



Impact of the Mission Kakatiya Programme on Scheduled Tribes: A Study from Warangal District of Telangana

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Abstract— A Nation's agricultural, social, and economic development depends heavily on irrigation. The production of food has been stabilized via irrigation, essential component of the production process in agriculture. Some civilizations have endured for thousands of years with sustainable irrigation, while others have seen their civilizations rise and die with the development and demise of their irrigation systems. Around two-thirds of agricultural production in India comes from irrigated agriculture, which has significantly reduced the country's dependence on foodgrains. The building of dams and irrigation systems has lowered the rate of poverty from 69% to 10% when the crops are farmed under guaranteed irrigation. The Mission Kakatiya initiatives will increase the ground water level around the village tank as well as the water storage capacity of the village tanks during the rainy season. The availability of water in the village tanks supports the expansion of agriculture and local livelihood options.

Keywords: Sustainable irrigation, Poverty reduction, livelihood, Crop security, Production.

I. INTRODUCTION

Irrigation Tanks have been vital to Telangana due to the state's location. The tanks, scattered throughout the state's ten districts, are extensively relied upon by the populace. The ideal irrigation method for Telangana's terrain and rainfall pattern is tank irrigation, which reserves and regulates water flow for agricultural use. Tank construction has been a Telangana specialty for a very long time, going back to the Satavahana period. The Kakatiya era demanded the highest degree of technical proficiency in tank construction. The Kakatiyas constructed tanks are Ramappa, Pakhala, Laknavaram, Ghanapuram, and Bayyaram. These tanks supported agriculture as well as the Kakatiya kingdom's general growth and wealth.

The centuries-long rulers of this area, Qutubshahis and Asafjahis, continued Kakatiyas' mission and legacy. The Telangana State's Small Irrigation Sources are intended to be revived and restored, and the administration wants to preserve this objective. Tank irrigation significantly improves agricultural growth, rural employment, and poverty alleviation.

The Telangana administration has invested a lot of time and energy in rural development. One of the government's main programmes is Mission Kakatiya. Telangana's main business is agriculture, thus the government used Mission Kakatiya to address difficulties with irrigation. Telangana farmers were able to rejuvenate their water supplies because to this programme. Minor irrigation sources were restored, community-based irrigation management was strengthened, agricultural services were offered, and diversification and new technology usage were encouraged.

II. OBJECTIVES OF THE STUDY

- ❖ To assess the effects of the Mission Kakatiya programme on the practise, output, and profitability of agriculture, and to emphasise those effects among scheduled tribes of Warangal District.

- ❖ To discuss how Mission Kakatiya has affected in the development of rural regions and the socioeconomic position of the Scheduled Tribe people.

III. RESEARCH METHODOLOGY

Research methodology is a list of all the steps and information involved in creating a research endeavour. Data collecting and analysis is a way that seeks to blend social in the process with relevance to the research objective. Both primary and secondary data were used. In this study, a thorough evaluation of books, journals, periodicals, etc., as well as internet surfing to get the most recent and accurate information about the research, were conducted. In addition to this, it was gathered through the analysis of pertinent material, both published and unpublished, Gazette Reports of the Government of India and the Government of Telangana, including research publications, news articles, records and documents from the government, census reports, and yearly reports from different ministries and directorates. The records and files from the government sources, reports from the census and annual reports published by the departments and directorates of both the state and union government.

III.I. AGRICULTURE, IRRIGATION AND ECONOMY IN KAKATIYA PERIOD

Agriculture was significant part in the Kakatiya era economy through trade, but industry and commerce were also significant. In order to collect, store, and utilize rainfall, the Kakatiya's concentrated on irrigational structures including the excavation of tanks, lakes, and canals. During this time, agriculture production grew. Since that Hindu literature consider tank construction to be a sacred activity, it has taken on a religious overtone. Constructing a tank was viewed as a philanthropic deed that conferred significant religious virtue on the receiver.

The beneficiary or local community used to keep up the irrigation works with financial assistance from the nobles and officials. As part of tank maintenance, bunds and sluices needed to be fixed, and canal silt needed to be cleared out. Farmers utilized bullock carts to transfer the silt that had collected as a consequence of sedimentation in the tank bed, which is fertile for agricultural regions. If there was any serious damage, the villagers would gather the cash necessary to fix the tank right away.

In order to carry water from rivers or streams to fill the tanks, diversion canals or channels were created during the Kakatiya dynasty. (For example, Musetikaluva, Antarangakaluva, and Krishnavenikaluvu.) In addition, holes were made to collect subsoil water from springs and uta kaluvas for the tanks and, in certain cases, for direct irrigation of farmland. According to the inscriptions from that era, these are some of the uta kaluvas: Kucinenikaluvu, Ravipetikaluva, Bomminikuntakaluva, Tumu kaluvu, Tamtikaluva, Alugukaluva, etc. Also, the farmers practised drilling wells and using them for irrigation. They used to utilise "etam" or "ratnam" or bullocks to physically pump water from wells for agriculture.

The monarchs of the Kakatiyas prioritised agriculture and constructed various irrigation systems. The bulk of irrigation systems are still in operation after 800 years since the following rules were set during the Kakatiya period. In order to increase the production from the tank's catchment region, the majority of tanks or lakes were constructed directly beneath heavily wooded or vegetated areas. Also, the locations were carefully picked, minimising the quantity of silt that was transported from the streams to the tanks. The length of the bund was also shortened since fewer lakes were constructed because there were already natural bodies of water linking the hillocks. To avert a water scarcity during a drought that lasts one or two years, a reservoir far bigger than necessary is built.

The Kakatiyas period dedicated great emphasis to develop large irrigation infrastructure around their empire. Before the Kakatiyas, the normal area under agriculture was quite little, the tanks were very tiny, and the irrigation systems were very simple. Although Telangana's red and sandy soil is very rich and well suited for wet farming, it needs a lot of water to be productive and provide enough grain to feed the people since it is porous. The first people to recognise this was the Kakatiyas. They also realised that wet crops might be cultivated on a huge scale, considerably enhancing the economic wealth of the country, provided the country's abundant rivers and streams could be preserved and utilised for agriculture. As a

result, they had the notion to construct massive tanks or dams where water large enough to irrigate wide areas of land could be kept.

III.II. MISSION KAKATIYA: VISION, STURUTURE AND FUNCTION

Telangana is the southeast state of India. It has a lot of historical elements and is located on the Deccan Plateau. The Godavari River, the longest in southern India, passes through the state. This state is well known for its robust primary sector output. The agricultural sector supports more than 65 percent of the state's population, while approximately 85 percent of farmers fall into the small and marginal category, with an average land holding size of 1.11 hectares. More than 70% of Telangana's planted lands provide poorer yields per unit, and the bulk of farmers there rely on rainfed agriculture.

As soon as the state of Andhra Pradesh was split apart, the government launched the initiative. "Mission Kakatiya" was the name given to the initiative when it first began. This initiative was launched in 2014–15 as a massive people's movement since it has the backing of the whole Telangana population. The government decided that 9,350 tanks would need to be removed each year for rehabilitation.

Tank construction has a long history in Telangana, dating back to long before the Satavahana, Kakatiya, Qutubshahis, and Asafjahis dynasties, which governed this region for decades. But, after independence, many administrations failed to invest in and maintain tanks, placing them in danger of extinction due to encroachment, siltation, and other factors. Due to the destruction of the tank system, the independent villages of Telangana are now more vulnerable to regular drought. Tanks have been vital to Telangana due to the state's location. The ideal irrigation method for Telangana's terrain and rainfall pattern is tank irrigation, which reserves and regulates water flow for agricultural use. Tanks may be utilised for a variety of purposes outside irrigation, including developing fisheries, acting as public grazing areas, and collecting clay for ceramics. There are approximately 46,531 tanks in the State, which consists of the 10 previous districts.

As part of the "Mana Ooru Mana Cheruvu" Mission Kakatiya initiative, all the tanks and lakes in Telangana State, India, are being repaired. Chief Minister Kalvakuntla Chandrashekar Rao formally introduced the initiative on March 12, 2015. As part of the Mission Kakatiya project, minor irrigation infrastructure is being developed more quickly, community-based irrigation management is being strengthened, and a comprehensive programme for tank restoration is being implemented. This project's goal is to increase the development of agriculture-based income for small and marginal farmers. The term "Mission Kakatiya" was created as a homage to and commemoration of the Kakatiya kings who built several irrigation reservoirs.

III.III. USES OF MISSION KAKATIYA

With an increase in water retention capacity, the soil will become less damp. The de-silting of the fluoride concentration will result in a large decrease in groundwater. Using silt in plants helps cut down on fertiliser consumption. The production of cotton, chiles, etc. will rise by almost 30% as a result. The mission Kakatiya is mostly used for farming. Crop output increases and agricultural practises stabilise as a result of the program's implementation.

III.IV. BENEFITS OF MISSION KAKATIYA

This initiative was started with the intention of supplying water to rural regions in general and the agricultural sector in particular. This scheme gave benefits to the farmers in numerous ways including effective irrigation system sand enhanced water management practises. One of the biggest advantages of Mission Kakatiya is the balanced use of chemical fertilisers in the agricultural field. The intensity of the cropping pattern and the appropriate cropping pattern boosted the production of the farmlands. Another aspect offered by this approach is a cost decrease during cultivation. The use of advanced technology in agriculture enhanced farmers' income.

III.V. CHALLENGES TO MISSION KAKATIYA

The absence of modern technological equipment in the operational Mission Kakatiya is one of the main obstacles. Farmers in

rural areas should also successfully use this technology. Lack of skilled workers, such as technicians and skilled labourers, in rural areas is another issue that needs to be addressed. Furthermore, for this programme to be implemented successfully, the work must be finished before the monsoon season, and Mission Kakatiya faces funding issues from the central government as well.

III.VI. PHASE MANNER FOR MISSION KAKATIYA IN TELANGANA STATE

The government intends to repair 9,306 tanks every year (20% of the total number of tanks) in order to restore all 46,531 tanks in five years. The present objective of "Mission Kakatiya" is to close this 10 lakh acre deficit without acquiring more land or allocating more water. It is feasible to irrigate the 10 lakh acres that are now under small irrigation tanks.

III.VII. MAKING IT AS A PEOPLE'S PROGRAMME

In order to promote participation in the broad government programme, it is intended to increase public knowledge of the importance of Chinna Neeeti Vanarula Punaruddharana through extensive exposure. By informing the public about the tank's 68 advantages via a range of media, it is crucial to motivate and persuade end users to join. The necessary departments are approached in order to inform them of the benefits of the programme and the importance of people's involvement.

IV. CONSTRUCTION METHODOLOGY FOR MISSION KAKATIYA STRENGTHENING / REPAIRS TO EARTH DAM / BUNDS

I. JUNGLE CLEARING

- It is necessary to remove all shrubs, plants, trees, and other objects. This aids in making sure that the newly deposited dirt is properly bound to the old embankment. This aids in making sure that the newly deposited dirt is properly bound to the old embankment.

II. MOISTURE CONTENT

- At the source of supply, the initial moisture content of the material, including that of borrow regions, should be determined.
- Moistening must be done with the correct spray nozzles or by using an appropriate sprinkler tanker.
- Direct water hose flooding or spraying is not permitted.

V. ROLE OF SOCIAL WORKERS IN MISSION KAKATIYA

A substantial portion of Telangana's economy is centred on agriculture. The Telangana government has launched Mission Kakatiya as a community engagement programme to develop sustainable agricultural resources, and the MDGs focus value on community involvement in the sustainability of agriculture. Mission Kakatiya's objectives include adopting a comprehensive programme for tank repair, encouraging the construction of small irrigation infrastructure, and strengthening community-based irrigation management. Little irrigation tanks can only be efficiently operated and maintained by the primary stakeholders, as is well recognised. The Mission Kakatiya program's tank restoration intervention includes revitalising the community-based management mechanisms for the tanks as one of its key elements.

VI. MISSION KAKATIYA AS SOCIAL CAPITAL IN DEVELOPMENT PROGRAMMES

Social capital may provide an explanation for how Mission Kakatiya's growth and sustainability are impacted by the social context. Researchers concerned with the sustainability of community development and conservation initiatives have called for more attention to show how outcomes are affected by various forms and stocks of 'social capital, suggesting this as a missing link in the sustainable development agenda. Resource management strategies that are founded in community cannot afford to

overlook the effects of political hegemony and exclusion.

It is suggested that social capital built up via prior experience and capacity-building initiatives can multiply, encouraging the development of future collective action and common interest solutions to local issues. Social capital has been recognised by the WHO and the World Bank in particular as a crucial instrument for eradicating poverty and fostering community growth.

VII. MISSION KAKATIYA: FOOD SECURITY & SUSTAINABLE ENVIRONMENT :

Several international and national public organisations have made food security one of their top priorities since it is one of the key components of development and the reduction of poverty. It is described as having access to enough wholesome food that satisfies their dietary requirements and personal food preferences for an active and healthy lifestyle. The state in which all people, at all times, have physical, social, and economic access to sufficient, secure, and nourishing food is known as "world food security," according to the United Nations Committee on World Food Security.

- 1. Availability** of Food supply and commerce have to do with variety and quality as well as amount of food. It need effective farming systems, properly managed natural resources, and productivity-enhancing policies to increase availability.
- 2. Access** includes both financial and practical food availability. To increase access, smallholders must have improved market access, enabling them to increase their income through cash crops, animal products, and other businesses.
- 3. Utilization** refers to how the body makes use of the different nutrients included in diet. A person's nutrition status is influenced by their health, eating habits, how they prepare their food, the variety of their diet, and how food is distributed throughout the household. Enhancing nutrition and food safety, diversifying diets, lowering post-harvest loss, and giving food more value are all necessary for increased usage.
- 4. Stability** - Maintaining food security at all times is a sign of stability. A harsh season might cause short-term shocks that lead to temporary food insecurity.

VIII. MISSION KAKATIYA CAN HELP FARMERS IN THE FOLLOWING WAYS TO ACHIEVE FOOD SECURIT

1. Rejuvenation of lakes will increase water security during dry seasons and aid in rainwater harvesting.
2. It offers alternatives, such as fishing and grazing spaces for cattle.
3. When organic debris, fish, and other aquatic species decompose over time, the beds of lakes and tanks gradually deposit soil that is rich in nutrients and humus.
4. Lake rejuvenation raises the water holding capacity of the lake, which increases the availability of water by increasing groundwater replenishment through higher percolation of water.

IX. POTENTIAL BENEFITS FOR ST COMMUNITIES

The restoration of irrigation tanks under Mission Kakatiya has led to increased groundwater levels, reduced power consumption for farming, higher crop yields, and overall rejuvenation of the rural economy . For ST communities, who often rely on agriculture and related activities, these improvements can translate into enhanced agricultural income and better livelihoods.

X. CHALLENGES AND CONSIDERATIONS

Despite these benefits, specific challenges may affect the extent to which ST communities benefit from Mission Kakatiya.

Issues such as equitable access to restored water resources, the need for capacity building, and addressing land ownership patterns are crucial to ensure that STs fully capitalize on the program's offerings

XI. DATA ANALYSIS AND FINDINGS OF DATA ANALYSIS

It's an important work in every social research the quality findings depends on the quality of data analysis. In this part an attempt is made to analyze primary data which has been collected from respondents during field work

Table No. 1: Gender of the Scheduled Tribe – Respondents

Sl.No	Gender	Frequency	Percent
1)	Male	50	62.50
2)	Female	30	37.50
	Total	80	100

Source: Primary data

The above table shows that among 80 respondents 62.50% of the respondents are male while the remaining 37.50 % of the respondents are female.

Table No. 2 : Marital Status of the Scheduled Tribe - Respondents

Sl.No	Marital Status	Frequency	Percent
1)	Married	60	75
2)	Unmarried	20	25
	Total	80	100

Source: Primary data

The above table depicts that among 80 respondents 75% of the respondents are married while the remaining 25 % of the respondents are female.

Table No. 3 Age Group of the Scheduled Tribe - Respondents

Sl.No	Age	Frequency	Percent
1)	18 - 25 years	8	10
2)	26 - 35 years	30	37.5

3)	36 - 45 years	24	30.0
4)	Above 45 years	18	22.50
	Total	80	100

Source: Primary data

The table limelight that among 80 respondents 10% of the respondents belong to the age group of 18-25 years, 37.5% of the respondents are in the group of 26-35 years, 30% of the respondents are between 36 to 45 years and the remaining 22.50 % of the respondents belong to the age group of above 45 years

Table No. 4 Occupational Wise Useful by Implementing Mission Kakatiya to the Scheduled Tribe - Respondents

Sl.No	Occupations	Frequency	Percent
1)	Agriculture	48	60
2)	Fisheries	12	15
3)	Artisans	14	17.5
4)	Cattle Rearers & Daily Farmers	6	7.5
	Total	80	100

Source: Primary data

The above table shows that among the 80 respondents 60% of the respondents are agriculturists, 15% of the respondents are fisheries, 17.5% of the respondents are artisans and 7.5% of the respondents are cattle rearers and daily farmers.

Table No. 5 SATISFACTION LEVEL REGARDING THE IMPLEMENTATION OF THE MISSION KAKATIYA AMONG THE SCHEDULED TRIBE RESPONDENTS

Sl.No	Age	Frequency	Percent
1)	Highly Satisfied	16	20
2)	Satisfied	40	50
3)	Neutral	10	12.5
4)	Dissatisfied	14	17.5
	Total	80	100

From the above it is understood that among the 80 respondents, 20 % of the respondents conveyed that they are highly satisfied, 50 % of the respondents conveyed that they are satisfied, 12.5 % of the respondents conveyed that they are neutral and 8 % of the respondents conveyed that they are dissatisfied

XII. CONCLUSION

The study's final finding is that Mission Kakatiya has a stronger ability to boost farmers' confidence. Farmers fully feel that the government made the correct decision by funding Mission Kakatiya, according to the survey. The majority of people believe that this is only feasible since a separate Telangana state was created. They gave Chief Minister K. Chandrasekhar Rao all the credit. According to the responders, Mission Kakatiya is a financially sound initiative that might serve as an excellent example for other governments.

Other physical and infrastructural factors, such as the quantity of agricultural agriculture, the size of forests, the use of agricultural machinery, fertilizers, and power, have been affected by Mission Kakatiya. Several people have expressed the opinion that the project is effective in lowering the number of bore wells, diversifying crops, restoring soil fertility, clearing silt from the tanks, managing tanks and bunds, etc.

The programme also significantly contributes to raising farmers' knowledge of sociopolitical issues. People's perspectives have improved since Mission Kakatiya was put into action, and economic growth is to blame for this. The Mission Kakatiya's beneficiaries are revitalizing their relationships with one another, their sense of community, and long-forgotten customs. It is remarkable how Mission Kakatiya helped mitigate unwanted effects. Humans are able to come to agreements and coexist peacefully. Land issues are being settled more quickly. Both migrations and farmer suicides have significantly decreased.

Thus, it can be said that Mission Kakatiya has improved its beneficiaries' socioeconomic level, standard of living, and, last but not least, their sense of self-worth in addition to their agricultural output. Mission Kakatiya has positively impacted rural communities, including Scheduled Tribes, ongoing efforts are necessary to address specific challenges and ensure equitable benefits for ST populations.

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