



MISSION KAKATIYA AND ITS IMPACT ON RURAL AGRICULTURE IN KAMALAPUR MANDAL OF WARANGAL URBAN DISTRICT

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ABSTRACT: Government of Telangana launched a flagship program 'Mission Kakatiya', also known as "Mana Ooru - Mana Cheruvu". The mission aims at retrieving the lost glory of minor irrigation in the state with community participation for ensuring sustainable water security. And it also encompasses livelihoods, food security, cultural, and environmental components. The present study is to see the impact of Mission Kakatiya Programme in Kamalapur Mandal of Warangal Urban District. The study was based on secondary data. It has found that intervention of the Mission Kakatiya has helped overall decrease of gap ayacut. It has enhanced agriculture-based income for small and marginal farmers, by accelerating the development of minor irrigation infrastructure, strengthening community-based irrigation management and restoration tanks to its full potentials.

KEYWORDS: Environmental Components, Irrigation, Restoration, Rural Agriculture, Sustainable Water Security.

I.INTRODUCTION

Tanks have been the lifeline of Telangana owing to the state's geographical positioning. The topography and rainfall pattern in Telangana have made tank irrigation an ideal type of irrigation by storing and regulating water flow for agricultural use. Though tanks are mainly used for irrigation purposes, they are also used for rearing fisheries, as a common grazing land, as a source of clay for pottery etc. However, after independence, the successive Governments have neglected the maintenance and development of tanks and allowed them to face extinction by way of siltation, breaches, encroachments etc. With the extinction of tank system, the self-sufficient villages of Telangana have become vulnerable to frequent drought.

Upholding the vision of Kakatiyas, the Government of Telangana launched a flagship program 'Mission Kakatiya', also known as Mana Ooru Mana Cheruvu. The mission aims at retrieving the lost glory of minor irrigation in the state with community participation for ensuring sustainable water security. And it also encompasses livelihoods, food security, cultural, and environmental components.

Mission Kakatiya aims at bridging the gap ayacut of about 10 lakh acres by adopting following works (i) by de-silting the tank beds to restore original water storage capacity of tanks,(ii) by repairing dilapidated sluices, weirs etc.,(iii) by strengthening the tank bunds to its original standards,(iv) by repairing the feeder channels to standards for getting water freely into tanks,(v) by re-sectioning of irrigation channels to standards.

As the schemes need multi-disciplinary approach, various departments of the State Government such as irrigation, agriculture, fisheries, rural development, forest, and groundwater are in constant touch with each other for better coordination. There are about 46,531 tanks in the State spreading across all the 31 districts. The irrigation department has planned to restore all the 46,531 minor irrigation sources in next five years, taking up 20% (9,306) of the tanks each year. Under the first phase of Mission Kakatiya, 9,306 tanks were taken up for renovation. The budget provision for the Scheme in 2014-15 was Rs.2016 crore and in 2015-16 it is Rs. 2083.13 crore. The irrigated area under tanks in the State had gone up to 15.5 lakh acres in 2016 against 10 lakh acres irrigated in the previous years.

II.OBJECTIVE

To see the impact of Mission Kakatiya Programme in Kamalapur Mandal of Warangal Urban District.

III.METHODOLOGY

The present study was based on secondary data collected from Irrigation and Common Area Development (I&CAD) Department officials, Informal questionnaire prepared and data gathered from District Irrigation Office.

IV.STUDY AREA

Kamalapur is one of the mandals and village of Warangal Urban District in the state of Telangana with the Geographical Coordinates of 18°09' 36" North and 79°32' 26" East spreading in the area of 13.16 km² (5.08 sq.mi), which holds the 5th rank in area-wise in Warangal Urban District. The population of this mandal is exceeding 10,000 people. It is primarily famous with a large tank (Pedda Cheruvu) considering to be the largest tank in this mandal and also useful for micro irrigation, drinking water supply and pisciculture. It is one of the fastest growing and emerging developing mandal in this District.



Figure1: Warangal Urban – Mandals Map

V.RESULTS AND DISCUSSION

Increased crop yields and farmers' income, and decreases fertilizer use. As expected, the Mission Kakatiya programme taken up by the Telangana Government for restoration of minor irrigation tanks, including revival of chain-link tank system, has resulted in multi-dimensional positive impact on farming and farmers' income in the command areas as well as outside.

A third party analysis of the impact of the programme, which also includes repairs of dilapidated structures such as sluices, surplus weirs, de-silting tankbeds to improve or restore the water-holding capacity of tanks, silt application and revival of feeder channels, The impact assessment was made keeping 2013-14 as the baseline year, when rainfall in the State was high, timely and evenly distributed, while 2016-17 was taken as the impact year. The study was conducted on 88 tanks in the Warangal Urban. The tanks include 48 taken up under the first phase of the programme.

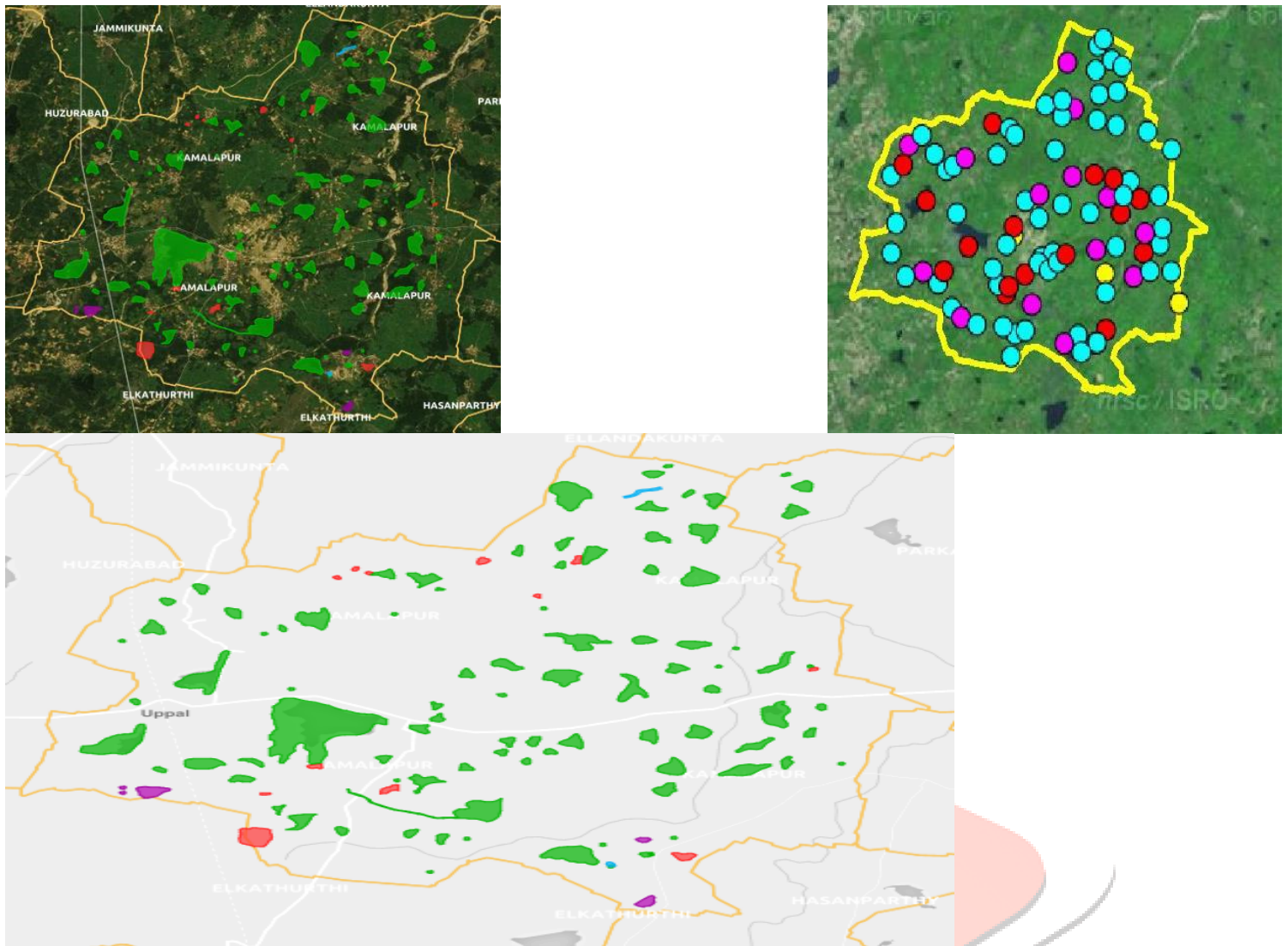


Figure2: Satellite view of Tanks in Kamalapur Mandal

The study has found that intervention of the Mission Kakatiya has helped overall decrease of gap ayacut by 15.2 % as it was 36 % in the baseline year and 21.2 % in the impact year. From the below table the gap ayacut decrease was seen maximum in Basavayya Kunta 58.6% followed by Devuni Cheruvu Shanigaram (54%). Mairipally Oora Cheruva (45%), Kaniparthi Oora Cheruvu (37%) and other tanks ayacut relatively decreased the gap of ayacut in the study area.

Table1: Minor Irrigation Reconcile survey of Tanks

S No	Geo ID	Name of the Tank	Village	Ayacut (Acres)	Relocalization
1	795090181767	Large Tank	Kamalapur	1,272.00	1,272.00
2	794903181950	Pedda cheruvu	Uppal	283.26	283.26
3	795563182317	Peddi reddy cheruvu	Marripalligudem	254.28	285.00
4	795098182258	Gundla cheru	Gunded	238.00	271.00
5	795519181379	Oora cheru	Ambala	195.00	195.00
6	794745181743	Chinna cheruvu	Uppal	181.27	181.27
7	795373181536	Oora cheru	Gudur	176.12	176.12
8	795536182047	Oora cheruvu	Vangapally	173.38	173.38
9	795534181904	Sangadivani cheruvu	Vangapally	151.17	151.17
10	795057181483	Nalla cheruvu	Kaniparth	111.24	112.00
11	794886181667	Damera Cheruvu	Desharajupally	110.00	110.00
12	795753182252	Jujunoor Cheruvu	Jujunoor	98.00	98.00
13	795533182502	Oora cheruvu	Maripally	90.00	130.00
14	795857181956	Nalla Cheruvu	Gopal pur	75.00	75.00
15	795874181743	Bondaiah Kunta	Madannapeta	75.00	70.00
16	79572418135	Medi Kunta	Ambala	65.00	65.00
17	795705181434	Kotha Kunta	Ambala	60.00	20.15
18	795257181578	Muthaiah Kunta	Gudur	60.00	60.00
19	794808181648	Chakalivani Kunta	Desharajupally	55.00	55.00
20	79562181426	Nagula Kunta	Ambala	54.55	54.55
21	795292181848	Chinta Kunta	Kamalapur	52.00	52.00
22	79979181669	Erra Kunta	Desharajupally	50.00	50.00
23	795403181700	Ayyagari Kunta	Gudur	50.00	50.00
24	795198182258	Simhadri Kunta	Gunded	48.00	48.00
25	795740182037	Narsimhula Kunta	Vangapally	46.00	46.00
26	794797182093	Bhogam Cheruvu	Bheempally	45.00	45.00
27	794882182213	Aboni Kunta	Bheempally	45.00	45.00
28	794991182072	Vadlavani Kunta	Kannur	44.00	44.00
29	795489181705	Mothu Kunta	Gudur	43.00	43.00
30	7952731822398	Mondi Kunta	Gunded	43.00	43.00
31	79577718272	Eddula Kunta	Marripaly	43.00	43.00

32	795448181674	Kummari Kunta	Gudur	42.00	42.00
33	79501181521	Eellama Kunta	Kaniparth	42.00	42.00
34	795828181646	Kotha Cheruvu	Madannapeta	42.00	42.00
35	794744181591	Ravi Kunta	Desharajupally	41.00	41.00
36	794938182137	Dammaka Kunta	Kannur	41.00	41.00
37	795704181583	Gudi Kunta	Nerella	41.00	41.00
38	795299181418	Ramaiah Kunta	Shambunapally	41.00	41.00
39	795979181774	Alli kunta	Shanigaram	41.00	40.00
40	795652182054	Jangala kunta	Vangapally	41.00	35.00
41	795342181655	Chirra Kunta	Gudur	40.00	40.00
42	795292181810	Erra Kunta	Kamalapur	40.00	32.00
43	795014181521	Oora cheru	Kaniparth	40.00	67.33
44	795997181666	Pasula Malaiah Kunta	Madannapeta	40.00	40.00
45	795659182472	Kummari Kunta	Marripaly	40.00	40.00
46	795508182287	Godla kunta	Marripalligudem	40.00	40.00
47	795672182375	Nadimi Kunta	Marripalligudem	40.00	40.00
48	795751181766	Basavayya Kunta	Shanigaram	40.00	90.00
49	795468181741	Achola Kunta	Gudur	39.00	39.00
50	795222181614	Pothula Kunta	Kaniparth	39.00	39.00
51	794938182137	Damsapur Cheruvu	Kannur	39.00	39.00
52	795665181382	Kummari Kunta	Ambala	38.00	38.00
53	795403181700	Sri Ramula Kunta	Gudur	38.00	38.00
54	795902181669	Erra Kunta	Madannapeta	38.00	38.00
55	795694182596	Rangaya Kunta	Marripaly	38.00	38.00
56	795510182353	Kotha Kunta	Marripalligudem	38.00	38.00
57	795665182272	Ramula Kunta	Marripalligudem	38.00	38.00
58	795408181976	Medi Kunta	Pangidipally	38.00	38.00
59	795280181327	Golipi kunta	Shambunapally	38.00	38.00
60	795199181679	Aithari Kunta	Kamalapur	38.00	38.00
61	794954181619	Nakkala Kunta	Desharajupally	37.00	37.00
62	795993182160	Thalla Kunta	Gopal pur	37.00	37.00
63	795526181735	Rai Kunta	Gudur	37.00	50.00
64	795344181949	Balaramaiah Kunta	Kamalapur	37.00	37.00

65	795702181658	Oora kunta	Nerella	37.00	70.00
66	795714181964	Bramandla Kunta	Vangapally	37.00	28.36
67	795662181754	Nadimi Kunta	Nerella	36.00	36.00
68	795408181976	Regula Kunta	Pangidipally	36.00	36.00
69	795261181773	Oora Kunta	Kamalapur	36.00	36.00
70	794766181860	Bramandla Kunta	Uppal	35.00	35.00
71	795581181412	Bramandla Kunta	Ambala	34.00	34.00
72	795595181344	Gidda Kunta	Ambala	34.00	34.00
73	795879181821	Devuni Cheruvu	Shanigaram	34.00	88.35
74	795958181841	Peetri Kunta	Shanigaram	34.00	34.00
75	79566918572	Revanthuni Kunta	Marripaly	33.00	33.00
76	795756182386	Garla Kunta	Marripalligudem	33.00	33.00
77	795922181286	Manyapu Kunta	Guniparthi	32.00	32.00
78	795127181455	Bandam Kuta	Kaniparthi	32.00	32.00
79	795510182353	Eddula Kunta	Marripalligudem	32.00	32.00
80	795771181900	Bandla Kunta	Shanigaram	32.00	32.00
81	794823182172	Kummari Kunta	Bheempally	30.00	30.00
82	794797182093	Banjari Kunta	Bheempally	30.00	30.00
83	795943181970	Mothayya Kunta	Gopal pur	30.00	30.00
84	795280181327	Balamma Kunta	Kaniparthi	30.00	30.00
85	794744181575	Pambala Kunta	Desharajupally	29.00	29.00
86	795418181722	Thetyala Kunta	Gudur	28.00	28.00
87	795783181970	Eddula Kunta	Shanigaram	23.00	23.00
88	795075182121	Thati cheruvu	Kannur		94.26

Similarly, the irrigation intensity has increased by 41.2% and gross irrigated area has increased by 49.5%. The gross irrigated area under tanks in the study has increased by 6550 acres and 6277 acres in the baseline year, which constitutes 4.35 percentage. Increase in paddy yield in the study areas was 4.4% and that of cotton by 11.6% in 2016 kharif compared to baseline year. Increase in paddy yield in 2016 rabi was 19.6%, maize by 6.7%. Savings on fertilizer use after silt application was found at 40% in the case of paddy, 31.2% for maize, 19.8 % for cotton, and 17 % for red gram and green gram. Mission Kakatiya programme has helped decrease in the gap ayacut under tanks, increase in irrigation intensity, increase in total cropped area, increase in yield of various crops cultivated, rise in groundwater table, reduced need of fertilizer after silt application, increased water retaining capacity of the soil and reduced wetting are among many other positive outcomes,”

VI.CONCLUSION

Mission kakatiya is the best mission which is introduced by Telangana Government to restoration of tanks by removing the dirt and silt and clear the rivers and thus help people to get the water very sufficiently. It has enhanced agriculture-based income for small and marginal farmers, by accelerating the development of minor irrigation infrastructure, strengthening community-based irrigation management and restoration tanks to its full potentials. It also paving way for the promotion of pisciculture on a large scale and finally this programme transformed the rural economy generating multiple income sources for locals and prevent their migration to urban centres.

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