

Original Research Article

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Utility Perception of Villagers about E-Class Dugout Type Farm Ponds (100 mts. x 100 mts.) under *Jalyukt Shivar Abhiyan*

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ABSTRACT

The present study entitled “ Utility Perception of Villagers about E-Class dugout type Farm Ponds (100 mts. x100 mts.) under Jalyukt Shivar Abhiyan in Akola district ” was carried out as Research Review Committee Project for the year 2017-2018 in Akola district of Vidarbha region of Maharashtra. The main objective of this study was to study the utility perception of the villagers about E-Class dugout type farm ponds. An exploratory social research design was used. For this study Akola district is purposely selected because dugout type farm ponds on available E-Class land of villages were dugout only in Akola district of Maharashtra under “*Jalyukt Shivar Abhiyan*” for recharging ground water level. From Akola district 10 E-Class dugout type farm ponds of 100 mts. x100 mts. size were selected randomly from 10 villages those dugout during 2015-2016 by the District Supritendent Agriculture Office, Akola, Small Scale Irrigation Division, Akola and Minor Irrigation Division, Z.P. Akola. From each selected E-Class dugout type Farm-Pond Village 12 villagers were selected randomly. Thus this investigation was confined to a sample of 120 villagers for computing the utility perception of E-Class dugout type farm ponds under “*Jalyukt Shivar Abhiyan*”. This research study clears that out of the total selected villagers 90.00 per cent villagers have express high level of utility perception about the E-Class dugout type farm ponds (100 mts. x100 mts.) constructed under the “*Jalyukt Shivar Abhiyan*” in their villages. Also majority of the selected villagers suggested that at inlet side of the ponds some erosion control structure should be provided to control deep gully formation. Hence it is recommended that the Developmental departments/agencies should construct E-Class dugout type Farm Ponds (100 mts. X 100 mts.) under the “*Jalyukt Shivar Abhiyan*” in all districts of Maharashtra for recharging ground water level.

Keywords

Utility Perception, Farm Ponds, *Jalyukt Shivar Abhiyan*

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Introduction

Maharashtra government in India has launched the water management programme named “*Jalyukt Shivar Abhiyan*” to make Maharashtra state drought-free state by 2019. The programme aims to make 5000 villages free from water shortage every year.

Under the programme, the micro irrigation system would be encouraged for proficient use of water, hence increasing the irrigated area. Several parts of the Maharashtra state still facing the shortage of water problem. Maharashtra is a drought-prone area, especially its region of Vidarbha and Marathwada. Due to this, the farmer cannot able to fulfill their

need of water for agriculture. The project involves deepening and widening of streams, construction of cement and earthen stop dams, work on *Nallahs* and digging of farm ponds.

The Maharashtra government has a target to make entire state drought-free by the end of 2019. The government has set the yearly target to complete this water management project. For this whole scheme, Maharashtra government allocates 70,000 crores for the *Jalyukt Shivar Abhiyan*.

Moreover, all the existing water conservation schemes now accumulated under this scheme. With several parts of Maharashtra still reeling under the drought, the state government has launched the scheme to combat increasing number of suicide by the farmers of the state. Maharashtra is a drought prone area, especially its region of Vidarbha and Marathwada. In 2014, Vidarbha was deficit by 14 per cent, while Marathwada was deficit by 42 per cent, putting both the regions in the category of drought. Incidents of farmers' suicide have become very common in these regions. High dependency on Monsoon rain is the biggest factor behind farmers taking this extreme step. According to an English Daily, 986 cases of farmers' suicides were reported from Maharashtra in 2014. In 2013, there were 11, 744 farmers' suicides reported across the country out of which nearly 27% (3,146) – highest for any state - was from Maharashtra. The main reason to suicide is water scarcity, and loan, if this programme goes smoothly and result oriented, farmers from much hit area would be benefitted, and it shall increase the water level of villages which has lowered to 1000 ft. some places in Maharashtra.

Launch of the "Jalyukt Shivar Abhiyan"

Date of launch - 26th Jan., 2016

Completion target - 2019

Total budget allocation - 70,000 crores

Project aim on every year - 5000 villages

Works done under *Jalyukt Shivar Abhiyaan*

Broadening and deepening river base.

Removing silt from lakes, ponds, farm ponds, and canals which prevents water percolation.

Building check dams, canals, small ponds, and wells (individual and community). Digging of farm ponds.

Tree plantation, etc.

These works used to be done earlier as well but these were scattered and under different ministries, now this abhiyaan has included some 49 schemes under one roof and under eye of collector and parent minister of district. Its effect has started wherever work is done.

Benefits of "*Jalyukt Shivar Abhiyan*"

The state of Maharashtra has been suffering from drought and water shortage from past few years. "*Jalyukt Shivar Abhiyan*" has aims to make Maharashtra drought free by 2019. This directly helps beneficiary and the farmers who live on agriculture.

"*Jalyukt Shivar Abhiyan*" is a massive water conservation programme in the state. This programme generates thousands of jobs in Maharashtra state on various works under the scheme.

"*Jalyukt Shivar Abhiyan*" helps to stop farmers' suicides in Maharashtra state because of water problem.

In Akola district of Vidarbha various work had been completed since 2015-16 under "*Jalyukt Shivar Abhiyan*" like broadening and deepening of river base and *Nallahs*, Digging of *Dohas*, Repairing of *Shivkalin Talav*, Individual farm ponds of the farmers, big size farm ponds on E-Class land of villages, Village *Talav* repairing, Cement bunds on *Nallahs*, etc. But big size village dugout type farm

ponds (100x100 m) on E-Class land of villages are unique work completed in only Akola district of Vidarbha. Hence, this study is planned with the following objectives.

To study the utility perception of the villagers about E-Class dugout type farm ponds (100 mts.x100 mts.) in Akola district purposefully.

To study the constraints faced by the villagers about E-Class dugout type farm ponds.

To documents the suggestions from the villagers regarding E-Class dugout type farm ponds.

Materials and Methods

Exploratory design of social research was used. The present investigation was carried out in Akola districts of Vidarbha region of Maharashtra. From Akola district 10 E-Class dugout type farm ponds of 100x100 mts size were selected randomly from 10 villages those dugout during 2015-2016 by the District Supritendent Agriculture Office, Akola, Small Scale Irrigation Division, Akola and Minor Irrigation Division, Z.P. Akola. From each selected E-Class dugout type Farm-Pond Village 12 villagers were selected randomly. Thus this investigation was confined to a sample of 120 villagers where E-Class dugout type farm ponds were dugout under "Jalyukt Shivar Abhiyan".

Collection and analysis of data

A structured interview schedule was prepared and used for data collection. Data were collected by personal interview method with the help of structured interview schedule. Questions were framed in the schedule keeping in view the objectives of the study. Interview was conducted at residence of villagers. Tabulation was done after completion of the interview work with the respondents and editing the schedule. The raw data from edited schedule were first recorded in suitable primary table serially and incorporated in secondary table according to the classification. The obtained

score of each variable were used for categorization of all selected variables.

Utility Perception

In present study utility perception as operationally defined as personal interpretation of the selected villagers about the usefulness of E-Class dugout type farm ponds constructed under the *Jalyukt Shivar Abhiyan* in Akola District. Responses from individual villagers were collected on three point continuum viz. VU (Very useful), U (Useful) and NU (Not useful) by assigning score 2, 1 and 0 respectively. Raw utility perception score were converted into utility perception index by using following formula. Respondents were distributed by using equal interval method as low (Upto 33.33), medium (33.34 to 66.66) and high (Above 66.67) utility perception level.

$$\text{Utility Perception Index (\%)} = \frac{\text{Perception score actually obtained}}{\text{Maximum obtainable perception score}} \times 100$$

For computing the utility perception researcher have constructed total seven statements in consultation with the experts of Soil and Water Conservation Departments, Dr.PDKV, Akola. The results regarding the utility perception of the selected villagers about the E-Class dugout type farm ponds under the *Jalyukt Shivar Abhiyan* have been presented in Table 1.

Results and Discussion

The results from Table 1, regarding the utility perception of the selected villagers about the E-Class dugout type farm ponds under the *Jalyukt Shivar Abhiyan* revealed that cent percent (100.00%) selected villagers expressed that E-Class farm pond acts as a rain water harvesting structure in village, it helps to conserve the fertile soil and can be recycled and helps for recharging ground water level of surrounding tube wells and open wells in village.

Followed by nearly cent percent (99.17 %) of the selected villagers responded that E-Class dugout type farm ponds helps for making available the drinking water to animals. While considering the response of villagers regarding to provides water for plant protection purpose it was observed that majority (92.50%) of the villagers expressed that these ponds useful and 7.50 per cent responded as very useful. Whereas more than one third (76.67 %) of the villagers mentioned that E-Class farm pond useful for an additional source of income to the villagers by rearing the livestock in the village, 7.50 per cent expressed very useful and remaining 15.83 per cent villagers responded as not useful.

While 70.00 per cent expressed that these farm ponds were useful for increasing the tree plantation under social forestry and 30.00 per cent revealed as a not useful for the same. Thus from the above statements it is concluded that overall it helps for recharging the ground water level directly and useful for many other purpose indirectly.

Overall Utility Perception level of the selected villagers

Overall Utility Perception level of the selected villagers about the E-Class dugout type farm ponds under the *Jalyukt Shivar Abhiyan*, related to selected seven statements has been computed in the form of index and respondents has been distributed in three categories by equal distribution method as given in Table 2.

It was observed from the data depicted in Table 2 that majority 90.00 per cent of the selected villagers were found in high level of utility perception about the usefulness of E-Class dugout type farm ponds under the *Jalyukt Shivar Abhiyan* in Akola district. Whereas remaining 10.00 per cent villagers have medium level of utility perception. Hence it is concluded that majority villagers have high level of utility perception about the E-Class dugout type farm ponds under the *Jalyukt Shivar Abhiyan* in Akola district.

Table.1 List of the selected E-Class dugout type farm ponds (100 mts. X 100 mts.) from Akola district of Vidarbha

Sr. No.	District	Tahasil	Name of selected village were E-Class farm ponds dugout during 2015-16	No. of villagers interviewed
1	Akola	1.Akola	1. Goregaon Kh.	12
			2. Chikhalgaon	12
		1.Patur	1. Digras Bk.	12
			2. Balapur	1. Takali Nimkhardha-1
			2. Takali Nimkhardha-2	12
			3. Kazikhed	12
			4. Wazegaon	12
		4. Murtijapur	1. Kawatha Kholapur	12
			2. Shirtala	12
			3. Borta	12
Total	4 Tahsils	10 E-Class farm ponds	120 villagers	

Table.2 Distribution of the selected villagers according to their Utility Perception about the E-Class dugout type farm ponds constructed under the *Jalyukt Shivar Abhiyan*

Sr. No.	Utility statements of E-Class Farm Ponds	Utility Perception N=120		
		Very Useful	Useful	Not Useful
1	E-Class farm pond acts as a rain water harvesting structure.	120 (100.00 %)	--	--
2	E-Class farm pond helps to conserve the fertile soil and can be recycled.	120 (100.00 %)	--	--
3	Helps for recharging ground water level of surrounding tube wells and open wells.	120 (100.00 %)	--	--
4	Helps for making available the drinking water to animals.	119 (99.17 %)	01 (0.83 %)	--
5	E-Class farm pond provides water for plant protection purpose.	9 (07.50 %)	111 (92.50 %)	--
6	Helps as an additional source of income by rearing the livestock in the village.	09 (7.50 %)	92 (76.67 %)	19 (15.83 %)
7	Helps to increase the tree plantation under social forestry.	--	84 (70.00 %)	36 (30.00 %)

Table.3 Distribution of the selected villagers according to their Overall Utility Perception level about the E-Class dugout type farm ponds

Sr. No.	Utility Perception level	Respondents	Percentage
1	Low (Upto 33.33)	00	00.00
2	Medium (33.34 to 66.66)	12	10.00
3	High (Above 66.67)	108	90.00
	Total	120	100.00

Table.4 Problems/ Constraints perceived from the selected Villagers about the E-Class dugout type farm ponds

Sr. No.	Problems/ Constraints	No	%
1	Less rainfall in monsoon	120	100.00
2	Medium to large size rills developed on embankment	60	54.17
3	Deep gullies are formed on inlet side of pond	98	81.67

Table.5 Suggestions received from the selected Villagers about the E-Class dugout type farm ponds

Sr. No.	Suggestions received	No	%
1	At inlet side some erosion control structure is required to controlled deep gully formation	92	76.67
2	For increasing the harvesting of rainwater the depth of E-Class dugout type farm ponds needs to be increased.	85	70.83

Problems/ Constraints perceived from the selected Villagers about the E-Class dugout type farm ponds

The data about the Problems/ Constraints perceived from the selected Villagers about the E-Class dugout type farm ponds has been collected and findings were depicted in Table 3 as below.

It was clear from Table 3 that cent percent (100.00%) of the selected villagers have mentioned that less rainfall in monsoon is the main problem for filling the E-Class farm pond. Followed by majority of the villagers expressed that deep gullies are formed on inlet side of pond due to the absence of stone pitching/ erosion control structure at inlet side of the ponds. Whereas 54.17 per cent respondents express that medium to large size rills developed on embankment of the ponds due to rains. Hence this research clears that these constraints/problems should to be rectifying by the developmental departments before start of monsoon.

More than three fourth (76.67%) per cent of the selected villagers suggested that at inlet side some erosion control structure is required to controlled

deep gully formation and 70.83 per cent per cent villagers express that for increasing the harvesting of rainwater the depth of E-Class dugout type farm ponds needs to be increased.

Policy implication

In Akola district 90.00 per cent of the selected villagers have high level of utility perception about the E-Class dugout type farm ponds (100 mts. x100 mts.) constructed under the "*Jalyukt Shivar Abhiyan*" in their villages. Also majority of the selected villagers suggested that at inlet side of the ponds some erosion control structure should be provided to control deep gully formation. It is recommended that the Developmental departments/agencies should construct E-Class dugout type Farm Ponds (100 mts. X 100 mts.) under the "*Jalyukt Shivar Abhiyan*" in all districts of Maharashtra for recharging ground water level.

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