



ISSN: 2249-894X  
IMPACT FACTOR : 5.7631 (UIF)  
UGC APPROVED JOURNAL NO. 48514  
VOLUME - 8 | ISSUE - 8 | MAY - 2019



## MANAGEMENT OF WATER UNDER THE IMPERIAL CHOLAS

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### ABSTRACT:

*Agriculture is always playing a major in Tamil Nadu because the majority of the population is depending on agriculture for their life. We can say that without agriculture Tamil Nadu will be doomed like anything. Tanjore is called as Granary store house. The most quantity of the paddy being producing in Tanjore district and among agricultural crops, paddy undoubtedly constitutes the largest and most important sector in terms of income. The Cholas were the Prominent Kings, who ruled the district successfully. In the great of South India, the Cholas also made a great contribution in Management of water for their kingdom. Though the Cholas there was enormous water in water bodies for their proper irrigation arrangements.*

**KEYWORDS:** Irrigation, Land Management.

### INTRODUCTION:

Water is one of the basic sources of life. Human civilization owes its existence to water, which is the crucial input for agricultural operations. Any variations or fluctuations in availability of water resources would directly affect the society at large. No civilizations or society could flourish where there is no existence of water. For an agrarian economy like India, where agriculture and rearing of livestock is an important means of livelihood, water becomes one of the essential resources of their existence. Sometimes, scarcity of water also leads to social friction and tension among the social groups and it led to deep social feuds. Therefore, since

time immemorial, the society paid much attention regarding the management of water. They focused on storage, preservation, percolation, regulation, maintenance and distribution. Thus, the control over water or water management becomes indispensable component of the society. It also becomes one of the important agendas in the administration of the state. In order to maintain social harmony, the state thus, played a crucial role for the collection, storage, and distribution of water resources.

In ancient days, as agriculture is one of the main livelihoods of the people and the prosperity of the kingdom depends on the vastness of lands under cultivation, great importance was given in the collection, storage, distribution and management of water.

Moreover, as the rivers are not perennial but depend mostly on rainfall from time to time, the vital problem of storing, providing a good supply of water and distribution for irrigation thus, concerned both the rulers and the ruled of South India too. In the different periods of South Indian history, successful attempts were frequently made to meet the difficulties of water supply and irrigation by constructing tanks, digging wells, cutting out canals and making sluices and embankments. Different types of water management and irrigation systems are being followed due to its varied geographical and geological settings. Such constructive works were partly the result of the state action and partly the outcome of individual benefactions. Sometimes the religious institutions also played

a great role on this part.

Among the great period of South India, the Cholas also made a great and tremendous contribution in the management of water for its people of the kingdom. During the period of the Cholas, proper arrangement for irrigation was made. From a Tamil inscription found in Tirupati, it is learnt that in case there was a shortage of water, certain rules were framed for usage of water as per the proportion of land so that no water is wasted. Furthermore, while selling or donating the land, it was customary to note in the documents the concerned river, lake and tank were used for irrigation.

Though the Cholas on one hand concentrated on wars, on other hand they also gave equal importance for the maintenance and setting up of a number of water bodies such as lakes, tanks and dams. They were aware of the fact that water bodies were their life line for their long-lasting rule. Avvaiyar and Tiruvalluvar emphasize the importance of water. Since the beginning of early human civilization, humans start their existence on river banks and their existence depends on the variations and fertility of those rivers and built many water bodies such as tank, lakes and dams. Such types of activities took on a massive scale during the period of Cholas. The heart land of the Cholas was the fertile valley of Cauvery river so by giving importance to water management, the Cholas made their country prosperous and their dynasty was one among the longest-ruling dynasty of the South India. Besides, many tributaries of Cauvery also flow in the Chola country and made this country prosperous.

IllangoAdikal praises Cauvery in his *Silappatikaram*. Mudattamakkanniyar in his *Porunaratrappadai*, while speaking about Karikal Peruvalatthan and his rule praises about Cauvery. The same king referred to in *pattinappalai* by KadiyalurUruttirankannanar as he made the land fertile<sup>1</sup>. It is said that he was instrumental in setting up banks on either side of Cauvery, which is referred to in *VikramaCholan Ula* of Ottakkuttar. Melpati copper plates of Punniya Kumaran of 7<sup>th</sup> century CE, Tiruvalankadu copper plates of GangaikondaChola of 11<sup>th</sup> century CE and Kanyakumari inscription if Vira Rajendra Chola there are references about the setting up of banks to Cauvery. From the inscriptions of Tiruppalanam and Tiruchchendurai, it is learnt that a tax in the name of Kavirikkaraiviniyokam was levied for the maintenance of the banks of Cauvery.

Sometimes, when there was no possibility of forming of new rivers, huge lakes were built by Cholas. From Sendalai inscriptions it is learnt that for maintaining Virasikamani lake (Allur-Alichikkudi), Parantaka I offered grants to the Jains of Amankudi. From the inscription it is also learnt that the duty of maintaining the lake was entrusted to Arambaviran to which material assistance was given to KanagasenaPidarar who maintained a Jain palli in Puthamur. From Sendalai inscription also says that the General of Rajendra Chola I, Jayamuri Nadalvan, who defeated Sri Lanka, maintained the lake. Later Cholas built many rivers and lakes which are confirmed by inscriptions.

There was tremendous agrarian expansion during the rule of the imperial Chola Dynasty (c. 900-1270 AD) all over Tamil Nadu and particularly in the Kaveri Basin. Most of the canals of the Kaveri River belongs to this period e.g., Uyyakondan canal, Rajendran vaykkal, SembianMahadegvivaykkal<sup>2</sup>. There was a well-developed and highly efficient system of water management from the village level upwards. The increase in the royal patronage and also the number of devadana and bramadeya lands which increased the role of the temples and village assemblies in the field. Committees like *eri-variyam* (tank-committee) and *totta-variam* (garden committees) were active as also the temples with their vast resources in land, men and money. Considerable water bodies and tanks were built during the Chola period. But some few outstanding may be briefly mentioned. Rajendra Chola built a huge tank named Solagangam in his capital city GangaikondaSolapuram and was described as the liquid pillar of victory. About 16 miles long, it was provided with sluices and canals for irrigating the lands in the neighbouring areas. Another very large lake of this period, which even today seems an important source of irrigation, was the Viranameri near Kattumannarkoil in South Arcot district founded by ParantakaChola. Other famous lakes of this period are Madurantakam, Sundra-cholapereri, Kundavai-Pereri (after a Chola queen)<sup>3</sup>.

Moreover during the Chola period, for the maintenance of lake throughout Chola country, a separate board was set up and the members were paid with salary as fees. Besides, the board, in order to help the board and for keeping of records, officers were appointed. They received salary for their

work. They were also known as intermediaries. It is learnt that they were given 4 *nali* paddies per day, 7 *kalanju* gold and one dhoti for one year. For maintaining lakes, taxless land and materials were also given as gift. Another tax known as *ayam* was also levied.

Rajaraja I<sup>4</sup> (1012- 1044 CE) built many water bodies and set up many arrangements for their maintenance. By setting up many committees they were look into. For the welfare of the cattle and for the improvement of agriculture, he contributed much. Among other things he gave importance to sharing and harvesting of water. From *Purananuru*, it is learnt that the kings who saved the water bodies would automatically be savior for his people. Based on this, he built a canal known as Uyyakkondan, which was one of his titles. Through this, water management was executed by him meticulously.

Among the other achievements of Rajaraja I, Mayanur canals got a prominent place. Mayanur is situated in the southern bank of Cauvery at the west of Kulittalai. He built a channel in Mayanur so as to give irrigation to Palaiyur, Analai, Pulivalam and Somarasampettai which were in the southern bank of Cauvery in Trichy district. The Channel was extended up to Eriyur and connected with it. The Channel was named after the name of one of his titles i.e. Uyyakkondan. Till date the name exists.

Similarly, an inscription of Rajaraja I (1012 CE) belonged to his ninth regnal year found in Tirukkogarnam Siva Temple of Pudukottai records about a big lake known as Kavirakulam, which is presently called as Tiruvetpur. The lake was maintained since the period of early Pandyas. In that lake, a higher grade officer of Rajaraja known as MerkillimangalattuArikulakalaBramathirayan set up *kumilithumbu*. He also rebuilt the channels and in order to meet the expenses, he donated lands. The right for maintaining the lake was given to the locals. According to the inscriptions, he says that he would keep and worship even the minute sands which were found on the feet of the person who at a later saves the lake from destruction. For this reason he was called as Jananathan. He not only gave the right of protecting the lake to the local people but also made arrangement to meet the expenses for its maintenance. His great thinking was laudable one.

According to Tiruvalangadu Copper plates, Rajendra Chola<sup>5</sup> (1012-1044 CE) built CholaGangam which was also known as Ponneri near GangaikondaCholapuram, in order to perpetuate the memory of his conquering Ganges. After he conquered Ganges, he brought the water of Ganges and poured it in the lake. Required water was brought from Kollidam to Ponneri through a canal named it after the name of his father Rajaraja I. *Nirkkalkal* such as *vai*, *vaitthalai* and *thalaivai* were set up. What makes one wonder was the sluice and the irrigation techniques where the works men had built by burnt clay bricks, while its lower portion was found closed with granite. Through a hole water came inside the tub, got filled and later overflowed. Apart from *madai* (narrow channel for water) and sluice other terms which are found in Chola country are *kumil* (water bubbles) and *thumbu* (tubularity / inner hole). Through a long tube-like structure water hid and then came out again through the tube with bubbles. So it is called as *kumili*(water bubbles). There are more information in inscriptions about *kumil* and *thumbu*.

As Cholas set up many lakes during their time, the land was prosperous throughout the year. They saved rainy water and used it in a proper way without wasting it. Due to this, the ground water level never decreases. In the administrative set up, water board had an important place. Throughout the year for maintaining the lakes and such other water bodies, land was donate in the name of *kulapatti* and from the income derived from it attempts were made to save the lakes.

In ancient days, most of the cases the water rights were given to landholders and land donees. But Improper management or used of water sometimes led to disputes and feuds among the people. So the state took up the management of water as one of their important portfolio of administration so that all could get the adequate water and resolved disputes. For instance, the Kasakkuti copper plates grants of Nandivarman II (731-796) led down strict rules for misusing of water in the canals by using baskets (*kutairaittu*) or by cutting out branch canals (*kurrettampanniyum*). The relevant lines of the plate are:

*innarperellaiyullum akappatta ninila  
num punceyyum utumpoti amai tavalvatellam ceyarralum vehka  
vinalum tiraiyaneriyalum niriyinta vali arukkalum vellakka  
lum tonti kkontunnappe peruvarakavum ikkalkalukku kolkalamum  
pulutipatum peruvatakavum ikkalkaslil kute iraittun kurankaruttum kurre  
.....ttam panniyum kontuntar kokkollum tantappatuvatakavum manaiyum...*

During the rule of the Cholas, these rules and regulations were further modified and well refined and enforced in the strictest terms. The copper plate inscriptions of Tiruvalankatu which belonged to sixth regnal year of RajendraCholan I (1018 AD) is one of the finest examples that related to the water management (SII 3:205). The grant expresses the water rights in clear terms. It states that lands of the donated village (*devadanavillage*) shall be irrigated by canals dug proportionately as per water assigned from these canals; others who are not tenants of the *devadana* lands shall not be permitted to cut branches from these canals (*kurangaru*) or put dam across the passage of water or put up small lifts or bale out water by baskets. The water, thus, assigned shall not be wasted. The water shall be used appropriately for irrigation after proper regulation. The canals flowing across this village to irrigate other lands shall be permitted to pass through. In the same way, the channels flowing across other villages to irrigate these lands shall be allowed to pass through<sup>6</sup>. (K. Rajan, *Ancient Irrigation Technology: Sluice Technology in Tamil Nadu* (Thanjavur: Heritage India Trust, 2008), 58-59)

In those days whoever engaged in the cause of saving the banks of lakes and rivers died while attending duty were worshipped in the place where they gave their life or in Ayyan or Pidari temple. In those places hero stones were laid. It is pertinent to note that such worship continues till date. In the inscriptions of Cholas and Pandyas, there were references about the gifts of lands, known as *uthirapatti*, to those who gave their life for the cause of saving water bodies. In order to save others these great men gave their lives and they are worshipped, which is proved from the herostones.

Besides the rulers, religious institutions had an important place in the history of Medieval Tamil Nadu, and the Cholas were the greatest temple builders of South India. Temples of those days served not only as religious centers but also centers of social and economic activities of the life of the people. They were powerful social and economic and cultural entities. The Chola temples and their artistic excellences are called the gift of Cauveri, and they are part of the cultural heritage of the Tamil country.

For instance, Sri Panchanadeeswarar temple at Thiruvaiyaru has played a very important role both in the religious and social life of the common people and the rulers of the Chola kingdom. The inscriptions, found on the walls of the temple contain vital information about the social and economic life of the people of Thiruvaiyaru. These institutions had their great impact on society, in general and the institution of caste in particular. They were institutions of public benefaction and influenced the economic life of the people

Agriculture has been the backbone of South Indian economy. Here the cultivation depended on seasonal rains. Since there is no perennial river system near Thiruvaiyaru, the people of this area suffer a lot when the rains fail. The process of reclamation led to the development of irrigation system in the region. The period witnessed necessarily the improvement of irrigation facilities, particularly tank irrigation. The rulers of the medieval period realized the importance of providing irrigation facilities.<sup>7</sup> An excellent system of irrigation prevailed in and around Thiruvaiyaru which helped increase cultivation. Since the region under the study is situated in the lower part of the Cauveri delta, waters of the *Aru* (river)<sup>8</sup> *Vaikkal* (Canal)<sup>9</sup> and *Kulam*<sup>10</sup> (tank) helped irrigation in this area.

An inscription in the *pushpamandapa* on the banks of the river Cauveri in Thiruvaiyaru mentions that the Grand Anicut was rebuilt by Achyutappa Nayaka before the year A.D.1596.<sup>11</sup> This certainly helped reclamation of lands in the period. The Grand anicut very much influences the agriculture process of this region even in present day. In A.D.1771, Tulaja arranged for developing a new canal from the river Kudamurutti through lands owned by a private individual at Thiruppanthurutti.<sup>12</sup> This region watered by the canal benefited a large area of land. In the second quarter of the nineteenth century, many bridges were built across the rivers Vennaru and Cauveri.<sup>13</sup>

The River *Cauveri* has made *Cholamandalam* fertile even from very ancient times. This promoted agriculture in the region and transportation of agricultural products.

The managers of the temple were also responsible for the creation of the new irrigational facilities, i.e. tanks and irrigation canals from which greater production resulted. It is well known from the inscriptions that the canal system of irrigation was prevalent during the period of the Cholas and Pandyas.<sup>14</sup>

Canals from the rivers irrigated the paddy fields. Numerous canals were cut around Thiruvaiyaru and they have been named after the ruler and members of the ruling family. Tank irrigation also was prevalent in the area. The list of various tanks and the tax called *kulavadai* collected for the use of their waters has been referred to in the inscription. The managers of the temple were also providing responsible for new irrigational facilities, like tanks and irrigation canals because of which greater production resulted. The lands of the village granted to temples were irrigated by canals others who were not the tenants of the *devadan* lands were permitted to cut branches from the canals and bale water in baskets, to irrigate their lands.

In those days whoever engaged in the cause of saving the banks of lakes and rivers died while attending duty were worshipped in the place where they give their life or in Ayyan or Pidari temple. In those places hero stones were laid. It is pertinent to note that such worship continues till date. In the inscriptions of Cholas and Pandyas there were reference about the gift of lands, known as, *Uthirapatti* to those who life there for the cause of savings the water bodies. In order to save others these great men gave their lives and they are worshipped, which is proved from the hero stones. From this cultural tradition of Tamils could be well understood.

Based on the instances mentioned above, it can be summed up that the individuals and the state-cooperated in making arrangements for irrigation in the following ways: 1. assigning huge money on the desilting of existing lakes. 2. Renovating the old ones and digging out new tanks for a uniform supply of water for all the channels. 3. Many fallow lands were brought under cultivation soon after the construction of lakes.

Thus the efforts, understand by the imperial Cholas, especially during the reign of Rajaraja and Rajendra Chola's a fertile centre for cultivation and made the belt of self sufficient for Rice Production.

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