

SUCCESS STORY ON WATER CONSERVATION THROUGH COMMUNITY INVOLVEMENT & PARTICIPATION, LIVELIHOOD ACTIVITY & IMPACT

INTRODUCTION:

Mawrah Village is located at a distance of about 40 km south of Shillong under Khatarshnong – Laitkroh C&RD Block, East Khasi Hills District. Geographically, the area is a plateau region with elevations reaching up to 1830 m above MSL. The climatic zone of the place falls under the ecotone region overlapped by temperate and subtropical climates.

The project area of the Small Multipurpose Reservoir Project is situated towards the South East of Mawrah (GPS Location 25.379153°, 91.779780°). It comprises of a micro catchment (27.00 Ha), out of which 7.70 Ha is submerged under the water body of the reservoir. Various interventions have been taken up including catchment area protection initiatives and infrastructure development etc.

PROBLEMS IN THE AREA:

Economic hardship is one of the major problems for the people in the area where livelihood opportunities are very minimal. The geography and climate of the place do not favour agro-based livelihood activities, thereby making people depending on other alternative sources such as stone quarrying, forest products and daily wage labour.

Slate mining and sand quarrying in several areas around the village renders irreparable destruction to the environment and the ecology. Regular collection of firewood for selling to local markets causes huge depletion of forest cover in the area leading to land degradation. The denuded land is highly vulnerable to soil erosion owing to long spell heavy monsoon over the place. These activities lead to the overall drying up of spring water, rivulets, streams and other water bodies.

PROBLEM ANALYSIS

During formulation of the project, it is thought that mere creation of awareness about nature and conservation of water bodies will not bring much impact to the local populace. However, new eco-friendly employment opportunities are to be generated in order to drive people from engaging themselves on conventional and destructive ways into a more viable and sustainable livelihoods.

It is assumed that the creation of a huge water reservoir will be as an asset creation which can generate several water based livelihood initiatives. The availability of water for irrigation will enhance a scope for agriculture and cultivation. Fishery and eco-tourism will provide employment opportunity to a great extent as well as boosting the revenue of the state.

PROJECT IMPLEMENTATION

The Shillong Territorial Division under Soil & Water Conservation Department, Govt. of Meghalaya, is currently implementing the project. It may be mentioned that there has been an active involvement of the village community throughout the implementation of the project. The Village Dorbar has actively participated since planning & formulation stage and in various situations such as in decision making and facilitation of works on the field.

Under the involvement of the project, various interventions have been carried out, viz.

- Construction of the Main Check Dam (Multipurpose Water Reservoir).
- Footbridge over Head Dam.
- Footpath around the periphery of the main Reservoir.
- Approach/Link Road from Village junction to Water Reservoir.
- Land Development for setting up of cottages.
- Drinking Water Reservoir.
- Staggered Contour Trenches/Recharge Pits.
- Afforestation on upper catchment for enhancing green cover and Micro-climate Amelioration.
- Capacity Building and Awareness Campaigns for Village communities.

OUTPUTS

- a. **Tangible:** All seasoned & sufficient supply of drinking water for Mawrah & Rangmah villages is ensured.
- b. Quantity of water harvested & stored at present:
 - i. Main Reservoir – 523600 m³ (523.6 million litres)
 - ii. Drinking Water Reservoir – 310 m³ (0.31 million litres)
- c. The water body is expected to boost the livelihood opportunities for the local populace in the coming years.
- d. **Intangible:**
 - The aesthetic beauty of a place is improved through the presence of the water body which can be the potential for tourist attraction and other recreational purposes.
 - The presence of the reservoir, recharge trenches, afforestation etc. is conducive for ground water recharge and sustenance of the underlying aquifers.
 - The water body is associated with other ecological importance, being a home of few native fish species and it also attracts migratory avian species (Baer's Pochard, swallows, etc.).

OUTCOMES

After two years of implementation, the project has thrown a new light to the local community in which various initiatives have been taken up at village level for the protection and conservation of the water body and its catchment. Few examples:

- a. As the catchment area falls under the community land, the Village Authority has stopped issuing permission and allotment of plots for new settlements as a part of protection of the catchment.
- b. In order to maintain the cleanliness and serenity of the water body, the Village Authority through mutual understanding has identified new plots of land for relocation of existing settlements which are in close proximity with the water body. Two households have been successfully relocated in 2023.
- c. Various activities such as stone quarry, sand and slate mining etc., which may cause damage/degradation the catchment area are stopped through community involvement.

IMPACTS

Sl. No.	Pre Project	Post Project
1	The land/catchment area is primarily degraded due to anthropogenic activities such as mining, deforestation, grazing, etc.	Land use pattern is greatly improved considering the ongoing catchment area protection activities such as afforestation, loose boulder check dams, etc.
2	About two-thirds of the total catchment area (27 Ha.) has been in the form of a mine spoilt area which lies degraded, marshy and unusable.	The area is converted into an attractive water body which has a huge potential for ecotourism and other recreational activities.
3	The degraded area has minimal contribution towards ecology and biodiversity conservation.	In the past few months, it is observed that the existing water body along with afforestation are becoming a home of native fish species and migratory birds.
4	There was no water conservation practices adopted earlier.	An approximated volume of 523600 m ³ of water is stored in the reservoir at present.
5	The whole catchment including the source feeding potable water to Mawrah & Rangtmah villages are threatened.	Several spring sources within the catchment area are treated and protected, thereby addressing the problem of water scarcity in the coming years.
6	No awareness and public sensitization regarding water conservation and its utilization in the area.	Several awareness programs were conducted from time to time in the village.
7	As local people could not utilize the mine spoilt & degraded area in any form, hence there was no socio-economic contribution to rural livelihoods.	The huge water body is expected to improve the socio-economic condition of the local communities (Mawrah & Rangtmah villages) through Eco-tourism, fisheries and other water related activities.

PHOTOS



a. Pre-project



b. Water Spread of the Reservoir.