

## **Irrigation as a Social Responsibility, A Case Study of Kakatiya Period**

**Dr.GUGULOTHU RAVI**

*Post Doctoral Fellow, Department of History & Tourism Management  
Kakatiya University Warangal*

Water is the essence of Nature. Without water the living things cannot survive and the world cannot exist. The qualities of water and its essential nature are recognized since ancient times. Indian literature refers to the precious nature of water at several instances. In the Atharvaveda, the importance of water is described thus:

“Water is good, water indeed is fatness....

May the strong rain of those who scatter sweetness  
Come helpful unto me with breath and vigour. Here,  
O ye waters in your heart. Here is your calf, ye  
holiness,

Flow here, just here, O mighty streams whither I now  
Am leading you”<sup>1</sup>.

The vital activity of water in the natural phenomena is well recognized in India. The Hindus attached divinity to water and called it ‘Ganga’ and ‘Yamuna’. Varun is the god of rain and water. The banks of rivers, river confluences, places of water springs, tanks, sea shores etc., are treated as sacred places, where the temple were built and gods installed<sup>2</sup>.

The presence of divinity is felt more in places where a pleasant river flows, swans swimming in the water with the flowering trees on their banks<sup>3</sup>. The Vishnu dharmottara, referring to the installation of images, states that installations should be made at river slides, in forests, gardens, at the sides of ponds, on hill tops and in beautiful valleys. At these places, the denizens of heaven are present<sup>4</sup>. In Tirukural it is stated that the world cannot exist without water and rain gives life to all the creation, revives the dying vegetation, restores life to what seems to dead<sup>5</sup>. Water is considered to be “liquid gold” in the east<sup>6</sup>. Thus the importance of water in the practical life is well recognized even in literature, in mythology, in religion and ritual.

Apart from being the essence of life water plays an important role in the economic life of all societies, as medium of transport, as source of irrigation for agriculture, for power and drainage.

The earliest civilizations of the world flourished on the banks of the great rivers. River waters helped the man in developing agriculture, easy transport, and also to have

commercial inter course with distant communities. The rivers acted as the agents in enriching the soil by their seasonal inundation and providing irrigation for the growing crops, as well as the highways by which the produce of the land could be transported to cities<sup>7</sup>.

Irrigation is the artificial creation of water resources by constructing dams, tanks, canals, channels etc., for agriculture. In India, the antiquity of irrigation goes back to the beginnings of civilizations and early farming communities. The hunter-gathers of the prehistoric times turned to be food producers during the Neolithic period<sup>8</sup>.

The people of the “Harappan culture” were also familiar with agriculture as evidenced by the food grains collected from the sites like Mohenjo-dara, Harappa, Lothal etc., though no irrigation systems of the period are brought to light, it is evident from their highly advanced drainage and sewerage systems that the Harappan people must have used the waters of Indus and other small rivers for irrigating their farm lands by constructing dams and tanks and by digging channels etc. During the vedic period also, there are references made distinctively to wells, canals and dams.

The artificial tank irrigation became more popular in the Peninsular India because of its physiographical features inadequate rainfall and lack of perennial rivers in the region. The antiquity of artificial means of irrigation such as tanks, channels etc., may be traced back to the Megalithic times in South India. Almost ninety percent of the Megalithic sites, a characteristic feature of South India, are in close proximity to large reservoirs or river banks<sup>9</sup>. From the extensive archaeological data on Megalithic, it is concluded that the authors of the Megaliths were settled people who practiced agriculture as their main industry and knew the value and use of irrigation<sup>10</sup>.

During the early historic period and medieval times, the importance of irrigation was spoken highly in the literary works as well as the epigraphical records of the period. The Tirukural and other works of the Sangam period stresses the importance of irrigation and agriculture to society<sup>11</sup>.

A few treatises on law also speak with authority on the importance attached to irrigation. The **Mitakshara**, written by Vignaneswara who adorned the court of Chalukya Vikramaditya VI, AD 1076-1126, advocates the importance of irrigation works by stipulating rules and regulations for the construction of tanks, wells etc., and for their protection. These stipulations are useful even for the modern society.

### The Mitakshara states thus

“When after obtaining the permission of the owner of the field either by request or by payment of money, a man wishes to erect a dam for water or sink a well and if the owner of the field occupies it, the owner himself is punishable”.

“The construction of a dam to a water flow should not be stopped by the owner of the field, even though it destroys another’s land, provided that it causes little injury and is productive of much benefit (to many). A well, moreover, as it occupies a small portion of land, causes little injury but is beneficial on account of the abundance of water (in it) shall never be stopped. The use of a well more over is indicative, by implication of a small well, a water pond and like others”<sup>12</sup>.

The construction or digging of a tank is considered by the early writers as the greatest of the seven meritorious acts of a man<sup>13</sup>. The **Amuktamalyada** of the illustrious Vijayanagara king Sri Krishnadevaraya stresses the vital importance of irrigation by stating that both virtue and prosperity would increase only when tanks and irrigation channels were constructed<sup>14</sup>. Indian Epigraphical records, while referring to numerous foundations of tanks construction of bunds and sluices, digging of channels and wells, emphasise the real Indian perception in giving so much importance to irrigation. The early Prakrit inscriptions contain references to the excavation and construction of such water reservoirs as **Kupi, Vavi, Kue Vavika, Tataka, Podhi** etc. In the Sanskrit epigraphs, there are such varied references to water works as **Vapi, Kupa, Tadaga, Paniya-Sangraha, Udapana, Dirghika, Kesara, Saras, Samudra** and **Sagara**<sup>15</sup>.

The famous Junagadh inscription of Rudradaman, dated AD 150 is the earliest inscription to speak about some technical details and the repairs conducted to the already existing Sudershana lake<sup>16</sup>. The Hisse-Borala inscriptions of Vakataka Devasena, written some time in AD 458-59, refers to the construction of a reservoirs and named Sudersanasaras. The slab bearing this inscription was found in a place where there are remains of an ancient brick wall beside an old lake<sup>17</sup>. a well found on the side of

the Pundariksha Perumal temple at Tiruvellarai near Tiruchirapalli in Tamilnadu has an inscription of ninth century AD engraved on a number of stone slabs forming the margin of the well. It states that the work on the **Perunginaru** or big well was commenced in the fourth and complete in the fifty year of Pallava Dantivarman’s reign. This well was repaired in AD 1262 during the reign of Hoyasala Ramanathadeva<sup>18</sup>.

The priority given to the construction of tanks over temples is clearly understood from the inscriptions referring to the founding of new settlements. Among such numerous examples, the Kannada inscription of AD 1210, from Agrahara Belagum in Hassan district of Karnataka alludes to the founding of an **agrahara** thus:

“Having created an **agrahara** by the names of Kesavapura, having constructed the tank called Kesava samudra and Lakshmi-Samudra and having erected the temple of Isa and Kesava”<sup>19</sup>.

Some of the epigraphical records have explicitly revealed the great religious and social significance attached to the excavation of irrigation works like tanks, canals, sluices etc. From the beginning the construction of a tank was considered as an act of charity which attributed religious merit. As an impact of these ideological perceptions, the kings, the samantas, the nobles and officials, the merchants and all wealthy man and women in general all contributed a lot in the construction of irrigation works. Particularly the rulers felt, throughout the historic times, that it was obligation on their part to provide irrigation facilities throughout their kingdom. Rulers without heirs considered the creation of a tank as their contribution to one of the Sapta samtanans. Even otherwise also the construction of a tank is considered as one the **Sapta Samtanans** or seven kinds offspring or seven acts of righteousness, which would also immortalize the name of the donor and establish his fame permanently<sup>20</sup>. The Ganapesvaram inscription of Kakatiya Ganapatideva (AD 1199-1262) enumerates the seven kinds of offspring or the **sapta samtana** as the procreation of son, the composition of a poem, the hearing of treasure, the planting of a grove, the marriage of a girl to a Brahmana, the construction of a temple and the construction of a tank<sup>21</sup>. The Vanapalli plates of Anavema dated saka 1300, also refers to these Sapta samtanans.

The Porumamilla tank inscription of AD 1369 is a classic example commemorating the construction of a tank<sup>22</sup>. Apart from invocatory and genealogical details, the epigraph extols the merit of attaching to the building of a

tank and also the details of tank construction and the specifications of the site etc.

Verse nine enumerates the seven kinds of the best off springs such as: a son, a literary composition, a tank, a hidden treasure, a Siva temple, a grove and a brahmana village.

It also quotes from Hemadri's **Danakhanda** to explain the importance of water and irrigation works.

- (V.22) "Making charities in various way in keeping with the treatise of Hemadri, he heard that the merit attaching to the gift of water was the greatest of all.
- (V.23) on the authority of the Vedas: 'Verily all this is water]' and the Sruti says that; 'from water alone is produced food; and food is Brahman]'
- (V.24) There can be no doubt (that) water alone is the seed of the world of movables and immovables. Why speak more? I shall describe the superiority of water (as follows):
- (V.25) Even that (great) Siva is the bearer of the Ganga; Vishnu has the ocean for his abode; Brahma is sprung from the water-born (lotus). Hence water is superior to everything (else).
- (V.26) A shed for distributing water (prapa), a well and a reservoir, a canal and a lotus tank: the merit of constructing them in millions and millions (of tanks) higher in succession.
- (V.27) As the water of a tank serves to nature both movable and immovable creation on (this earth, even the lotus-seated (Brahma) is unable to recount the fruit of merit (attaching) to it<sup>23</sup>.

These verses clearly explain the importance given to water and irrigation works throughout the period from Vedic times to fourteenth century AD.

In another inscription of sixteenth century AD it is said that the gods, men, **pitris**, the **gandharvas**, **uragas**, **rakshasas** and the **bhutas**, all depend on a tank. It is also claimed that the person, in whose tank, men, beasts and birds quench their thirst by drinking its water acquire the same merit as attached to the performance of an **Aswamedha**. Further claims that the **pita** of the excavator of a tank rejoices, the **Pitamaha** dances (with delight) and even the **pitris** of his cognates join him<sup>24</sup>.

Many other records, particularly of South India speak about the construction, restoration and repairs of tanks, channels, well etc. A study of the beliefs and ideological perceptions which inspired the rulers and other classes of people in undertaking the irrigation works, the attitude of the state towards these works and the different classes of

people as authors of these works disprove Karl Wittfogel's theory of "Oriental Despotism".

Irrigation is the artificial application or process of supplying water to crops in the areas where the rainfall is insufficient or unseasonal. It is also termed as "hydraulic agriculture" applied to a system of farming which depends on large scale and government directed water control. "Oriental society" is also called as "hydraulic society".<sup>1</sup>

The antiquity of irrigation is as old as agricultural farming. In ancient Indian literature, the land which is "not dependent on the god of rain" (adevamatrika) and has plenty of natural resources of water is highly praised. But when this is lacking, irrigation through lakes, dams, ponds, wells etc., becomes inevitable.

The large scale irrigation works executed in India and other oriental countries were attributed to the state. Some western scholars considered the execution and maintenance of irrigation works as the chief function of the state. Adam Smith, Engels and Karl Marx were the first scholars who stressed the importance of irrigation activity in relation to the position and function of the state. Inspired by Engels analysis, Karl Wittfogel put forward the concepts of "hydraulic civilizations" and "oriental despotism".

Wittfogel's concept of "Oriental despotism" or "hydraulic despotism" focuses on the nature of the tasks in large scale irrigation projects. He explains that the large scale irrigation projects could be executed only by the use of mass labour and this mass labour must be coordinated, disciplined and led only by a controlling authority i.e., the state. He says that in a "hydraulic state" one finds such "authoritarian patterns" as "agro managerial despotism" and a "monopoly bureaucracy". In other words, he has proposed a model of a state sponsored and state controlled hydraulic activity in which there is no scope for an individual private enterprise.

Wittfogel further explained that there were two types of irrigation societies: hydro-agricultural and hydraulic-agricultural. Hydro-agricultural societies are those having small scale irrigation works such as wells, tanks, rivers etc., which did not require a centralized apparatus like the state. Hydraulic-agricultural societies are those having large scale state directed irrigation farming. According Wittfogel, it was the latter which led to "hydraulic despotism".<sup>25</sup>

Taking into consideration of all the facts in Indian context, the scholars like Irfan Habib, R.S.Sharma and R.Thapar have questioned the validity of Wittfogel's hypothesis. V.K.Jain,<sup>26</sup> after an analysis of the epigraphic and literary data from fourth century BC to second century

AD, has concluded that Wittfogel's hypothesis is both logically and factually incorrect.

A review of Indian perception of water as well as irrigation reveals the special attention paid by Indians to water and irrigation works since ancient times. The qualities of water and its essential nature are recognized in Vedic literature as well as Harappan culture. The role of rivers in the economic life of the country was very well recognized by Indians as early as the civilization began in the sub continent. Artificial irrigation and water management are associated with Harappan and Megalithic cultures. Artificial irrigation in the form of tanks, canals, dykes etc., continued to play a major role in agriculture throughout the historic period.

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Many epigraphically records particularly from South India, speak about the construction, restoration and repairs of tanks, canals etc. A study of the beliefs and ideological perceptions which inspired the rulers and other classes of people alike in undertaking the irrigation works, the attitude of the state towards these works and the different classes of people as authors of these works disprove Karl Wittfogel's theory of 'Oriental despotism'.

The present study concludes that irrigation as a social enterprise in the community life of Medieval Andhra. The epigraphical records from Andhra clearly reveals that people from all sections of the society contributed greatly for excavation and upkeep of irrigation works. The temple also plays a significant role in that direction.

## References

Anantalwar, M A & Alexander Rea, ed., Indian architecture, A.V.T Aiyer & co, 1920 p. 69  
Annual Reports on Indian Epigraphy, no. 305 A of 1893; South Indian inscriptions, vol. 4, no. 1180.

Appa Dorai, A, "Economic conditions in South India," *Madras madras university press*, 1946, pp. 202 ff.  
Epigraphia Indica., vol. 16, no. 4, pp. 97-109.  
Epigraphia Indica., vol. 3, no. 15, p. 92.  
Godavari District Manual. Imperial gazettters of India provincial series madras 1908 Oxford, p. 16.  
Gurumurthi, A, "Why temples on River-beds?" *Saptagiri*, March 1980, p.29.  
Hymns of the Atharvaveda, Griffith R.T.H III volumes, Benaras, 1916-17, p. 13.  
Ibid.  
Ibid.,  
Ibid., p.138.  
Ibid., pp.135-136.  
Ibid., pp.137-138.  
Jain, V K, "Dynamics of Hydraulic activity in Mauryan and post Mauryan times", Proc of Indian History Congress 52 Session, New Delhi, 1991, p. 92.  
Karl, Wittfogel, *Oriental Despotism, A Comparative Study of total power*, Yale University 1957.  
Krishna Devaraya Amuktamalyada. (Vishnu Chittam) Edit Ramadas Ayyangar A.P Sahitya academy, 1967 Hyderabad p. 164.  
Krishna Swami, V D, "Neolithic pattern of India", Indian Science Congress, Bombay Xiii session, 1959, p. 1.  
Meadows Taylor, *Journal of Bombay branch of the Royal Asiatic Society*, Calcutta, 1853.  
Ramesh, K V, *Indian Epigraphy*, vol. 1, Delhi Sandeep prakasam, 1984, p. 136.  
Sir John Marshall, "Mohenjodaro and Indus Civilizations," Delhi., *Ideological Book house*, 1973, p. 994  
Srinivasan, K R & Benerjee, N R, "A Survey of South Indian Megaliths", *Ancient India*, AI No ix., Delhi 1953, p. 103-115.  
Srinivasan, T M, "Irrigation and Water supply, South India, 200 BC – 1600 AD., Madras," *New era Publications* 1991. P.1.  
Srinivasan, T M, Op.Cit., p. 5.  
Srinivasan, T M, Op.Cit., p. 6.  
Stella Kramimrisch Vishnudharmottara, III, X CIII, Patna, Eastern book House, 1993, p. 25-31  
Yazdani, G, *The Early History of the Deccan*, Part. 2, Hyderabad, 1960, p. 678.