungrass from forests. Regeneration status of forest is very poor. Most of the valuable timber species such as garjan, chapalish, barta, pitraj, bandarhola, goda, gutguittya, civit, sonalu, chatian, batna, chickrassi are on the verge of extinction. Some of the extinct wildlife species are deer, rhinoceros and nil gai.

Activity 1.2: Formation of CBOs/ Groups/ samity at Patiya and Chandanish.

Outcome 1.2: 12 CBOs have been formed at Patiya and Chandanish Upazila consisting of 305 members (108 male and 197 female members).

Activity 1.3: Monthly awareness/discussion meetings of the CBOs were facilitated by the Upazila Project Organizers and Project In-Charge.

Outcome 1.3: In the meetings discussions about the importance of biodiversity conservation, regeneration of endangered species, plantation establishment in and around homesteads, planting sites specific species, utilization of micro-sites by planting shade bearing economic plants/ species/ vegetables, post planting maintenance of seedlings, management of planted seedlings and older trees in the homesteads, eco- and homestead- friendly income generation activities, effects of environmental pollution and climate change were done.

Activity 1.4: Tree seedlings were planted in and around the homesteads of CBO members, in their lands at the nearest hills and in roadsides.

Outcome 1.4: A total of 50,361 seedlings of 80 different (wood, fruit and medicinal plant species) species have been distributed to the CBO members since 2007. Most of the seedlings planted were indigenous species, and very few were endangered species because of their non-availability in the local nurseries. Some species did not survive in the homesteads due to their narrow site range, shading effect of older trees, drought etc. The overall survival rate of the seedlings was around 40% and height growth ranges from 2.5 to 5.5 meter. Two school premises were planted with different tree species. The survival of seedlings was not satisfactory due to lack of post planting maintenance.

Objective 2: Regeneration of endangered species in and around homesteads.

Activity 2.1: Planting endangered species in the homesteads and hilly land.

Outcome 2.1: Group members planted three types of seedlings (woody, fruit and medicine). Endangered tree species planted were: Agar, bandarhola, batna, barta, chapalish, chickrassi, civit, dharmara, gab, garjan, gutgutiya, hargoja, horitaki, kainjal bhadi, pitraj, sonalu, telsur, tentul, uriam etc.

Activity 2.2: Maintaining naturally regenerated seedlings of plant species.

Outcome 2.2: Naturally regenerated seedlings of plant species such as puti jam, kadam, raintree, bet, bashak, tulshi in the homesteads have been maintained as far as possible.

Objective 3: Mass awareness development for homestead biodiversity conservation.

Activity 3.1: Motivation of forest user (male and female) groups for biodiversity conservation.

Outcome 3.1: Meeting with the CBO members by Upazila Project Organizer and Project In-Charge for awareness development about the importance and different approaches of biodiversity conservation in homesteads and all other land types.

Activity 3.2: Debate/essay competition about the importance of biodiversity conservation among school students.

Outcome 3.2: Debate on homestead gardening and vegetable cultivation was held between the students of Chanhora Shoroshibala High School and Chaurdanga Sardacharan High school for awareness development about biodiversity conservation.

Activity 3.3: Arranging exposure visits of school students to the nearest forests.

Outcome 3.3: In order to create awareness on biodiversity conservation among the new generation and to diffuse it to their family members, exposure visits of

the students of Kashem Mahbub High School and Fatema Jinnah Girl's High School to the nearest forests were organized. Students and teachers alike participated in the program. During the visits students were given orientation on various kinds of trees, herbs and shrubs, and their uses. At the end of the visit, students composed the experience of their learning visit in a given format where they wrote the names of tree species, their availability and importance. They also wrote about homestead agroforestry which they wish to establish in their homes.

Activity 3.4: Observance of Global Environment Day 2011.

Outcome 3.4: Global Environment Day 2011 was observed on 09 June 2011 at Patiya Shahid Minar square. Mr. Mohammad Abul Hussain, UNO, Patiya, Dr. Timir Baran Chowdhury, Upazila Vice Chairman, Patiya, other Upazila officials, journalists, school and college students, project beneficiaries, local elites, and grass root people took part in the celebration of Global Environment Day 2011. After a rally, drama, folk songs and cultural performance were staged as part of observance of the day.

Activity 3.5: Exchange visits of CBO members to demonstrate successful IGAs.

Outcome 3.5: 19 members of 06 CBOs of Chandanaish visited different activities of CBOs of Patiya upazila. During the visit they exchanged their experiences regarding AIGAs and CODEC-AF HAIMP project interventions, their experiences, thought and ideas about homestead agroforestry improvement and management, organizing of meetings, monthly fee deposition to the RLF and the bank, use of RLF to support the CBO members for AIGAs and their documentation processes, profitability of IGAs etc. Similarly, members of five CBOs of Patiya Upazila visited CBOs of Chandanaish Upazila.

Activity 3.6: Introduction of improved Stove (Chula).

Outcome 3.6: Training has been given to the group members about preparation, use and maintenance of improved stove. Some female members have gained skills in making improved stove and they help their neighbours and relatives for installing improved stoves. The improved stoves consume less fuelwood and are suitable for using leaves and twigs as fuel material, and also friendly to women health as they create less smoke and dust. Some female members have been earning money between Tk. 200.00 to 1000.00 per stove by installing improved stoves.

Objective 4: Poverty reduction through alternative income generation activities.

Activity 4.1: Vegetable cultivation.

Outcome 4.1: Seasonal vegetables were cultivated in homesteads and agricultural land (own/leased) as IGA by the group members. The seeds supplied from the project were begun, gajar, misti kumra, morich, tomato, lalsak, palongsak, puinsak etc.

Activity 4.2: Creation of Revolving Loan Fund (RLF).

Outcome 4.2: Every group has created a RLF from their monthly savings and one time donation (Tk. 20, 000.00) from the project. At the beginning of the formation of samity (CBO), every member used to deposit Tk. 10.00 per month. Now the deposits vary from CBO to CBO which ranges between Tk. 30.00 to 200.00. The loan amounts are returned to the samity by 44 installments in 11 months at the rate of 10% to 12% interest.

Activity 4.3: Alternative Income Generation Activities (AIGAs).

Outcome 4.3: The group members take loans from the RLF to support their alternative IGAs, such as, vegetable cultivation (in the homesteads and/or leased land), rice cultivation (in leased land), small scale businesses such as retail selling (door to door or in local markets) of vegetables, banana, betel-leaf, fruits, grocery shops, rearing of poultry and livestock, pond fish culture, rickshaw van services, tree plantation, tailoring etc.

Activity 4.4: Organizational development of the CBOs.

Outcome 4.4: Although CBOs organized monthly meetings and resolution writing was in practice in those meetings, however, fixing of meeting agenda was not always related to project objectives and development of efficiency in writing skills was poor. Samity members deposited their monthly fees regularly, maintained cash books and ledger books, bank pass books, loan registers etc.

5. Impacts: Awareness and Capacity Development, Livelihood, Institutional Development and Forests and Biodiversity Conservation

Major impacts of the project on participants and their surrounding area are discussed below:

- 1. Capacity development of the established CBOs-** Although no capacity building trainings were provided, the CBO members have the knowledge about how to deposit their monthly fees regularly; maintain cash books and ledger books, bank pass books etc. Most of the CBOs/samity produced their monthly and final reports. However, in a few cases there were lacking in matters of organizational development such as office management, arranging of meetings and resolution writing, disbursement of loans from RLF etc.
- 2. Awareness about forest and biodiversity conservation-** The CBOs developed their awareness about forest conservation in their discussion meetings with project staff.

Plantation of endangered species were established in the school premises and students engaged in nursing and tending of planted seedlings that helped them acquire knowledge about tree diversity, different uses of the species and created awareness about biodiversity conservation. Listing of tree species and their uses by school students during field visit to nearest forest has created awareness about biodiversity conservation to the students and awareness diffused to their family members. School teachers, government officers and grassroots people also developed awareness about forest and biodiversity conservation through participation in project programmes. Plantations of endangered tree species such as civit, garjan, arjun, telsur, bohera, horitoki, nim etc. in roadsides and chunky lands situated in forest margins were done successfully. One Mr. Mamtaj raised a successful plantation (7, 500 seedlings survived out of 8, 000) in Lalutia in his own land, the tree species were teak, gamar, chickrassi, koroï, garjan, rain tree, acacia hybrid, civit, bohera, horitoki, amloki, uriam, aam, kanthal, jambura, peara and komola (orange).

- 3. Reduction in forest dependency-** According to CODEC report, more than 150 forest dependent people now (end 2011) have stopped visiting forests because of their engagement with different IGAs; previously each of them used to gather 60 kg wood per week from the nearby forests. For that they used to cut three medium sized trees per person per week (i.e. 12 trees/person/month and 144 trees/person/year). Thus, a total of 21,600 trees (150 x 144) per year might have been saved which is a good sign in forest conservation. Moreover, more than 200 households of Patiya and Chandanaish are using improved stoves now. In a previous report and discussion with the users it was revealed that a 4-6 member household (poor family) needs 4-5 kg of fuelwood per day for cooking with traditional stove. The requirement of wood per household is around 3.60 mound/month or 36.72 mound/year. The improved stove saves about one third amount of consumption of fuelwood compared to that with traditional stove which also indicates a reduction in forest dependency for fuelwood collection.
- 4. Establishment of RLF and its utilization for IGAs-** RLF established from project contributions and members' group saving fund not only helped the needy members to start IGAs, but also strengthened group dynamics and acted as a catalyst of institutional sustainability of the group/organization. More than 150 forest dependent man and women are now direct beneficiaries of RLF through IGAs.
- 5. Improvement in livelihood-** The IGAs such as vegetable cultivation, small business (grocery shop, vegetable selling, work of hawker), pond fish culture, rickshaw van etc. already provided benefits to the participants and therefore improved their livelihood.
- 6. Institutional Development-** The project impact on positive institutional development was hampered by factors such as poor project-staff turn-out in field sites, lack of coordination between project office and field staffs, and absence of capacity building training for the CBO members.

6. Sustainability Potentials

It appears that some of the project initiated activities such as vegetable cultivation, tree planting may sustain beyond project phase-out phase provided that adequate input supports (seeds, seedlings, fertilizers) are available from government agencies and NGOs. Maintenance of revolving savings fund and their usefulness in community livelihood support activities will depend on the prudence of the leadership who will manage such funds and on the levels of cooperation to be extended from the group members. Forest and biodiversity conservation objectives could be fulfilled in the long run only if cooperation at multi-stakeholder levels involving FD and village leaders and elites continues even in absence of the current Arannayk funded CODEC project interventions.

7. Weakness/Areas that Need to be Strengthened

Various sites of the project working area are spread across, far away from one another, in a scattered manner which posed difficulty to implement, supervise and monitor the project activities. Coupled with that, lack of manpower posed a big problem in implementation of the project activities- project field coordinator posts fell vacant even after 2 successive appointments were made in the post but staffs recruited left the job. CBOs were not given any training for capacity development on organization and financial management. One CBO in Lalutia (Dohazari) was found to be reluctant in organizing group meetings, also no loans from the RLF were provided to the poor members for supporting IGAs. The landless extreme poor project participants had smaller homesteads with limited space to plant different types of tree seedlings. The limited space is due to keeping excess stock of undesired saplings and it was very difficult to convince them for thinning the stunted, crooked, forked and diseased saplings. The seedlings of endangered tree species were very rare in the local nurseries, and so it was very difficult to provide the seedlings of endangered species to the project participants. Seedlings from nurseries to respective homesteads were very difficult to transport in good condition due to difficulty in accessibility, transportation shock, and mishandling.

8. Recommendations

Capacity building of the groups on organizational development and management is essential for enabling the groups to make effective plan for plantation development in homesteads and around homesteads for biodiversity conservation, income generation and effective management of community fund (RLF and monthly savings). CODEC project should support the groups in this regard. The seedlings supplied by the project are haphazardly planted in the homesteads due to lack of a suitable homestead plantation model. A suitable multistoried-homestead-plantation model designed considering tree architecture of Multi Purpose Tree Species is essential to achieve the objectives of the project. Quality planting materials/seedlings is a pre-requisite for successful plantation establishment. Many members would like to develop nurseries in their localities to be facilitated by the CBOs so as to ensure timely and safe (without transport shock) supply of

tree seedlings which will help higher survival rates of plantings done in homesteads. Some members opined that CODEC signboards need to be set up in project sites in villages to increase peoples' awareness about forest conservation.

While helping participants with AIG support, the project personnel should take into consideration each participant's requirement of money to sustain his/her daily livelihood needs as any shortfall in income may drive the person to earn additional income by extracting forest resources which means deterioration of forest resources, and that will act against the achievement of the project objective of forest and biodiversity conservation in the long run. Many argued that there are still quite a number of eligible forest-dependent people who need to be brought under project group formation process so as to ensure better achievement of forest conservation objective. Although the project has some failures, the importance of forest conservation in the degraded hills of Patya-Chandanaish-Dohazari area cannot be overlooked. Therefore, the project needs to continue its current activities by putting more efforts on enhanced staff mobilization/coordination and organizational development of the CBOs. Project intervention sites may be changed for a better supervision of works and to achieve more visible outcomes.