PROJECT FACTSHEET

Plastic Pond Rainwater Harvesting Systems (PP-RWHS)

NACCFL is partnering with CECI, the Manakamana Small Farmers' Agriculture Cooperative Ltd. (SFACL), and Sital to implement a multi-use plastic pond rainwater harvesting system pilot project in Manakamana Rural Municipality, Gorkha District. Plastic pond RWH systems typically collect 30,000-60,000 litres of rainwater which is then used during dry season. The goal of this project is to demonstrate how can these simple and affordable PP-RWHS can contribute to strengthening the livelihoods and climate resilience of small farmers of Nepal.

NACCFL
Nepal Agricultural Cooperative Central Federation Ltd.

Context

Rural communities living in the hilly and mountainous regions of Nepal face, on the one hand, water shortages during the dry season and, on the other, suffer from erosion and landslides caused by excessive runoff during the monsoon. The majority of these small farmers also lack year-round irrigation systems which prevents them from being able to engage in commercial agriculture and makes them vulnerable to erratic precipitation patterns.

Small farmers can use plastic pond storage systems to collect runoff and rainwater during the wet season, which they can then store and use later during the dry months (e.g. for irrigation, livestock, domestic non-drinking purposes and aquaculture). The plastic ponds are directly dug out from the ground and require little construction materials a part from the plastics sheets to cover the bottom and sides of the pound and hosepipes connecting the rooftop gutters to the pond. The costs for a multi-use PP-RWHS with storage capacity between 30,000 to 60,000 litres ranges between $300 to $600 USD, the most expensive being the labour costs.

Objectives

Multi-use PP-RWHS are becoming increasingly popular in some of parts of rural Nepal. Yet, this simple and affordable technology could be further spread if it was not of the restricted information and financial resources available. The objective of this pilot project is to demonstrate to small farmers of Manakamana, and ultimately to the other hilly and mountainous agricultural communities as well, the potential of this PP-RWHS technology. The three main objectives of this project are:

- To provide financial and technical guidance for building two multi-use plastic pond rainwater harvesting systems in Manakamana.
- To evaluate the cost and benefits of these systems from the technical, socio-economic, gender, and environmental perspectives.
- To facilitate knowledge sharing about and access to multi-use plastic pond rainwater harvesting systems for small farmers across Nepal.

Expected Outputs

The 1-year study pilot project will have three specific outcomes:

- A detailed study presenting the multiple benefits derived from installing two systems in the SFACL of Manakamana.
- Training and information sharing sessions offered to 1,300 small farmers on how to finance, install, operate and maintain PP-RWHS.
- Policy recommendations to various levels of government, NGOs, businesses and to other relevant stakeholders on how to improve access to multi-use PP-RWHS for small farmers of Nepal.

Duration:
April 2018 to April 2019

Partners:
- Manakamana SFACL, Nepal
- CECI, Canada
- Sital Drip Irrigation Technology Industry, Nepal

Further information:
http://www.naccfl.org.np/

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