



Deshmukh Kalpana



A STUDY ON “WATER CONSERVATION IN DOMESTIC SECTORS.”



¹Deshmukh Kalpana N and ²Nuzhat Sultana M.B

¹Dept.of Home Sci., Art's, Commerce & Sci.College Kannad.

²Associate Prof. HOD in Dept. of Home Sci., K.S.K. College, Beed.

ABSTRACT

Water is our most precious resource and something the most important natural resource for sustainable the most of us take for granted. Over the year rising populations growing industrialization and expanding agriculture have create the demand of water. Therefore water conservation has become the need of the day. Hence, present study was designed to identify the various methods and systems of water conservation at household level. One hundred families with three to four members from different areas of Kannad Taluka were selected, and given them knowledge and awareness about water conservation. After 20 days to study the impact of knowledge and awareness among rural women for water conservation and its management, with the help of survey method. The study shows that indoor per capita use of water in each site ranged from 50.2 to 54.8gallon/day in Shiv Nagar, Shanti Nagar, Saraswati Colony, and Vit Bhatti of Kannad city. Study shows that systematic water supply planning has more important and effective for indoor water conservation and its management.

Water is the most important natural resource for sustainable development and quality of life, yet it is unevenly distributed; almost one-fifth of the world's population lives in regions where water is scarce and one-quarter suffer from severe water shortage. Over the year rising populations growing industrialization and expanding agriculture have create the demand of water. Therefore water conservation has become the need of the day.

A water conservation measure is an action, behavioral change, device, technology or improved design or process implemented to reduce water loss, waste or use. Water efficiency is a tool of water conservation. Water conservation is the responsibility of both water users and suppliers. Both can

employ numerous methods to preserve water supplies. There many advanced techniques and devices to help conserve water, such as grey water reuse, rain water collection, water conserving land scarping and irrigation practices, the installation of low–flow fixtures and appliances and proper swimming pool maintenance. Water users can conserve water by using “wise water use” methods, such as shorter shower, taking bath instead of showers, running only full loads of laundry and dishes, repairing leaky plumbing. The following methods can be used for external and internal use.

KEYWORDS :Domestic sectors,industrialization,conservation .

INTRODUCTION

1.GREY WATER METHOD: -

This method of water conservation is requiring more investment and equipment on the part of home owners. Grey water recycling is defined as the reuse of water from the sinks, Showers, washing machines and dishwasher in a home. Currently grey water contributes 75% of total waste water flow to domestic sewers ⁽¹⁾ Grey water can be used for several water consuming activities, mostly outdoor washing and irrigation. Some studies have shown no adverse effect on Lawry’s or ornamental garden where grey water has been used for irrigation. ⁽²⁾

2.INSTALLATION OF WATER EFFICIENT APPLIANCES:-

In this method the installation of water efficient appliances and low-flow plumbing fixtures, such as low-flush toilets, faucet aerators, low flow shower heads find reduced water use washing machines and dish washers ⁽³⁾ Faucet aerators mix air with the water which serves to reduce splashing and cuts of flow ⁽⁴⁾ .

A Study of Household water use concluded that the overall daily per person consumption declined to 4 liters, due to appliances rather than changes in water use habits ⁽⁵⁾ .

Another study demonstrated that retrofitting a home with water conservation devices accounted for 18 g pcd decrease in water use. ⁽⁶⁾ Installation of water conserving appliances can cut a community water consumption by 20% . ⁽⁷⁾

3.WISE WATER USE: -

This method includes changes in water use habits including bathing and house hold cleaning. A more effective vigilance with leak detection and repair. A dripping faucet can leak up to 200 liters per day while a leaking toilet can account for 16000 liters per days ⁽⁸⁾ .

4.OUTDOOR WATER USED: -

In some area 50% home owner’s used water only for outdoor purpose. ⁽⁹⁾ . Most of the water may be used for lawn/garden maintenance or car washing. Lawn can accounts for about 32% of residential outdoor water use.

Moreover the collection of rain water can potentially save 50% of domestic water consumption. This water can be used not only for garden and lawn watering, but even toilet flushing and clothes washing, because ran water is very soft and free of chlorine which makes it acceptable for different uses. ⁽¹⁰⁾

MANAGEMENT OF WATER: -

WATER USERS SHOULD ADAPT THE FOLLOWING RULES FOR WATER CONSERVATION & ITS MANAGEMENT.

- 1.Maintenance of water distribution system in the house should be more effective.
- 2.Water metering can be helpful to strict measurement of water use of each house holed
- 3.To encouraging the public to conserve water in times of shortage is possible but educating them to conserve water when there are no crises has become difficult⁽¹¹⁾.
- 4.The most successful efforts have been the creation of model homes, or other publicly viewable projects, employing water conservation technology.

OBJECTIVES:-

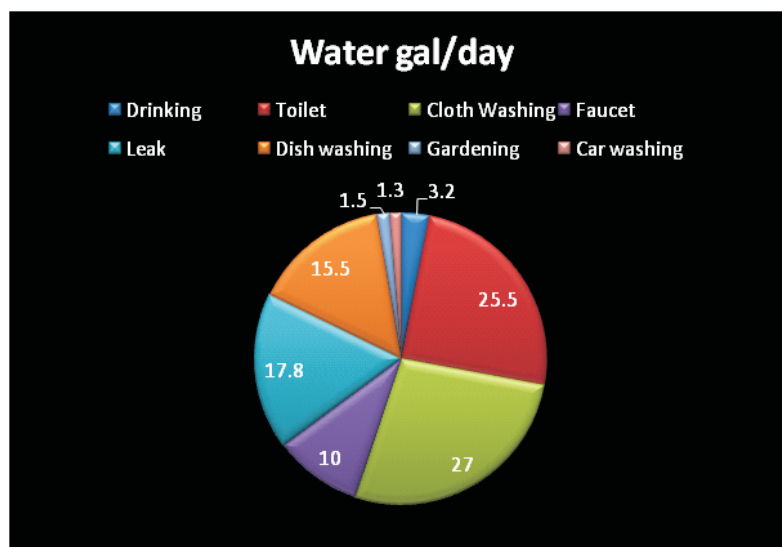
- 1.To know the consumption of water for different purpose at house hold level.
- 2.To import the knowledge and to aware the families about the water conservation at household level.
- 3.To introduce the use of efficient watering system at house hold level.

METHODOLOGY:-

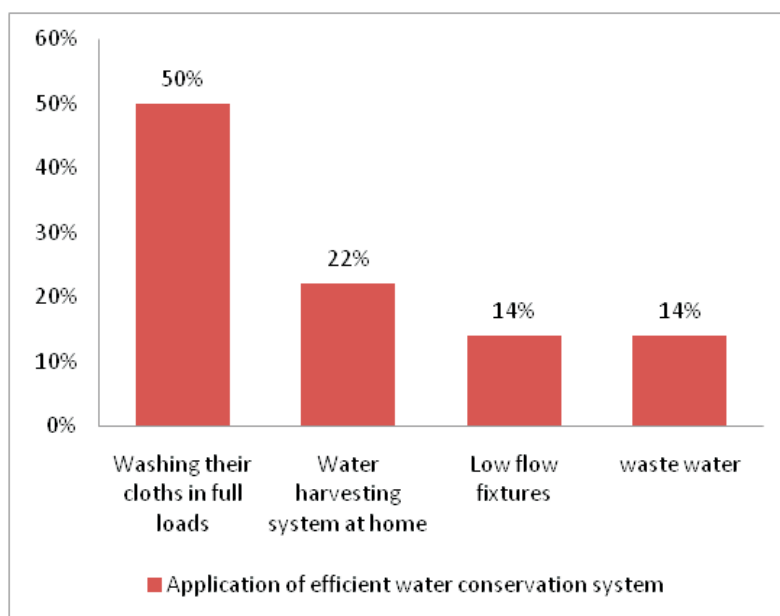
THE STUDY WAS CARRIED OUT UNDER THE FOLLOWING HEADS.

- 1.Selection of area: - One hundred families of Shiv Nagar, Shanti Nagar, Saraswati Colony, and Vit Bhatti in the Kannad City were selected randomly.
 - 2.Selection of Sample: - One hundred families with three or four members in the family from the above areas of Kannad Taluka from Aurangabad district was selected randomly.
 - 3.Selection of Method: - A Survey method was carried out with the help of questionnaire cum interview schedule.
- `A survey of fifty families was carried out with the help of questionnaire cum interview schedule and imparts the knowledge about water conservation and its management. After twenty days duration, to study the impact of knowledge and awareness among rural women for water conservation and its management.

RESULT AND DISCUSSION:-



The above result shows that the per capita use of water in each site ranged from 50.2 to 54.8gal/day. The selected families responded that they were used approximately 25.5gallen/day and 28.0 gallan/day water for toilet and clothes washing respectively. Whereas 17.8 gallan/day water was consumed in leakages. But 15.5gallon/day and 10.0 gallan/day water was used dishwashing and faucet respectively. Only 3.2 gal/day water was consumed for drinking purpose. In outdoor consumption only 1.5gal/day and 1.3 gal/day water was used for gardening and car washing.



The study has found that most of the families adopted the different methods of water conservation, when they know about it. 14% families have fixed low flow fixtures in their house. 22% families were adopted water harvesting system at home. Whereas 50% families preferred to wash their clothes full loads in washing machine. 14% families were used waste water for their gardening purpose. Conclusion: -It is concluded that water supply planning have more important for indoor water usage reduction. Moreover indoor usage of water can be reduced automatically by 30-40% by using new low flow fixtures and some other water conservation methods. And it is very beneficial to install the water appliances i.e. (Water meter) at house hold level.

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