

# **A STUDY ON RAINWATER HARVESTING IN KERALA**

**MINOR RESEARCH PROJECT**

**MRP(H)-0269/12-13/KLCA007/UGC-SWRO**



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**JULY 2015**

## **SUMMARY REPORT OF THE FINDINGS**

**A Study on rain water harvesting in Kerala is conducted to analyze the following objectives.**

1. To analyze economic affordability of rain water harvesting among households in the study area
2. To Study the household expenditure for water before and after rain water harvesting
3. To examine the sufficiency of water availability through rain water harvesting to roof top area

**The major findings emerged from the study were as follows :**

### **SOCIO ECONOMIC BACKGROUND OF SAMPLE HOUSEHOLDS**

- 64 percent of the beneficiaries belong to Hindu families and 36 percent belong to Christian families.
- Community wise classification of sample households shows that 64 percent belong to general category, 28 percent belong to OBC and the rest 8 percent belong to Scheduled castes.
- 30 households have APL status and 20 households have BPL status
- monthly income of sample households reveals that out of 50 households, 16 have monthly income of less than 5000 and 22 families who have income between 11000 and 15000 . There are 5, 6 and 1 households who have income ranging from 5000-10000, 15000 – 20000 and 20000-25000 respectively. There is one family who have income above 25000 .
- 86% of the families are headed by male members and 14 % are headed by female members.

- Out of 50 samples 16% of the heads of the family is above the age of 60, 38% is in the age group of 50-60 and 46 % within the age group of 40-50.
- 41 families are nuclear and 9 families are joint families
- 70 percent households having the family size of 1-4 members and 28 percent households having 5-10 members. Only 2 percent having the members above 10.
- The education level family members of sample households describes that 10.8 % got only primary education. 24.05% has got only SSLC qualification, 23.11% has got higher secondary education, 25% got degree and above qualification and only 3.3 % has got professional degree.
- 64% own between 5- 10 cents of land, 26 % own between 10-20 cents of land and only 2% own above 20 cents of land
- The study reveals that 44 percent of houses have an area between 1000-1500 square feet. 34 percent of houses have an area below 1000 square feet and only 8 percent of the houses having greater than 2000 square feet.

#### **SOURCE OF WATER AND WATER SCARCITY AMONG SAMPLE HOUSEHOLDS**

- 88 percent households revealed the problem of water scarcity and the remaining 6 households that is 12 percent were not facing any water scarcity
- Majority of the households depend on more than one water source for meeting their day to day water requirements. More specifically , 16 (32 % ) families are using their own well,12 ( 24%) families using both public tap and neighbour's well, 7 ( 14 %) families using Public Tap , Neighbours Well and own well, 8 ( 16 % ) families using both Own well and Neighbours Well ,3 (6%) families using both Public Tap and Neighbours Well and one family depend bore well to meet their water requirements
- 74 % of households depend on paid water to meet their domestic water needs. 26% of households are not depend on paid water

- Out of 50 households surveyed 66 % respondents were not satisfied with the quality of the water available through rain water harvesting .34 % were opined about the good quality of water
- All the sample households (100% )harvesting rain water in their own area of land
- majority of houses constructed are concrete (94%) and the rest (6%) is tiled
- Majority of the respondents using pipes for conveyance and only 2 of them using Gutters for conveyance

#### **ECONOMIC, SOCIAL AND ENVIRONMENTAL IMPLICATION OF RAIN WATER HARVESTING OF SAMPLE HOUSEHOLDS**

- 37 households are still depending on paid water though they are using RWH
- Paired t test gives the result that rainwater harvesting is effective in decreasing the expenditure for water
- About 98% of households using water from rain water harvesting for domestic purpose only. Among 50 households , only one sample household [2%)make use of water for both domestic and agriculture purposes
- 88% of sample households reported that water availability has been increased considerably. Only 12% respondents were felt that there is no change in water availability from rain water harvesting.
- 16 % of households responded that, they could manage with only public water supply and 4% preferring rain water harvesting only for water requirements.
- 88 % of the sample respondents supported the opinion of getting an additional improved water supply option. 12 % respondents are completely satisfied with the existing water supply option.
- The results of the multiple regression analysis indicated that 37 percent of variations in the cost of managing rain water harvesting technique were influenced by the factors such as annual income and the size of family.

