

A survey on Household Water Harvesting – a supplement to domestic water supply and Recharge of Ground water in selected areas of East Godavari, Konaseema, Krishna, NTR Districts, A.P

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Abstract:

The ecologically safe traditional systems are viable and cost-effective alternatives to rejuvenate India's depleted water resources. Productively combining these structures with modern rainwater-saving techniques, such as percolation tanks, injection wells and subsurface barriers, could be the answer to India's perennial water problems. There is a need to plan at the village level has also been prepared to protect water and he also stated that teachers should play a key role in the state's development in educating the students about the need for water harvesting. The data from Ground water Department reveals that there is a decrease of ground water table every year in all zones of Eluru. All the study areas are under danger of water depletion. Out of the households which are practicing water harvesting, 20% only maintained the sunken pits every year. Use of electricity is also reduced in the households which are practicing water harvesting methods

Keywords: Infra structure, Housing and Transport, Graph theory, Industrialization

1. INTRODUCTION

India is facing one of its major and most serious water crises. Nearly a Quarter of the country's population is affected by a severe drought. With nearly 50 per cent of India is suffering from drought-like conditions, the situation has been particularly grim this year in Western and Southern states that received below average rainfall.

The World Health Organization (WHO) states that an individual requires around 25 litres of water daily for meeting his/her basic hygiene and food needs. The rest is used for non-potable purposes like mopping and cleaning. This indicates that for most of the non-potable uses, a quality lower than drinking water is required. Thus, for economic efficiency and environmental sustainability, water must be treated and supplied according to usage.

The Union government recently formed a new Jal Shakti (water) ministry, which aims at tackling water issues with a holistic and integrated perspective on the subject. The ministry has announced an ambitious plan to provide piped water connections to every household in India by 2024. Union Jal Shakti Minister, Shri Gajendra Singh Shekhawat, announced the commencement of the Jal Shakti Abhiyan - a campaign for water conservation and water security.

The Prime Minister, Shri Narendra Modi had given a clarion call to citizens to join hands for water conservation and create a Jan-Andolan along the lines of the Swachh Bharat Mission, to save water and secure the future. Rain water Harvesting is one of the most important means water conservation today(4).The Prime Minister invited ideas, traditional knowledge, initiatives undertaken, success stories, and films made on water conservation from common citizens, celebrities and NGO's alike.

In Andhra Pradesh, raising temperatures with dipping groundwater levels is a cause for much worry that needs immediate intervention. As compared to the corresponding period last year, the water level has depleted by 2.85 metres below ground level (MBGL) on an average across the State. As per information, it currently stands at 15.75 MBGL as against 12.90 MBGL last year.

Among the coastal districts, Prakasam (24.23 MBGL) and West Godavari (20.67 MBGL) are worst off in groundwater depletion.

The present study was undertaken to know more about the water harvesting methods, and to create awareness among public about the same.

2. METHODOLOGY

The data was collected by exploratory method study design with an initial survey followed by in-depth interviews to know the household characteristics influencing rain water harvesting. The information for the present study has been collected from households as a primary source through survey method and the results are tabulated.

Steps for actual work: selection of area, Survey data collection, Awareness on different methods and importance of water harvesting, Report preparation.

Awareness campaign at Selected area: Awareness programmes were conducted on water harvesting Techniques like sunken pits construction and importance.

3. RESULTS

Table 1. Profile of the selected Study areas

S.No.	Name of the Study area	Mandal	District
1	Yerna Gudem	Devarapalli	East Godavari
2	Visweswarayapuram	Malkipuram	Konaseema
3	Ajjampudi	Gannavaram	Krishna
4	Vijayawada	Vijayawada	NTR District
5	Mylavaram	Mylavaram	NTR District

Table.2.Adoption of Water harvesting methods

S.No.	Name of the village	Water harvesting method Adopted	Year of Starting/construction	Type of construction
1	Yerna Gudem	-	-	-
2	Visweswarayapuram	Sunken pits-8	Cement-5, Mud-3	Paermanent-5, Temporary-3
3	Ajjampudi	-	-	-
4	Vijayawada	-	-	-
5	Mylavaram	Sunken pits-4	Cement-3, Mud-1	Paermanet-3, Temporary-1

4. DISCUSSION:

In present study, out of 5 study areas, it was found that about 24% of the households practiced sunken pits for water harvesting. These households never facing the problem of scarcity of water during summer. The availability of harvested rainwater throughout the year is an important factor. It seems from this study that harvested rainwater can meet the partial water demand of drinking and cooking. They are also coming under above poverty line, 4% are

employed and with formal education of 64%. So, they adopted water harvesting techniques to compete with water crises. Water quality also improved in households of 80%. Out of the households which are practicing water harvesting, 20% only maintained the sunken pits every year. Use of electricity is also reduced in the households which are practicing water harvesting methods.

70% of the households are responded positively and they have started taking up measures for water harvesting. Still there is a need to change the mindset of 30% of households.

5. SUGGESTIONS&CONCLUSION

To meet the ever increasing demand for water in all study areas, to reduce the runoff which chokes storm drains, to avoid flooding of roads, to augment the ground water storage and control decline of water levels in all study areas, to reduce ground water pollution, to improve the quality of ground water to reduce the soil erosion, to supplement domestic water requirement during summer, drought etc., Water harvesting measures need to be given priority should be incorporated in the watershed development programs.

All these measures help in fulfilling the domestic water need as well as improving the ground water level by few meters. They help in improving the quality of ground water through dilution when recharged to ground water. All these activities help in the overall health and growth of communities.

6. CONCLUSION

“The key to the well-being of our country’s water resources lie in the indigenous water conservation systems which are being forgotten by the society.”

- Anil Agarwal

So, it is the social responsibility of each and every person to create awareness and follow the water conservation techniques to pass on the resource to future generations

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