

A STUDY ON CITIZENS ATTITUDE AND AWARENESS ABOUT RAIN WATER HARVESTING SYSTEM IN JALGAON.

Dr. Neelima Prashant Warke
Associate Professor
Godavari Institute of Management & Research, Jalgaon.

Abstract

Rain Water Harvesting system is the system which saves, preserve and secure the life of our future generation by virtue of “water”. Rain Water Harvesting system saves millions of liter water for either reuse through reservoir or get back to earth via bore pits and suck pots. It is said “Third world war if any it is only because of water”. This single line statement shows the importance of water in future.

Due to industrialization as well as urbanization, the percolation level of water reduces so ultimately now it is the prime responsibility of civilized citizens to percolate the water in the land. Is it done by all means? Are we sincere about it? Are we aware about it? The most important factor i.e. is we really interested to do so? These are the few pungent issues who decide the future of our next generation. With such pondering background researcher has intended to study the awareness level as well as attitude of citizens about rain water harvesting system to map the conscious level of citizens about nature.

The present research paper critically analyzes the awareness level and attitude of citizens of Jalgaon city about Rain Water Harvesting system and their willingness to install it.

Introduction

Meaning

Rainwater harvesting is the process of storage and use of rainwater in our homes like wash clothes, gardening, washing cars, and toilet use. Rainwater harvesting is absolutely free and environment friendly. In ancient India – as in a lot of parts of the ancient planet today – rainwater was usually composed and stored for home use

Rain water harvesting is a technique of collection and storage of rainwater into natural reservoirs or tanks, or the infiltration of surface water into subsurface aquifers. The harvested water can also be used as drinking water, long term storage and for other purposes such as ground water recharge. It is the accumulation and deposition of rainwater for reuse on site. The harvesting of rain water simply involves the collection of water from surfaces on which rain falls, and subsequently storing this water for later use. Normally water is collected from the roofs of buildings and stored in rainwater tanks.

Jalgaon city at a Glance

Jalgaon is well known for its advances in cotton, Banana, pulses and Gold. According to census of 2018, the city of Jalgaon had population of 798514 with an average literacy rate 87.28%. The city has North Maharashtra University which is a state university. The city is also recognized educational hub which has more than 40 colleges and schools. The area of Jalgaon district is 95 sq.km. The peoples of Jalgaon are recognized as a jalgaonkar as well as khandeshi. The per capita income of jalgaonkar is comparatively less. There are more

than 75000 domestic and commercial building properties on which municipal corporation charges revenue tax every year. The Jalgaon MIDC is well-known in India for PVC pipes and PP mats. Jalgaon MIDC holds 40 % of Market share in mat production of India. The pulses of Jalgaon are highly demanded across the world. The Banana cultivation and processing city is also one of the unique identity of Jalgaon which renames Jalgaon as a “Banana City”

2.0 Benefits and Advantage of Rain Water harvesting system

Advantages:-

- Easy to Maintain.
- Reducing Water Bills. Water that has been stored from harvesting water can be used for several non-drinking purposes.
- Suitable for Irrigation. Harvesting allows the collection of large amounts of water.
- Reduce demand on Ground Water.
- Depending upon the conditions both water collection capacity and storage capacity can be increased as needed within the available catchment area.
- Rain water can be a continuous source of water supply for both the rural and the poor.
- Water collected from roof catchments usually is of acceptable quality for domestic purpose.
- It has low maintenance cost and running cost.
- Local people can be easily trained to implement such technology and construction materials are easily available.

Benefits of Rainwater Harvesting

- Rainwater harvesting can reduce storm water runoff from a property. The elimination of runoff can reduce contamination of surface water with pesticides, sediment, metals, and fertilizers.
- It is an excellent source of water for plants and landscape irrigation since it has no chemicals such as fluoride and chloramines (chlorine).
- Storing rainwater helps in recharging the aquifers.
- It helps in preventing urban flooding due to excess rain.
- The stored water can be used for irrigation practices in farming region.
- The water can be used for daily use and help in reducing water bills in the towns and cities.
- It is a helpful way to tackle the scarcity of water in arid and dry regions.
- It helps in restoring the groundwater level.

3.0 Research Methodology

Research Methodology is the systematic way of conducting the research. The methodology adopted for research it is the acute strength of the research. The present research is very vital as it is related to one of the most significant basic human requirement i.e. “Water”. In light of above, the research Methodology adopted for the present work is as follows.

3.1 Objectives of Study

1. To know the Attitude of citizens about implementing Rain Water Harvesting System on their representative houses or properties.
2. To check the awareness level of citizens about Rain Water Harvesting System and its benefits.
3. To understand the impact of Rain Water Harvesting System made by Government in Jalgaon city.
4. To suggest a optimum policy so as to build a constructive attitude amongst citizens about implementing Rain Water Harvesting System.

3.2 Sample Size and Sampling

The present population of study are i.e. jalgaon city is more than 06 lacs. According to records of Jalgaon Municipal Corporation there are more than 1, 25,000 residential as well as commercial properties. Therefore the owner or family head of these properties would be our population of study. Hence it is roughly estimated that the population of present study is above 1, 25,000 and out of which researcher has selected sample size of 150 for present research. Therefore 150 schedules were distributed and after collection and screening them, 113 schedules have been considered for present study as a final sample size. A simple random sampling technique is used for collection of data.

4.0 Analysis and Interpretation

The Rain Water Harvesting System is a utmost as well as urge need of our Nation. Now days even Government authorities have made it compulsory for new infrastructural developments, however it is expected that Rain Water Harvesting System should be willingly install by old constructions. It is the only major way to increase the earth water level. With this view when researcher has interviewed the citizens of Jalgaon city, number of pondering facts were revealed which are as discussed below:

Table: 01 Knowing Rain Water Harvesting System

Factor	Response	Frequency	Percentage
Knowing Rain Water Harvesting System	Yes	88	78 %
	No	25	22 %
	Total	117	100

78 % respondents know what Rain Water Harvesting System is, whereas 22 % do not know anything about it.

Table: 02 Installed Rain Water Harvesting System at properly

Factor	Response	Frequency	Percentage
Installed Rain Water Harvesting System	Yes	21	19 %
	No	92	81 %
	Total	113	100

Only 19 % of respondent have been installed Rain Water Harvesting System at their properly.

Table 03: Benefits received for Rain Water Harvesting System

Factor	Response	Frequency	Percentage
Aware about given benefits	Rising water levels of bore well	19	17
	Rising ground water level	42	37
	Reduces electricity to lift water	08	07
	Storage of water	12	11
	Improve the quality of ground water	08	07
	Not Aware	38	34
	Total		127

Almost 34 % of respondent are not aware about benefits of Rain Water Harvesting System and 37 % are only knows that it raises ground water level.

Table: 04 ever thought on Rain Water Harvesting System

Factor	Response	Frequency	Percentage
Ever thought on Rain Water Harvesting System	Many times	12	13
	Some times	48	52
	Never	32	35
	Total	92	100

More than 65 % of respondent were thought about to install a Rain Water Harvesting System and they ever thought on it.

Table: 05 Willingness to install Rain Water Harvesting System

Factor	Response	Frequency	Percentage
Willingness to Rain Water Harvesting System	Yes	73	79
	No	06	07
	Can't say	13	14
	Total	92	

Out of those 92 respondents who do not have Rain Water Harvesting System, 79 % are willing to install the Rain Water Harvesting System.

Table: 06 Information source about Rain Water Harvesting System

Factor	Response	Frequency	Percentage
Receiving Sources	Govt. Ads in Newspapers	20	18
	Television Ads or mobile Messages	35	31
	Social clubs or NGO,s programs	68	60
	Banners or Hoardings	23	20
	others	12	11
	Total		138

60 % respondents told that they have got the message of Rain Water Harvesting System through social clubs and NGO,s whereas 31 % perceives it either through television Advertisement or through mobile messages.

Table: 07 Working of Rain Water Harvesting System

Factor	Response	Frequency	Percentage
Aware about working Rain Water Harvesting System	aware	18	16
	Partial aware	67	59
	Not aware	28	25
	Total	113	100

59% of respondents are partially aware about Rain Water Harvesting System whereas only 16% of 113 respondents are totally aware about it.

Table: 08 Costing of Rain Water Harvesting System

Factor	Response	Frequency	Percentage
Awareness that the cost of system is approx. 15,000/-	Aware	25	22
	Partial aware	16	14
	Not aware	72	64
	Total	113	100

64 % respondents are not aware that the average cost of Rain Water Harvesting System is approximately 15,000/-

Table: 09 Hurdles in Installing Rain Water Harvesting System

Factor	Response	Frequency	Percentage
Hurdles	Lack of Knowledge	65	71
	Availability of manpower and material	22	24
	Lack of own willingness	52	56
	Financial constraints	28	30
	Lack of time	12	13
	Others if any	08	09
	Total	187	--

Almost 71 % respondent feels that the lack of knowledge is the main hurdles in installing Rain Water Harvesting System. Also 56% of them admit that their lack of willingness is responsible for not installing it.

Table: 10 Opinion on Govt. Rule of mandatory Rain Water Harvesting System

Factor	Response	Frequency	Percentage
Opinion about Govt. made Rain Water Harvesting System mandatory	Support	73	65
	Neutral	10	09
	Resist	30	26
	Total	113	100

65 % of respondents support Government decision to make Rain Water Harvesting System compulsory to new construction at the time of building completion certification.

Table: 11 Expectations from Government

Factor	Response	Frequency	Percentage
Expectation from Govt. while purchasing Rain Water Harvesting System	Subsidy	63	56
	Lower interest rate	22	19
	Exemption in tax	20	18
	Other	08	07
	Total	113	100

Almost 56 % as respondent expects “subsidy” from Government for installing Rain Water Harvesting System.

Table: 12 Commitments for Installation

Factor	Response	Frequency	Percentage
Commitment by respondents for installation within 03 months	Yes	39	42
	No	23	25
	Can't say	30	33
	Total	92	100

When researcher asked them for giving commitment to install Rain Water Harvesting System within 03 months, 42 % of them were agreed and 33 % are in twisted condition.

Findings:

It is not worth to mentioned here but its a fact that most of the respondents are not aware about the acute utility and role of Rain Water Harvesting System which either due to negligence or due to their “Happy-go-lucky” type of attitude. Based on the analysis of schedules the following findings were drawn

1. Almost 78 % of citizens are knows the terms Rain Water Harvesting System hence the introductory knowledge levels seems high.
2. Out of 113 only 19 % of respondents have installed Rain Water Harvesting System at their property. The implementation percentage is very low.
3. It has revealed during analysis that 37 % of respondent knows the benefits of Rain Water Harvesting System that it rises the water level whereas almost one third of them are not aware about the single benefits of Rain Water Harvesting System. The scenario was very pathetic.
4. It has found that 65 % of respondent ever thought on Rain Water Harvesting System are rest 35 % never thought on it till date.
5. It has further noticed that almost 79 % respondents are willing to install Rain Water Harvesting System.
6. Awareness arrives through medium and attitude will develops from it. It has found that 60 % respondent receives information of Rain Water Harvesting System through social clubs, NGOs programs and 31 % has received information through TV Ads or mobile phones. Hence social clubs like rotary plays a vital role in awareness of Rain Water Harvesting System.
7. It has pointed out that 59 % of respondents are not aware about working of Rain Water Harvesting System whereas quarter quantum of population does not aware about it.
8. It has clearly shown in analysis that 64 % of the respondents are not aware about the costing factor of Rain Water Harvesting System. This financial blindness is major barrier in spread out of Rain Water Harvesting System.
9. Another major hurdles in installing Rain Water Harvesting System is lack of own willingness, almost 56 % of respondents agreed to it whereas 71 % of respondents feels that lack of knowledge prevents them.
10. It is crystal clear further analysis more than two third respondents believes that Government should make Rain Water Harvesting System mandatory and building completion certificates should not issued without it.
11. It has revealed during analysis that 56 % respondents suggest that Government should give subsidy as a motivational tool for installation of Rain Water Harvesting System.
12. At the end when researcher appeals citizens of Jalgaon to install Rain Water Harvesting System and serve Nation, 42 % of them were agreed to install the system within 03 month. If it happens, it would be the true outcome of the research as well as researcher efforts made on them.

Conclusion

Rain Water Harvesting System is the staunch need of the country, as we all aware that the declining earth water level is today's crucial issue for farmers, society, citizens and all. The awareness and attitude of common man of Nation creates a pivoted changes if he think so.

The citizens of Jalgaon city are either not properly aware about the term Rain Water Harvesting System or not take much efforts to even think over it. The availability of Rain Water Harvesting System in town is very poor and even only few respondents have installed it. As it seems that peoples do not have inherent liking to know about the benefits of Rain Water Harvesting System, Respondent believes that it could only been happens if Government makes it compulsory. Moreover respondents feel that government should offers subsidiary for installation of Rain Water Harvesting System, from this It conclude that peoples can easily slides their responsibility on the shoulder of Government. On the other hand when researcher appeals them to install the system within 03 months, half of them were agreed. It clearly indicates the need of counseling to citizens of jalgaon about Rain Water Harvesting System. The various social clubs like an Rotary and NGO'S plays a vital role in promotion and awareness of Rain Water Harvesting System.

The Rain Water Harvesting System is the utmost needed activity for saving the future of our next generation. The research carried out in Jalgaon city is only character presentation of scenario of Rain Water Harvesting System in Country. The today's urge need is to make the people more and more aware about Rain Water Harvesting System and save million gallon water every year for next generation.

References:

- Cochran, W.G. (1977), sampling techniques (3rd ed.) New York: John Wiley & Sons.
- Bryman, A. (2014). Social Research Methods. Oxford University Press, Oxford.
- Kothari, C. R. (2018). Research Methodology: Methods and Techniques. In New Age International. New Delhi.
- Saravanavel, P. (1985). Research Methodology. Kitab Mahal. Allahabad. India.
- https://en.wikiversity.org/wiki/Rainwater_harvesting assessed on 05 August 2019
- https://en.wikiversity.org/wiki/Rainwater_harvesting assessed on 06 August 2019
- <https://www.watercache.com/faqs/rainwater-harvesting-benefits> assessed on 28 July 2019