

Role of Farm Pond in Drought Prone Area of Man and Khatav Taluka

Prof. Madhukar B. Raskar

Head, Department Geography, L.B. S. College, Satara (India)

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Corresponding Author

Email: abhijitphate[at]gmail.com

ABSTRACT

The farm Pond is a dugout structure having definite shape and size. Water in farm pond can be collect by surface runoff or poured by other sources. The stored water can be used for irrigation, drinking purpose, pisciculture etc. Agriculture is important activity in the Man and Khatav taluka in Satara district. The deficiency of water faces every year in the region therefore massive importance of farm pond in the region. It acts as a decisive tool during the period of scarcity of water. Farm pond can increase agricultural production, generates new sources of income and minimize the deficiency of water.

1. Introduction

Water is a precious resource on the earth surface but the distribution of water is uneven on the earth surface. 97.39 per cent water is stored in the oceans. Only 2.61 per cent is fresh water in available on the earth. Out of that 0.59 per cent located in the ground, lakes, rivers. The entire survival depends on the small amount of fresh water. The huge amount of population resides in Indian Territory. Food is necessary for the survival. India gets food from agricultural land. 60 per cent food grains are obtained through the irrigated land while 40 per cent food grains are obtained through the rainfed area of India. India has huge possibility to increase the food grain by cultivating over rainfed areas. The possibility of increasing food grain can achieve by digging farm pond in the rainfed areas.

Man and Khatav taluka is located in drought prone area of Maharashtra. Agriculture is main activity of the people living in the Man and Khatav taluka. The growth and development of agriculture does not take place properly because there is lack of proper water sources available in the region. Farm pond is ideal tool in Man and Khatava region. Farmer in the region is started to construct farm pond in the region. The need of seasonal irrigation is fulfilled through the stored water of farm pond.

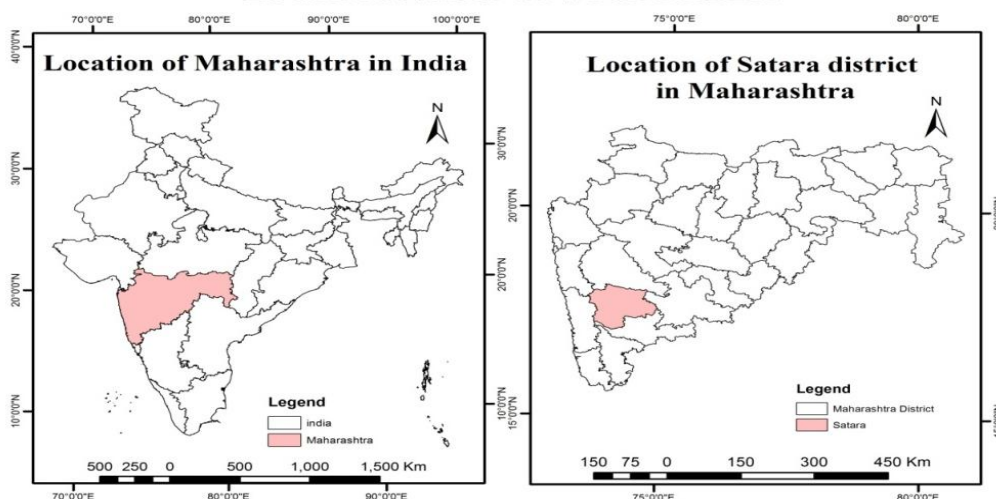
2. Objective

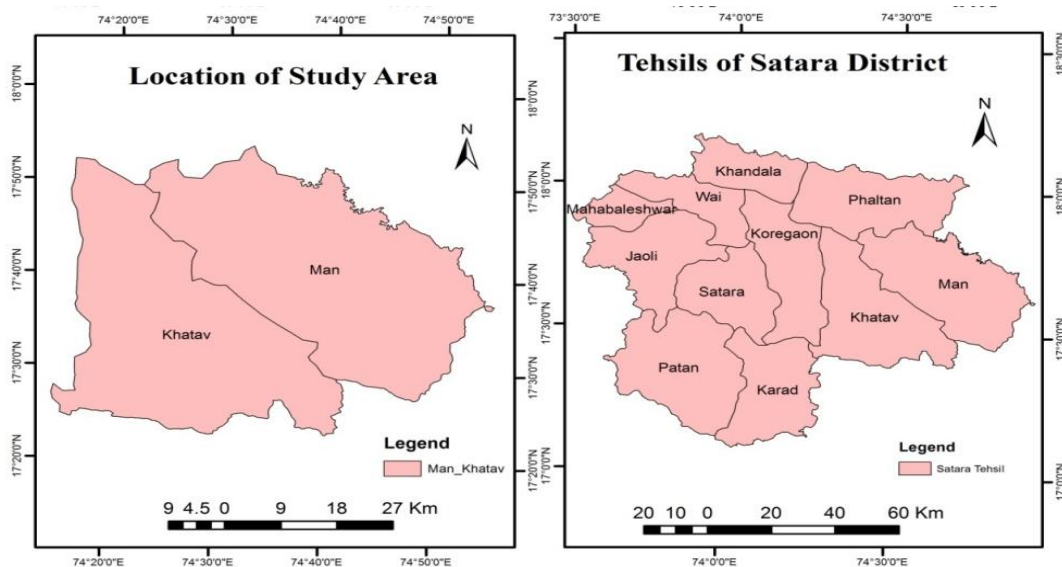
- 1) To study the irrigated area by farm pond in the Man and Khatav taluka.
- 2) To focus on the use of farm pond in the Man and Khatav taluka.

3. Study Region

The study area Man and Khatav taluka are administratively covered in Satara district. Geographically, it is extended 17° 22" north to 17° 54" north latitude and 74° 13' East to 74° 54" East longitude. It located in Eastern part of Satara District with covered 2846.99 sq. km area. The east side of taluka is surrounded by Man tahsil of Satara district, the south boundary touched at Sangli district, the south- west-Karad and West boundary at Koregaon tahsil of Satara district, to the north-Phaltan tahsil of Satara district. 247 villages are consisted in the study area out of that 143 consisted of Khatav taluka and 104 villages in the Man taluka. Temperature, Rainfall pattern is highly varied in the entire study region. Generally, high temperature observed in the summer season. Rainfall recorded in between 200 to 600 mm. The river Yerela is main river in the region which flows seasonally.

LOCATION MAP OF STUDY AREA





Map No.1

4. Database and Methodology

The present work is based on primary and secondary data source. The primary data collected through intensive field work with the help of schedules, interview and discussion with the farmers, other relevant person and authorities. The secondary data collected from the district and state census reports and statistics abstract, district gazetteers and some unpublished records. The stratified random sampling method has adopted for the selection of the village. Ten per cent sample villages (i.e.25 villages) have selected. The selection of 25 villages is based on the maximum farm pond holder in the village.

5. Result and Discussion

Well and tube wells are the major sources of irrigation in the region. 89per cent area is irrigated by well and tube wells. The wells and tube wells run with full potential during the rainy and winter season. In the summer season, most of the wells and tube wells become dry. If the intensity of drought recorded very high then all wells and tube wells become totally dry. 7 per cent area of the region irrigates by canal source. Out of total canal irrigation, 73 per cent irrigates are observed in only Khatavtaluka. Pond and farm pond are irrigated 2 per cent area respectively

Table No- 1 Irrigated Area by Different Sources in Hector

Sr. No	Taluka	Type of Source			
		Canal	Well and Tube wells	Tanks and pond	Farm pond
1	Man	1003.2	19980.7	425.5	607
2	Khatav	2737.4	27425.4	449.1	720
Total 53348.3		3740.6	47406.1	874.6	1327

Source: Kathav and Man TalukaAgricultral Office 2018

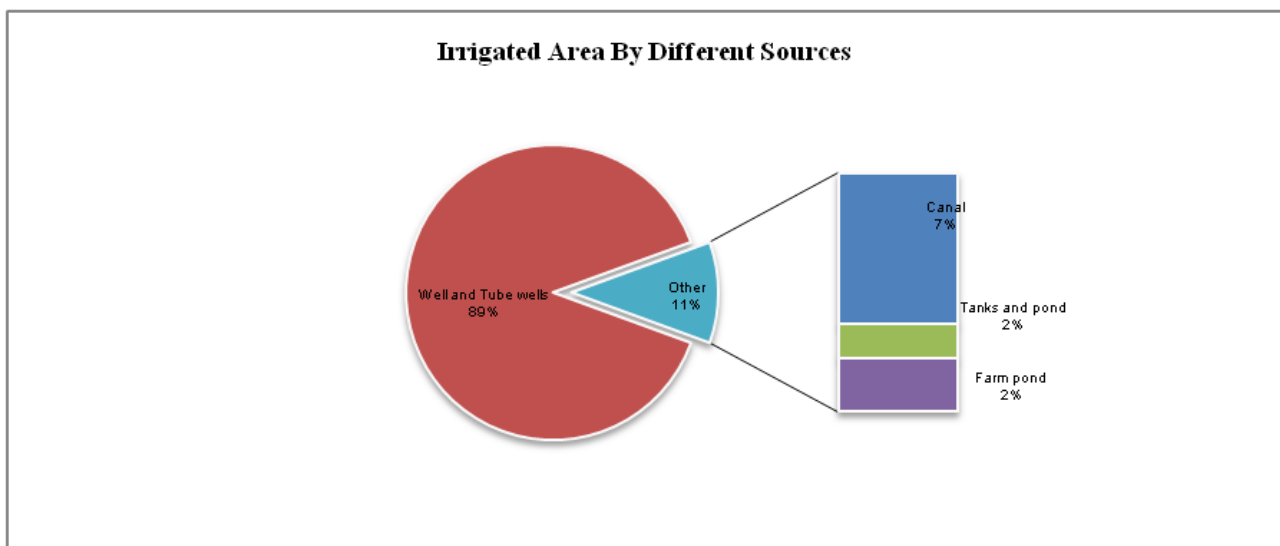


Fig.NO.1

Table No.2
The Use Farm Pond in Man Taluka

Indicators		Village											
		Kh	Bi	Bh	Ma	Da	Ja	Go	Na	Wa	Pa	Pal	Shi
Use	Irrigation	27	25	21	27	27	23	27	21	24	29	16	32
	Drinking	1	3	1	2	5	3	4	3	5	6	3	3
	Pisci culture	0	2	0	0	3	0	1	0	0	2	1	2

Source: Compiled by author based on field visit

Note: Name of villages indicated in short form taking initial two letters of sample village.

Table No.3
The Use Farm Pond in Khatav Taluka

Indicators		Village												
		Ra	Ni	Pu	Va	Ku	Am	Ch	Mh	Ni	Ka	Vi	Vik	Ne
Use	Irrigation	19	16	23	23	28	27	30	20	27	17	29	26	31
	Drinking	4	2	3	0	4	2	0	2	2	5	1	2	1
	Pisciculture	0	0	0	0	2	3	0	0	0	1	0	2	3

Source: Source: Compiled by author based on field visit

Note: Name of villages indicated in short form taking initial two letters of sample village.

349 farmers in Man taluka have constructed a farm pond within 12 sample villages. While 355 farmers in the Khatav taluka has constructed a farm pond within 13 sample village. Cumulatively 704 farm pond has been dig out with in 25 sample villages. Out of that 87.35 per cent farm pond used for seasonal irrigation purpose in entire study region. Only 9.51 per cent farm pond used for drinking purpose during summer season while 3.12 per cent farm pond used for irrigation as well as pisciculture purpose.

6. Conclusion

Man and Khatav taluka is located in drought prone area of Satara district. Farmers were taking the seasonal crops in the region. Before dig out farm pond famers were not assure about their crops but now they are taking assuredly crop in the field. 87.35 per cent farmers using farm pond only for seasonal irrigation purpose. Only 3.12 farmers using the farm pond for pisciculture, if more farmers attracted to rearing fish in pond can get more profit than present.

Abbreviation

Sr.no	Man Taluka Sample villages list		Sr.no	Khatav Taluka Sample villages list	
1	Kh	Khutbav	1	Ra	Rajapur
2	Bi	Bidal	2	Ni	Nidhal
3	Bh	Bhalavadi	3	Pu	Pusegaon
4	Ma	Mardi	4	Va	Vaduj
5	Da	Dahivadi	5	Ku	Kuroli
6	Ja	Jashi	6	Am	Ambavade
7	Go	Gondavale kh.	7	Ch	Chitali
8	Na	Naravane	8	Mh	Mhasurne
9	Wa	Wadjal	9	Ni	Nimsod
10	Pa	Panavan	10	Ka	Kaledhon
11	Pal	Palsavade	11	Vi	Visapur
12	Shi	Shirtav	12	Vik	Vikhale
			13	Ne	Ner

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