

Women's Role in the Irrigation Activities During the Vijayanagara Period

Vengala Anjani Simha¹, Neelisetty V Madhav Gupta²

^{1,2}Assistant professor, Department of History, Maris stella college

Abstract

This paper discussed the Importance of Irrigation in the Vijayanagara Empire and the role played by women in various irrigation activities. Irrigation in the Vijayanagara period was primarily subdivided into Canal, Tank, and Well Irrigation. Epigraphic evidence across the Vijayanagara Empire yields numerous inscriptions that highlight the significant contributions made by women. Contemporary literary evidence also throws light on the role of women in the irrigation, agriculture, and its allied activities. Along with the Royal women and nobility, common womenfolk, including the Devadasis, made vast donations for the building of canals, tanks, and Wells. For the sake of irrigation in some villages, several women sacrificed their lives.

Women played a subtle but important role in irrigation and water management under the Vijayanagara Empire, although inscriptions and chronicles mention them less frequently than men. Based on epigraphic evidence, agrarian studies, and temple records, we can outline their role as follows.

Keywords: Women, Irrigation, Inscriptions, Donations

INTRODUCTION

Irrigation was essential to the economy of the Vijayanagara Empire, where agriculture formed the backbone of the state. The rulers focused on irrigation projects, particularly in the semi-arid Rayalaseema and Bellary regions surrounding the capital, Hampi. The Tungabhadra River played a critical role in supplying water to the area. Advanced canals and anicuts were constructed to manage water effectively, benefiting both the capital and adjacent agricultural lands. These irrigation techniques were so effective that they still influence modern water management.

The region's uneven and hilly terrain prompted residents to develop methods for artificial irrigation, essential for enhancing agricultural productivity amid unpredictable monsoon rains. Average rainfall of 20 to 60 inches per year is insufficient for the growing population, leading to droughts and famines documented in various historical records. Urban communities relied on private and communal tanks, borewells, and advanced water recirculation systems in royal enclosures. Large tanks, known as anicuts or bunds, were crucial for irrigation, making the fortified city self-sufficient even during sieges.

Agriculture dominated the population's activities, with crops like rice, wheat, ragi, cotton, and sugarcane being cultivated, along with introduced crops like onions and tobacco by the Portuguese. Significant water tanks, such as Bukkasamudram and Krishnarayasagara, were built, many of which still exist today.

Overall, irrigation was vital for sustaining agricultural productivity in this challenging climate, with land tax forming a major part of the empire's revenue. The engineering prowess of the time is evident in projects like the Viranarayana Tank at Tirupati, which underwent renovations under Vijayanagara rulers.

Geo-Physical Factors

The development of irrigation facilities in the Vijayanagara Empire was largely driven by its geophysical location in the Deccan Plateau, where annual rainfall ranges from 60 cm to 100 cm, especially south of the Krishna-Tungabhadra doab. The region features undulating hilly terrain, unlike the flat plains of the Gangetic Valley.

The rivers in this area, including the Krishna, Tungabhadra, and Kaveri, are non-perennial and rely heavily on inconsistent monsoon rains. They can overflow during the rainy season, causing damage, but dry up soon after. Consequently, much of the river water flows into the sea without being utilized. The hard and sandy soil formed from basalt rocks further complicates agricultural productivity, making it challenging for the people of the Vijayanagara Empire to achieve self-sufficiency in food production.

Literature Review

Many sources, like epigraphical, archaeological, foreign accounts, and literary sources, highlighted the works done by the Vijayanagara rulers in the field of Irrigation. Foreign Accounts includes Chronicles from visitors like Domingo Paes, Duarte Barbosa, and Fernão Nunes described an extravagant and sophisticated network of canals, wells, and anicuts (dams) around the capital city of Vijayanagara (Hampi), attesting to its scale and complexity. Literary Evidence includes Sri Krishna Devaraya, in his Telugu work 'Amukhtamalyada', who emphasized the role of the state in the provision of irrigational facilities for the farmers and active participation of women in the agricultural activities.

Archaeological Evidence, including Physical remains, such as the water channels leading to the Queen's Bath in the Zenana enclosure and numerous step wells found throughout the core urban area, corroborates the extensive infrastructure mentioned in foreign accounts. Epigraphical Sources includes over 100 inscriptions recording grants and donations from both royal women and common womenfolk towards constructing and maintaining irrigation works, demonstrating widespread societal participation and investment in water management systems.

Together, these diverse sources confirm that irrigation was a top priority for the Vijayanagara rulers, crucial for sustaining their prosperous agricultural economy and large urban population.

Role of Women in Irrigation

Women played a significant, though often less recorded, role in the irrigation systems of the Vijayanagara Empire. Royal women, particularly queens and princesses, sometimes acted as patrons of irrigation works. Inscriptions from the period mention noblewomen donating land for tanks, canals, and wells, or offering resources for the maintenance of water systems connected to temples. By sponsoring these projects, elite women contributed to the expansion and upkeep of irrigation infrastructure.

Temple women also had an indirect role in irrigation. Temples were major landholders, and women associated with temples, including patrons and devadasis, occasionally endowed lands or wealth for irrigation. Since temple lands depended heavily on well-maintained tanks and canals, women's contributions to temples often translated into the support of irrigation networks.

At the village level, peasant women actively participated in agricultural tasks that relied on irrigation. They assisted in transplanting paddy, watering garden crops, weeding, and maintaining bunds and small channels. Their everyday labor ensured that water from tanks and canals was effectively used in farming. In some cases, inscriptions mention women as independent landholders, especially widows, who were directly responsible for securing irrigation for their fields and negotiating water-sharing rights.

Beyond the economic aspect, women were also involved in the cultural dimension of irrigation. They took part in rituals and festivals around tanks, rivers, and agricultural fertility. Prayers and ceremonies performed by women sought to secure rainfall and good harvests, symbolically linking irrigation to the prosperity of the community.

Thus, women in the Vijayanagara Empire contributed to irrigation in multiple ways as patrons, as temple associates, as agricultural laborers, and as cultural participants. Their roles, though less highlighted in chronicles, were essential in sustaining both the agricultural economy and the water management traditions of the empire.

Consecration and Sacrifices by Women

Ancient scriptures like the Rigveda & Yajurveda endorsed certain benefits and sacrifices to pacify the evil spirits. That was particularly so in the case of the irrigation works. In the Rigveda, there is a legend of a Human sacrifice to Varuna. Yajurveda refers to the human sacrifices being offered to strengthen such vulnerable points at dams.¹

For one of the Panchabhootas, “water”, women sacrificed their lives from ancient days. Water is the most important element for women as it is essential for every household chore. Women depended on water for drinking, bathing, religious rites, cleaning, agriculture, and allied activities. In the Jaanapada (folk) stories, there was a correlation between the women and water. Water is the root and epicenter of crops and life. Hence, people believed the river was the feminine form of energy. In India, from the Rivers Indus to Kaveri and Ganga to Godavari, every river was named after a goddess. As women have been associated with fertility from ancient times, people believe women have the power to control water. Many folk stories gave evidence of sacrificing women, particularly Garbhini (pregnant, for the control of floods and the sake of rain.

In the Vijayanagara period from the traveler accounts we understand that during the construction of great temples, tanks, and large structures, they used to sacrifice people. To satisfy the goddess, people believed women should be sacrificed. In one of the Kannada folk songs, Mallanagouda of Kallanakeri Village constructed a tank. But the bund could not withstand the force and the thrust of the water, as a result of which it got breached. At last, taking in to consideration the general welfare that was involved in it, one young lady named Bhagirathi, the youngest daughter-in-law of the village headman, volunteered to sacrifice her life and she was sacrificed her life which resulted in the stoppage of bund breaks.

Chikka odeya, minister of the king, Bukka Raya of the Vijayanagara empire, built a tank in the year 1364 A.D., and the life of a girl had to be sacrificed at the time of embankment of that tank. On the bund of a tank of Hanasi village, in Bellary district, there is a crude shrine, built probably hurriedly in the past, with a crude sculpture inside the shrine. The sculpture is stated to represent ‘Kanya-Viramma, ’ a virgin who had sacrificed her life heroically for that tank.

In the tank of Pengalur, Cuddappah district, as the tank breached at several places, a year after its construction, after sacrificing even the daughters of its architect, breaches were reported to have been closed successfully.²

The village of Bukka Raya Samudram was known for its giant lake, built on the orders of Vijayanagara ruler Bukka Raya in the 14th century. The Village got its name from the tank. One of the jaanapada (folk) stories is about Musamma, who sacrificed her life for the welfare of the villagers. This lake was built by ‘Chikkappa Wadayar’. A village named Bukka Raya Samudram was established along the eastern bund of the tank, and another one called AnanthaSagaram was developed on the western side in memory of

Chikkappa Wadayar's wife. Both villages are located in the present-day Ananthapuram district of Andhra Pradesh.

As time progressed, after some years later due to the heavy rains, cracks appeared, and the bund(katta) collapsed. Whenever people were scared for their lives, the water goddess Gangamma appeared as a woman and asked for a sacrifice. She said that after the sacrifice, she would calm down, and the floods would recede. Hence, Musamma, the daughter-in-law of Basireddy, decided to sacrifice for the sake of the village's security. She went near the tank and sat in the place where cracks occurred in the tank bund. A village filled the cracks of the bund with big boulders and sand. Musamma was buried under this soil and rocks. As Gangamma was satisfied with the sacrifice, the Floods receded after the death of this great woman, "Musamma". Still in around Bukka Raya, Samudram Musamma was revered as a tank deity

Women as Donors of Irrigation Facilities

The village of Malapanagudi near Hampi developed under the God Mallakarjuna. Notable is an octagonal well, Sulebaavi (courtesans' well), though its naming origin remains unclear, whether honoring courtesans or serving their water needs. This well features 34 steps leading down, adorned with arches and bas-reliefs, reminiscent of Islamic architecture.

Inscriptional evidence shows that many women actively supported the provision of irrigation facilities. Many women gave donations, for instance, an inscription recorded in 1540 A.D. mentions that a tank was constructed by Chinnamamba, wife of Chief Pratapa Yalla and sister of Ramaya Mantri Bacha, the chief minister of King Achyuta Raya.⁴ Since a tank is an essential avenue for better living, and as the women have donated for the tank, we can infer that the donor enjoyed some remarkable position and was aware of the growing needs of the community. Economically also she must have been self-sufficient to give this particular donation.

In the year 1467, during the reign of Saluva Narasimhadevaraya, an inscription was inscribed on the north wall of Tallapakam Sankirtana Bhavanam records the execution of the document regarding the excavated irrigation channel in Mavandur for lands in Adittanapally, a temple village made by Srirangamba Devi, the queen, for the supply of articles for the four Tiruppakonam daily to lord sri venkateswara. One prasadam was to be received by the Srivaishnava Hastigiri-Dasar, who cultivated the flower garden in the Tirumala belonging to the queen.⁵

In the year 1518 A.D, during the reign of Srikrishna Deva Raya, an inscription records a grant made for the merit of the king by Ekkadi Timmamman, daughter of Nalla Gangamma, of 1500 narpanam into the Sri Bhandaram for carrying out repairs to irrigation channels and tanks in the temple villages, instead of which the sthanattar of the temple was to conduct the Tirupponakam service. The donor's share of prasadam was to be made over to Venkatesa Dikshitar, son of Kanjana-Bhattar, at Takkalur.⁶

An inscription mentions Irrigation and names the village after their mother-in-law, and the village was named after the wife of Minister Timmarasu. In the year 1516 A.D., dated April 5th during the reign of Tuluva Srikrishna Deva Raya, an inscription records that Appaya and Gopaya, sons-in-law of Saluva Timmarasu and sons of Nadindla Timmaraju, having renovated at their own cost the canal named Devulakaluva leading to Timma-Samudra, named after Timmarasu, created a new village called Lakshmi-Samudra in the name of their mother-in-law Lakshamma, wife of Timmarasu, and granted the same on the occasion of Akshaya-Tritiya to god Bilesvaradeva of Sajaladimna for the merit of their grandparents⁷ During the reign of King Sri Krishnadeva Raya, in the year 1516 A.D., a Brahmana purohita named Ranganatha Dikshita, after receiving a village in a grant from the king, constructed a tank and named it

Nagasamudra after the name of the king's mother, Nagaladevi, with the purpose that the king's mother would get the merit.⁸

In the year 1487 A.D., Chikka Tippa Rajendra, who was ruling from the Nidugallu fort, had a tank constructed in the name of his deceased queen, Lakshmidēvi. The tank was named after the queen as Lakshmidēvikere and was converted into an Agrahara, which was then granted to the Brahmins.⁹

It is said that the Gajapati queen Tukka Devi, wife of Sri Krishna Deva Raya, after a rift with the king, relocated her base to Cumbum in the north, where she spent the remainder of her life. She is said to have built a large irrigation tank in Cumbham of the modern-day Prakasam district in the Andhra region¹⁰

The Vijayanagara Empire developed a sophisticated and extensive tank irrigation system, essential for sustaining its large population and thriving agricultural economy in a semi-arid region. Rulers, nobles, and local communities constructed numerous large reservoirs (tanks) and anicuts (dams) across streams and the Tungabhadra River to capture and store monsoon rainwater.

This water was distributed via gravity-fed canal networks and aqueducts to fields and the urban core of the capital city, Hampi. The system supported diverse agriculture, including multiple crop cycles, and boosted state revenues. Maintenance was a collective responsibility, involving local assemblies and tax exemptions for participants, ensuring the system's longevity; many of these ancient structures are still in use today.

In the year 1397 A.D., A Daughter of the king, Bukkaraya, Jommadevi, living in Penugonda Rajya, desired to have a canal in front of the village Tirumaniyur for feeding the irrigation tank. So she sent for her ministers, Nagaraja and Mayanayani, and asked them to arrange for the excavation of the canal and the tank, and they executed the work successfully.

The inscription of Lakkana-Odeya, a minister of King Devaraya II, while making a grant to one Annadata, son of Singarasa, mentions a tank built by a lady, Danakanidevi, probably the wife of the Donee. The inscription is of the year 1410 A.D.

In the year 1467 A.D., Sree Rangambadevi Amman, queen of the ruler Saluva Narasimha, donated for the excavation of an irrigation channel in a temple village.

In the year 1516 A.D., from Pendekallu village, two brothers named Appayya and Gopayya founded a new village, along with building a new tank, and named it Lakshmisamudram in honour of their mother-in-law.

A Telugu inscription from Srisailam records that both husband and wife were responsible for the construction of a tank at Siddhapura, in the year 1518 A.D.

In the state of Pondicherry, a tank was built by a Dancing girl on the orders of Srikrishna Devaraya at the place called Muttitrayarapalayam.

A large tank near Bangalore was formed in 1533 A.D., fed by the river Arkavathi. This was built at the orders of King Achyutaraya for the merit of his mother, Obambika, and was renamed the tank as Obachchiyammana-Samudram.

Construction of a tank called Gopinatha-Samudra, near Ramachandrapura, an Agrahara Village, has been referred to in a record of the year 1540 A.D. It was constructed by a lady, Chinnamamba, the wife of Chief Pratapa Yalla and sister of Ramaya-Mantri.

An inscription from a village called Rangasamudra, in Rayadurg Taluk, records the construction of a tank by a lady, Lacharama-ammavaru, wife of Dalavayi Venkatapati-Nayaka, a local ruler.

Along with the tank sluices, weirs were also built by women. An inscription from Vaallatukottai village, in Chengalpet district, records that the sluice of the tank of the place was the gift of one Ellammal, the

mother of Varadappa-Nayakkan of Tondaimandalam, who was a local ruler ¹¹

In the year 1628 A.D., from a village, Atmakur, in the Nellore district, a lady of noble stature, Raghupati Ammagaru, daughter of Muchintal Rangappa Nayani and the wife of Velugoti Komara Timmayani and the mother of Venkatapati Nayaka, was responsible for the construction of the weir for the tank, which was set up with traditional 33 posts on the weir-wall. In addition, she got the tank bund further strengthened with earthwork, so that the benevolent deeds lasted forever, and so on ¹²

Well Irrigation

Well irrigation in the Vijayanagara Empire complemented the extensive tank and canal systems, playing a vital role in local and private agriculture. Rulers encouraged the digging of wells, offering tax incentives for individuals or institutions undertaking such works.

These wells, often elaborate step-wells in urban areas, accessed groundwater for domestic use and to irrigate smaller, nearby fields, especially in areas distant from river channels. This system provided a reliable, perennial water source, enhancing agricultural resilience in the semi-arid Deccan region.

There is an inscriptional reference, of the Vijayanagara period, which recommends the construction of a well, as one of the several meritorious deeds to be performed by man. It is in the context and form of advice given to the minister, Lakshmana-amatya, by his mother.

A Lady by the name Mallamma, who was the wife of Mallappa-Nayaka, an officer at Kurugodu, and daughter of Madhapa-Nayaka, another officer at Ballakunde got repaired, got the well of the temple of 'Santha-Mallikharjuna' at Kurugodu Village. After the completion of the repairs, the well was donated in the year 1512 A.D. for the maintenance of the flower garden that belonged to the above temple.

Conclusion

"Irrigation, which was considered one of the key elements for agricultural prosperity, was well organized in the Vijayanagara Empire. In these irrigation activities, women played a prominent role as donors and even encouraged their husbands to actively donate for irrigation activities. Various types of irrigational facilities like tank irrigation, canal and well irrigation, along with the weirs of the tanks, were built, maintained, and restored by the women. This shows their immense contribution made by the women of the Vijayanagara period to the overall development of society."

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