

Case Study of Taw Htwin Community Forestry, Myeik Township, Tanintharyi Region

1. Background

Myanmar has the seventh largest area of mangrove forests in the world. Mangrove forests in Myanmar primarily exist in three areas, Rakhine state, Ayeyarwaddy region and Tanintharyi region (ref.). Myanmar has the highest rate of mangrove deforestation between 2000 and 2012, particularly in Ayeyarwaddy region and Rakhine state.

Unlike these two mangrove areas, Tanintharyi's mangrove forests are relatively undisturbed until recently. However, recent economic development and political reforms put enormous pressures on the mangrove forests in Tanintharyi region due to increased accessibility, urban development, and tourism.



Figure 1 Field visit to Taw Htwin Gyi Community

community depends on shrimp farming for their livelihoods. Recent urban development and in Myeik township saw increased pressures on Mangrove forests surrounding the Htaw Htwin Gyi community. Recognizing the threats on the mangroves, Myeik Forest Department and Htaw Htwin Gyi community

established the Htaw Htwin Gyi Community Forestry in 2017. Prior to the establishment of the Community Forestry, mangroves were cleared for urban expansion and agriculture. Local communities informed that patches of mangrove forests were cleared by the outsiders to establish agricultural field and to claim the ownership of the land.

The main livelihood of the Htaw Htwin Gyi community is the traditional shrimp farming. Shrimp farming depends on healthy mangrove ecosystem for its productivity. However, in the past decade, the community has experienced the gradual decrease in shrimp catch. They believe that it is due to the degradation of the mangroves in the area. Although the community has traditionally conserved the area to sustain the production of shrimp, they lack the power to protect because the mangrove is located on a public land. The community cited the lack of ownership as the major challenge to the mangrove conservation.

In 2016, the Htaw Htwin Gyi community approached the local Forest Department to apply the conserved mangrove areas to be recognized as the Community Forestry under the Community Forestry Instruction (2016). The application process was also helped by the Flora and Fauna International and Myanmar Green Network. The Htaw Htwin Gyi community forest is now a 300 acres mangrove forest. Of the 300 acres, there are 200 acres of natural forests and the other 100 acres are gap areas where the replanting of 20 acres annually is planned. In 2018, the community has replanted 20 acres with *Avicennia* species. The purpose of the CF is as follows:

- a) To conserve natural mangrove ecosystems and rehabilitate degraded areas and thereby sustaining the shrimp farming
- b) To meet the basic needs for timber of the community
- c) To improve livelihoods of the community through community forestry



Figure 2 Taw Htwin Gyi Community Forestry

The purpose of this study is to assess the community based mangrove rehabilitation model. To this end, we applied the “Mangrove Rehabilitation Framework’ developed by the project. Therefore the following sections are divided in accordance with the mangrove rehabilitation framework.

2. Local site coordination

The Taw Htwin Gyi Community Forestry is a community initiated mangrove conservation and rehabilitation project. The establishment of Taw Htwin Gyi CF dated back to 2016 when the community realized the increasing pressures on the nearby mangroves from the land prospectors. After consultations with the local Forest Department officials, the community decided to establish the Community Forestry to protect the remaining natural mangroves and to rehabilitate the depleted areas.

Forest Department helped the community to get contact with a local NGO called Myanmar Green Network to provide the community with necessary technical and financial inputs. Myanmar Green Network (MGN) and Flora and Fauna International (FFI) facilitated the coordination meetings among the key stakeholders such as General Administration Department, Forest Department, Settlement and Land Record Department to get permissions for the CF.



Figure 3 Focused Group Discussion with members of Taw Htwin Gyi community

Community meetings were also held to elect the chairman and management committee members for the community forestry.

3. Comprehensive site assessment

The site assessment was conducted in 2017. Forest Department organized the site assessment team and it included CF management committee members, representatives from MGN and FFI. However, the site assessment team did not involve scientists such as marine biologists or zoologists. Instead, FFI and MGN organized trainings on data collection and documentation for the community members. The site assessment team has found out that out of the 300 acres of potential CF area, about 200 acres are covered with natural mangroves and about 100 acres need to be rehabilitated. The depleted area of 100 acres are scattered throughout the CF areas and thus were proposed to restock with gap planting. The local species found in the remaining surrounding natural mangroves were used for the gap planting. The seedlings are to be cultivated in the nursery within the CF.

It is suggested that, during the site assessment, both biophysical and socioeconomic assessment should be done. However, in this project, the

assessment of socio-economic status of the community was not conducted. The reason for this was because this is a community initiated project without external funding support. Being a self initiated CF, the sense of ownership among the community members is high and all the CF members are well aware of the ownership of the CF and potential benefits they could gain from CF.



Figure 4 Meeting with community members of Taw Htwin Gyi community

The team assessed the extent of the existing mangroves through rapid appraisal. The community members also prepared a participatory resource map to identify potential areas for restoration and conservation. Based on the field site assessment and participatory resource mapping, the CF areas were divided into different zones such as gap planting areas and natural mangrove areas. Areas for annual gap planting were also identified.

Although the site assessment team did not include any marine biologists or zoologists, the site assessment team included the CF members with high local knowledge on mangroves and foresters from Forest Department. Therefore, the selection of species and planting methods were mainly based on the local knowledge and by looking at the nearby natural mangroves.

4. Participatory mangrove rehabilitation planning

MGN and FFI facilitated the participatory development of the management plan for the Taw Htwin Gyi Community Forestry. The management plan was developed by the management committee of the CF in consultation with the members of the CFUG. The management plan details the activities for the next five years including the rehabilitation plan for gap areas and cultural operations for the remaining natural mangroves. The management plan will be renewed at every five-year interval.

Community meetings were held during the development of the management plan. Forest Department officials were invited to those meetings and MGN took the facilitator role for the meetings. During the community meetings, the CF areas were divided into conservation zones, village use zones and rehabilitation zones.



Figure 5 Gap planting of *Avicennia species* in the CF

Selection of species for mangrove rehabilitation were based on the local knowledge of the community members and the professional knowledge of the foresters of Forest Department. Notably, species were selected based on the nearby natural growth of mangroves, elevation, tidal behaviour and tide level of the rehabilitation site. Trainings were organized during the planning stage of the CF. Forest Department provided two trainings on nursery management and seedling production. Upon the completion of the management plan, the community submitted the management plan to the Forest Department for approval.

5. Participatory Project Implementation

Apart from the technical support, trainings and facilitation by the FFI, MGN and Forest Department, the Taw Htwin Gyi CF did not receive any funding from the donors. However, Forest Department provided the community with the necessary seedlings for the gap planting. A gap planting of 10 acres with *Avecenia species* were planted in 2017 in the depleted areas within the CF. Another 20 acres were planted in 2018. The community plans to rehabilitate 20 acres every year until they reach a target of 100 acres. When we visited the rehabilitation sites in 2018, it was reported that about 85 % of the seedlings survive. The community also has the plan to refill the decayed seedlings. However, being an early stage of rehabilitation, it is yet to see the long term survival rate of the plants.



Figure 6 Shrimp farming of the community

Forest Department provided two technical trainings for nursery management practise. Forest Department also provided seedlings for the first year of gap planting in accordance with the Community Forestry Instructions. MGN and FFI also provided trainings on facilitation skills, forest management, and planting techniques for the mangroves.

The nursery is managed by the community themselves. Women are mainly responsible for the production and nurturing of seedlings.

5.1 Challenges of the Taw Htwin Gyi CF

The Taw Htwin Gyi CF was established because the community feared that the mangroves would disappear due to the land confiscation and land clearing of the local businessmen. Therefore, the community endeavoured to be legally recognized the surrounding mangroves as the community forests and to rehabilitate and conserve the delegated areas. Notwithstanding these efforts, land confiscations and land conflicts remain a major threat because of the increased demand for land in the region.

Tanintharyi region, particularly Myeik District, is a popular tourist destination in Myanmar. Myeik archipelago is a tourist hotspot nowadays. Myeik is the largest city and the archipelago and is a local hub. With the development of the tourism, Myeik city itself has expanded and water fronts are in high demand for hotel construction. As a result, the water front land which are covered with mangroves are in high demand for urbanization. At the interview with the chairman of CF, he reported that businessmen from Myeik cleared the mangroves near their village and practised some cultivation with the hope that they could claim the ownership of the land later. We also saw that the a proposed mangrove eco-park, which was formerly under the management of Myeik University, is being transformed into a new suburb of the Myeik city.

The community reported that another major challenge for the sustainability of the CF is the availability of fund for conservation and rehabilitation. Being a self-initiated CF without external funding, it is challenging for the community to raise funds required for the rehabilitation works. At the initial stage of the CF establishment, MGN and FFI covered the costs for organizing trainings, participatory resource mapping, participatory planning and zonation of the CF.

Other challenges for the CF include cattle grazing and encroachment of rice farm and aquaculture.

6. Participatory Monitoring and Evaluation

The Taw Htwin Gyi community has organized an internal audit team in accordance with the Community Forestry Instructions. The audit team not only audits the financial matters but also monitors and assesses the activities of the CF. However, they do not have a systematic framework for monitoring and evaluation of the CF.

On the other hand, as required by the Community Forestry Instructions, Forest Department monitors and evaluates the successes of activities of the CF every year. Forest Department also ensures that the community undertakes the activities outlined in the management plan and assesses whether the community is implementing the management plan properly. The evaluation team also includes members of management committee of the CF.

7. Lessons Learned

The Taw Htwin Gyi Community Forestry was certified as the CF in 2018. Therefore, it is still early to assess whether the CF is successful. However, Forest Department reported that the Taw Htwin Gyi CF is very encouraging and has the potential to be successful. The motivation of the community is relatively high because of the economic interests from shrimp farming. There are also potential for additional income generation from CF such as by growing sea grass within the CF. Forest Department and Taw Htwin Gyi Community Forest Users Group reflects upon the success factors for the CF as follow:

- High motivation of the community to conserve and rehabilitate mangroves
- Economic incentives from CF by sustaining shrimp farming
- Potential income from CF by income generating activities such as sea grass
- Selection of the species for restoration based on the nearby natural growth, elevation, tide level and local knowledge
- Active participation of the community members
- Technical trainings provided by FD, MGN and FFI
- Inclusive community meetings with all the members (including men and women) of the CF

In spite of the promising signs of the Taw Htwin Gyi CF, the community and FD confessed that there are still overarching challenges which will need to be addressed in order to ensure the sustainability of the CF:

- Lack of funding for rehabilitation and conservation activities
- Land confiscation and land conflicts
- Urbanization and clearing of the mangroves
- Cattle grazing and farmland encroachment
- Weak land tenure rights

The long-term sustainability of the CF depends on the availability of funding for the rehabilitation and conservation activities. Moreover, it also needs to ensure that the CF can generate income from activities such as shrimp farming and sea grass growing so that the livelihoods of the community is improved and their motivation remains high. Forest Department and local authorities must be able to guarantee the land ownership of the CF in accordance with the Community Forestry Instructions and should be able to provide legal support to protect the CF against intruders.

One possible way for the funding support for the CF is through the Myanmar Reforestation and Forest Restoration Program (MRRP). MRRP is the main reforestation and rehabilitation program implemented by the Forest Department. In an era when the Forest Department is promoting community forestry and community forestry enterprises, the CF has the opportunity to become the CF enterprise with the sustainable shrimp production and sea grass growing. Local forest department will need to work closely with the community to provide necessary technical supports and should link the CF to the other CFs within the district and the region.