

Masons Training Programme on Constructing Rainwater Harvesting Tank in Giranthuru Kotte

Introduction

Giranthuru Kotte comes under Mahaweli Development Project and most of the families settled nearly two decades ago in the area. Under the Mahaweli Development Project most of the families obtained two acres of low land and half acre of high land. Paddy farming is the major economic activities of the rural peasants and it greatly depends on irrigation water from the large reservoirs. Animal husbandry and highland crop cultivation are some subsidiary source of income avenues in the area.

Ranhinda Reservoir



Distribution canals, without water



Protected wells are the common source of drinking water in Giranthuru Kotte area. However, most of the sources remain even without a single drop water in dry seasons. Therefore, the people live in the area face serious strains in fetching drinking water. They walk long distance to collect drinking water and as usual women are the first victims.

In order to address the drinking water problem Mahaweli Consolidation Project (MCP) took a bold step to introduce domestic rainwater harvesting technology in the area. They contacted Lanka Rainwater Harvesting Forum (LRWHF) to conduct awareness programmes to MCP staff members and consequently to a selected group of farmers from Giranthuru Kotte and Bakamuna. After the awareness programmes Ms Kumarage, the Gender Coordinator of MCP requested the forum to conduct a training programme on constructing rainwater harvesting tanks in Giranthuru Kotte. A training programme was conducted from October 21-25th for a group of people from Giranthuru Kotte selected by MCP. A beneficiary household from Pahala Ranhinda village was selected by MCP to constructing a demonstration rainwater harvesting system to promote the technology in the area.

Outcomes of the Training Programme

In the first day introductory session there were 12 trainees of whom only two had previous experience in masonry work and the rest are expert farmers. The purpose of constructing a rainwater-harvesting tank was explained by a MCP staff member and the benefits and importance of having a rainwater harvesting system was well explained by Mr Deva Hapugoda, technical adviser of LRWHF.

An Introductory session of the Mason's Training Programme



After the introductory session, the practical session was started and Mr Wimalasena, the master mason from Pilimathlawa took the leading role. A suitable site was selected after several discussions with the family members and the trainees prepared the site suitable for constructing the tank. After that a base was down by the trainees with close supervision of the master mason.

However, from second day onwards only two trainees were able to participate in the full training programme. Though, one of them is a farmer by profession he never hesitated to catch up the technical matters in constructing the pumpkin shape rainwater-harvesting tank.



Mr Wimalasena taught the trainees of each finer points and assisted in all possible ways to construct the tank. At the end of the training programme the two trainees expressed confidence in constructing rainwater-harvesting tanks in the area. The beneficiary household Mr Wijesinghe who is also a part time mason participated in the training programme on and off.

Different stages of construction



The family contribution in constructing the rainwater-harvesting tank was far excellent and each family member actively engaged in different unskilled tasks. The neighbours also helped in possible ways and this kind of unity is an asset in the rural area.

The importance of proper operation and maintenance of the system is well explained to the family members and they agreed to take additional care to maintenance of the system by keeping the roof area, gutters and filters clean.

Before and after guttering



Modification was made to the design of the lid in this location. The filter, which is usually attached to the tank, was placed on the lid, by using a large diameter plastic basin. This will avoid the clogging of water during heavy rainy days and the weight of the lid also greatly reduced.



Beneficiaries expressed the intention to build another storage tank close by the rainwater-harvesting tank to store the overflow water. Also, the field assistant of MCP is planning to introduce a more efficient irrigation system to reduce the water wastage.



Two decades ago we settled here under Mahaweli Development Programme and more than 30 families live in this area. Number of wells were constructed through Community Water Supply & Sanitation Project (CWSSP) and they were good source of water at the beginning. However, with time the wells started to dry off during dry season and we have to battle for drinking water. Earlier the wells were able to supply water even at 10 feet depth and now we have gone up to 30 feet depth, still we can't find water in the wells. When water flows through the canals, there may be few inches of water in wells, which are close to the canals. But when the authority disconnects water from reservoir we are in trouble. We have to rely on a single source of water. I have seen this type of rain water tanks in other places, however it is new to this area.

I am sure rainwater harvesting would be feasible solution to our long lasting water problem. Our colleague Mr Wijesinghe is committed farmer and he took a bold step to be the first rainwater harvesting beneficiary in the area. The training programme may be very useful to us and we can use our trained masons to construct our own systems in the future. On behalf of the villagers and the beneficiary family I must thank MCP and the Lanka Rainwater Harvesting Forum for introducing the technology.

Village leader

The village leader, family members, trained masons and the neighbours are very happy about the newly introduced rainwater harvesting technology. Even, some of them wanted to make their own system in the future. Though the MCP staffs visited on and off to the training site, it would have yielded better outcomes at least one of them committed their time to the entire training programme.

People may think that we do not have water problem since we live in Mahaweli settlement area. But the reality is not that, we have very serious drinking water problem. In extreme dry season, most of the wells remain without even a single drop of water and it continues two to three months. Currently more than 30 families depend on a single well. People come to the well from 3 a.m onward and it is ½ km away from our home. We need 25-30 pots of water per day and we spend 3-4 hours in fetching water. In dry season it becomes a real battle to our family members and even our school going children tax their time. For washing purposes we get water from the reservoir, which is 3 km away from us and we transport it by using our two wheel tractor.

The only source of drink water in Dry Season



We are very fortunate to get a rainwater harvesting system through Mahaweli Consolidation Project (MCP). We spent nearly Rs 10,000 for the system but it is worth. Due to water scarcity we do not cultivate our home gardens during the dry season and buy vegetables from out side. But next dry season we will be able to use the preserved rainwater for domestic uses and home gardening.



Our sincere thanks to MCP and Lanka Rainwater Harvesting Forum and we take all necessary steps to safeguard and proper maintenance of the system.

Mr & Mrs Wijesinghe
Rainwater Beneficiary, Giranthuru Kotte

Conclusions

- ⊕ Of the selected twelve trainees only two were able to participate in the five days training programme.
- ⊕ A five cubic meter ferrocement rainwater harvesting tank was constructed in the training programme.

- ⊕ The system consists of proper gutters, down pipes, first flush system, filters, outlet, overflow and washout.
- ⊕ Necessary technical advice was given to the family members and the trainees of proper maintenance of the system.
- ⊕ The family member's contribution is highly appreciable.
- ⊕ None of the MCP staff members participated in the full training programme and this may be cause problem when replicating and providing required information to other interested parties.

Recommendations

- ⊕ Regular monitoring for performance, O&M and usage of the rainwater harvesting system from MCP is necessary.
- ⊕ A water quality testing during rains and during storage is recommended.
- ⊕ Monitor the construction of the trained mason when replicating.