

A PARTICIPATION OF WOMEN IN COMMUNITY BASED TANK MANAGEMENT PROJECT IN CHITRADURGHA DISTRICT OF KARNATAKA STATE

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Abstract: The present study was conducted in the year 2015-16 in Challakere taluka of Chitradurgha district of Karnataka state involving 120 respondents selected from four villages. Pre-tested interview schedule was used for this study. The results of the study revealed that, majority of the respondents (52.50%) had medium extent of participation in irrigation tank management practices. Regular participation was observed in activities like strengthening of tank bunds (61.67%), decision regarding required irrigation water (57.50%), carrying out desilting activity (56.67%), identification of encroachment area (55.00%) and collection of facts about tanks (52.50%). The positive and significant impact of tank rehabilitation on crop productivity was observed with 34.14 per cent increase in cotton yield (per acre) after tank rehabilitation.

Key words: Chitradurgha district, Women Participation, Tank management.

1. INTRODUCTION:

Minor water reservoirs behind earthen dams are called “irrigation tanks” in India. Tanks are providing surface irrigation, recharging ground water and serving water needs of rural households and livestock. Tank irrigation is an old established practice in most of the semi-arid tropical parts of India, where the monsoon rains disperse erratically during a few months of the year and irrigation tanks serve to store and regulate the flow of water for agriculture use. South India has a long history of rain water harvesting through tanks and weirs. Andhra Pradesh, Karnataka and Tamil Nadu account for nearly 60 per cent of the tanks irrigated area. There are about 1, 27,000 tanks in these states as against 2, 08,000 tanks in the country. The Community Based Tank Management Project in Karnataka aims at improving the rural livelihoods and reducing poverty by developing and strengthening community based approaches to manage 2000 tanks spread over in nine districts. It is envisaged that the project interventions will result in increased productivity as well as irrigable area in the tank commands and catchments; increased households’ income of direct stakeholders, besides creating other impacts. There has been a growing realization for rehabilitation and restoration of irrigation tanks with women farmers’ participation. Hence, the present study was undertaken to know the Impact of People Participation and Irrigation Tank Management Practices on Crop Productivity and Income of Women farmers in Chitradurga district.

2. OBJECTIVES:

- To ascertain the impact of people participation and irrigation management practices on crop productivity and income of women.
- To understand the constraints experienced by women in irrigation tank management.

3. METHODOLOGY:

The present study was conducted in Challakeri taluk of Chitradurga district during 2015-16. Among the nine districts covered under KCBTMP, six districts fall in Southern Karnataka. Among the six districts, Chitradurga district was selected for the study because of higher number of irrigation tanks and it comes under jurisdiction of University of Agricultural Sciences, Bangalore. Among six taluks of Chitradurga district, Challakere taluk was purposively selected keeping large command area under irrigation tanks as criteria. Number of tanks covered. The data collected from the respondents were scored, tabulated and analyzed by using suitable statistical methods. The data on yield per acre of the crops during pre tank rehabilitation period were collected during interview process with the women farmers. The per acre yield after tank rehabilitation were also collected during the personal interview with the women farmers. The yield obtained with respect to these crops by the respondents in the previous season was considered in terms of quintals per acre. This measure was directly used in computing the relationship with other independent variables.

4. RESULTS AND DISCUSSION:

Impact of people participation

Table 1. Impact of people participation in tank irrigation management project on the crop productivity of the women farmers

(N=120)

Crops	Before Tank rehabilitation (Avg. yield/acre)	After Tank rehabilitation (Avg. yield/acre)	% change in yield/acre
Cotton	10.25 q/acre	13.75 q/acre	34.14
Paddy	19.5 q/acre	23.75 q/acre	21.79
Maize	17.00 q/acre	20.00 q/acre	17.64

It could be observed from Table 1 that, there was positive and significant impact of tank rehabilitation on crop productivity. An increase of 34.14 per cent in cotton yield (per acre) was observed after tank rehabilitation. Similarly 21.79 and 17.64 per cent increase in paddy and maize yield (per acre) from before to after tank rehabilitation. It could be inferred that, increase in crop productivity was considerably higher after the tank rehabilitation.

The findings have similarity with the findings of **Abdulkadir et al. (2002)** and **Shanthamani (2007)**

Impact on Income

Table 2: Impact of people participation and irrigation tank management on the annual income of the farmers

(n=120)

Variable	Categories	Before tank rehabilitation		After tank rehabilitation		Difference	
		Freq.	%	Freq.	%	Freq.	%
Annual income	Low (below Rs 17,000)	18	15.00	8	6.67	10	8.33
	Semi medium (Rs 17,001-34,000)	33	27.50	28	23.33	5	4.17
	Medium (Rs 34,001-51,000)	43	35.83	34	28.33	8	6.67
	High (above Rs 51,000)	26	21.67	50	41.67	27	22.50

The data presented in Table 2 shows that, there was positive and significant impact of tank management on farmer's income. Increase in per cent of women belonging to high income group (above Rs 51, 000) had doubled from 21.67 per cent before rehabilitation to 41.67 per cent after rehabilitation. Similarly the per cent of women belonging to low income group (below Rs. 17,000) had reduced from 15.00 per cent before tank rehabilitation to 6.67 per cent after tank rehabilitation. Further about 5 and 8 per cent reduction in per cent of women belonging to semi medium (Rs 17,001-34,000) and medium (Rs 34,001-51,000) category was observed before and after rehabilitation.

The above findings gained support from the studies indicated by **Reddy et al. (2009)**

Constraints experienced by women in tank irrigation management

The information on various constraints experienced by the women in tank management is presented in Table 3.

Table 3: Constraints experienced by farmers in tank irrigation management

(n=120)

Sl. No.	Constraints	Freq.	%
I. Technical constraints			
1.	Lack of knowledge about tank management practices	95	79.25
2.	Non-availability of required irrigation water	78	65.17
3.	Lack of knowledge about crop planning	67	56.24
4.	Lack of time to participate in tank user group meetings	76	63.18

5.	Lack of guidance regarding tank management practices	50	41.25
6.	Lack of motivation from the tank user group leaders	70	58.54
II. Tank management constraints			
1.	Inadequate drainage	31	25.78
2.	Improper repair/rehabilitation of tank structures	42	34.68
3.	No regulation/control for distribution of water	26	21.31
4.	Non authorities to regulate water	20	16.25
5.	Poor physical status of tank	54	45.36
6.	Accumulation of silt in command area	74	61.58
7.	Poor maintenance of tank structures like bunds, catchment area & command area	43	36.24
8.	Mismanagement of catchment areas	38	31.65
9.	Mismanagement of command areas	43	35.47
III. Others			
1.	Poor water distribution	27	22.13
2.	Over irrigation to the crops	62	51.35
3.	Low crop productivity	64	53.24

The major technical constraints experienced by women were lack of knowledge about tank management practices (79.25%), followed by non-availability of required irrigation water (65.17%), lack of time to participate in tank user group meetings (63.18%). Other technical constraints faced by the women were lack of motivation from the tank user group leaders (58.54%), lack of knowledge about crop planning (56.24%) and lack of guidance regarding tank management practices (41.25%). Similar findings are also found by **Navaneeth et al. (2007)**

The major constraints related to tank management experienced by women were accumulation of silt in command area (61.58%) followed by poor physical status of tank (45.36%), poor maintenance of tank structures (36.24%) and mismanagement of command areas (35.47%). Other tank management constraints faced by the women were improper rehabilitation of tank structures (34.68%), mismanagement of catchment areas (31.65%), inadequate drainage (25.78%). Similar findings are also found by **Umashankari (1991)**

Other constraints experienced by women were low crop productivity (53.24%) followed by over irrigation to the crops (51.35%) and poor water distribution (22.13%).

Similar findings are also found by **Girase et al. (1994)**

5. CONCLUSION:

It is fascinating to note that, the annual income level of the women farmers had increased after tank rehabilitation. This may be due to the good work done by the tank user groups in carrying out the community based tank management activities, there by increased water availability, as a result it would have facilitated for higher yield and higher income. The income generating activities taken by the project such as livestock, nursery kitchen garden and other off-farm activities have contributed to their income. Further, the personal characteristics of the respondents like high economic motivation of earning more money, innovativeness, risk bearing ability and timely supply of critical inputs and necessary possession of implements might have acted as incentives to the women farmers and hence would have brought change in their annual income level before and after initiation of tank rehabilitation activities. The above findings gained support from the studies indicated by **Sridhara (2002)** and **Nirmala (2003)** who reported that increase in their annual income level after implementation of project. The major constraints experienced by women farmers were lack of knowledge about tank management practices followed by, lack of required irrigation water lack of free time to participate in tank user group meetings accumulation of silt in command area and low productivity.

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