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# IRRIGATION PROJECTS IN THENI DISTRICT, TAMIL NADU

#### K. Manimaran

Assistant Professor, P.G. & Research,
Department of History, N.M.S.S.V.N. College,
Nagamalai Pudukottai, Madurai, Tamil Nadu.



# **ABSTRACT**

The importance of irrigation in a tropical country, like India can hardly be over rated. Water is to be "liquid gold" in the East. "Irrigation is everything in India water is more valuable than land, it increases its productiveness at least six fold and generally a great deal more, and it renders great extents of land productive which otherwise would produce nothing on next to nothing". It is an oft repeated saying that if sufficient water is given the ryot would grow a crop even upon the stones. There were so many factors that led to the construction of dams and canals in Theni district. The important rivers which traverse through the district, other than Periyar, are the Vaigai, and the Suruliar. The Vaigai river originates from the western ghats and after flowing Varusanadu range, turns south east through Nilakkottai and Madurai before entering Ramanathapuram. Two minor streams, the Varahanadi and Manjalar rising in the Palani hills, reinforce Vaigai before it reaches the slope of Aundipatti. Another important river is the Periyar, the biggest of all rivers in the then Travancore state. About the miles south of Allinagaram, the Suruliar river joins with the Theni river, perennial stream which lies deep in the Bodinayakanur valley. In order to utilize all the water resources various dams were constructed in Theni district.

**KEYWORDS:** Irrigation, liquid gold, Vaigai, theni, tamilnadu, western ghats.

## HISTORY OF IRRIGATION

The importance of irrigation in a tropical country, like India can hardly be over rated. Water is to be "liquid gold" in the East. "Irrigation is everything in India water is more valuable than land, it increases its productiveness at least six fold and generally a great deal more, and it renders great extents of land productive which otherwise would produce nothing on next to nothing". It is an oft repeated saying that if sufficient water is given the ryot would grow a crop even upon the stones.

# **SOURCES OF IRRIGATION**

The various sources of irrigation are rivers, reservoirs, tanks and canals. The great perennial rivers that flow across the peninsula from the Western ghats are of use , especially in the Deltas. In Madurai and Dindigul, the chief sources of water supply were the numerous channels from rivers and streams. Where irrigation by rivers was not feasible, tanks and reservoirs constituted the mainstay of the ryot.

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### **DEFINITION OF IRRIGATION**

Irrigation is the artificials supply of water to the soil for production of crops. Scientific irrigation involves in its storage and application to the land, a knowledge of the composition and needs of the requirements of the various crops to be grown.

### **IRRIGATION IN ANCIENT PERIOD**

The antiquity of irrigation is well documented throughout the written history of mankind. It was first practiced in countries where there were rivers which annually overflowed their banks, e.g. the Nile, Euphrates and Indus, when the water had drained off. The earliest records reveal the first use of irrigation by the Egyptians along the river Nile about 5000 B.C. The First Pharath the king Menes, about 3000 B.C. built a large masonary dam to control the Nile and provided water for irrigation.

# **IRRIGATION SYSTEM UNDER CROWNED KINGS**

The Tamil Nadu state as existed at the beginning of the Christian era under kings of the Chera, the Chola, the Pallava and the Pandyan lineage and a number of minor chieftains agriculture flourished and patronised by these kings and chieftains. The ancient kings of South India provided irrigation facilities by building reservoirs, anaicuts and channels. Almost every catchment basis in the south, however small, still bears traces of having been bounded across and even some large projects stand testimony to the services of those kings.

The important ancient irrigation system still in use. For instance Kallanai constructed by the Ancient Tamil Chola king, Karikal Chola in 46 A.D. across the river Kaveri at the head of the Delta. The Uyyankondan canal which takes off from the Cauvery is an interesting ancient work ascribed to Raja Raja Chola, the great. A large number of stone anaicuts and channels across river Tamirabarani in Nellai district were built in the days of the Pandyan kings.

### **FAMINES IN MADURAI DISTRICT**

The Madurai District, a part of the British possessions, was one of the largest districts in the  $19^{\rm th}$  century. Theni was a part of Madurai district. The famines which occurred during 1799-1800, 1806-1807, 1811-1814, 1932-1933, 1836-1837, 1857, 1866-1867 and 1891-93 caused great havoc to the people of the Presidency. Madurai district had to face totally nine famines.

While Tanjore and Tinnevelly were fertile due to the flow of rivers Cauvery and Tamirabarani respectively, Madurai district had none except the Vaigai river.

Another phase of famines in Madurai district took place from 1876-1900. The total area of 74,000 sq.miles having, a population 16 million, was affected by famine in Madras Presidency.

Various relief measures were taken up by the government at times of famines. A sum of Rs.2370/- was sanctioned for repairing the tanks in Periyakulam taluk. A famine relief grant of Rs.6,43,748/- was sanctioned by the Government. 60 villages in the Periyakulam Taluk were benefited. Theni was one of them.

# IRRIGATIONS SETUP UNDER EAST INDIA COMPANY

After taking over the administration of the Madras Presidency the East India Company became concerned about the land revenue executed some corrective steps to re-establish a satisfactory irrigation condition in order to improve the company's resource base.

The East India Company had to import food grains at times of droughts and famines.

A administration, perceived early in the  $19^{th}$  century the possibility of utilising the great rivers like Godavari, Krishna and Cauveri for irrigating the deltas. Sir Arthur Cotton, in the year 1834, across the Coleroon the upper Anicut.

In the 1890's the British arranged small systems to create patches of paddy cultivation on the upper beaches of some of the lesser streams. Thus to keep up their momentum, the irrigation Engineers had to find new sources of water.

### **RIVER SYSTEM IN THENI DISTRICT**

The important rivers which traverse through the district, other than Periyar, are the Vaigai, and the Suruliar. The Vaigai river originates from the western ghats and after flowing Varusanadu range, turns south east through Nilakkottai and Madurai before entering Ramanathapuram. Two minor streams, the Varahanadi and Manjalar rising in the Palani hills, reinforce Vaigai before it reaches the slope of Aundipatti. Another important river is the Periyar, the biggest of all rivers in the then Travancore state. About the miles south of Allinagaram, the Suruliar river joins with the Theni river, perennial stream which lies deep in the Bodinayakanur valley.

# Factors responsible for the construction of Dams and Canals in Theni District

When the British took over the Madurai country by a treaty with the Nawab of Arcot, the economic condition of this district.

The scanty rainfall in the district made the ryots poor. Almost every alternate season is one of the scarcity in this taluk and when an exceptionally dry year occurs, there is severe distress and the population is thinned by death and emigration.

A number of children and women and even old people not only lost their lives but also animals like the cattle suffered due to the lack of pasture and died in large numbers.

Apart from famines, floods also brought miseries in the nineteenth century. The earliest flood in the eighteenth century occurred in the district on 18 December 1709 when cyclone brought gale and violent rain.

In November 1814 another terrific storm swept over the neighbourhood of Madurai town and destroyed 3,000 cattle.

In December 1843 extraordinary flood occurred in the Vaigai and breached many tanks. In the year 1804 an unusually high flood in the Vaigai topped the road to west of Madurai and flowed into the Anupanadi Channel.

Under such circumstances the people had no other outlet except to look for substantial help from the government. Hence the British Government in order to control famine and flood and to improve the economic condition of the people undertook new irrigation projects in the district So, the Government decided to build the Periyar Dam in the area. After the completion of the Periyar project, it was found that 8500 million Cubic feet of water was wasted into the Arabian sea every year. For utilising the surplus water, number of new projects were launched in the district. One such minor project investigated was the Vaigai project. Sothuparai Dam and Manjalar Dam are other some minor projects. Apart from various Tanks canals, tube wells are utilised for agricultural purpose in the district.

#### **PERIYAR DAM**

The Periyar river is the largest river in Kerala. Geographically the Alwaye or Periyar river 142 miles in length is in the then state of Travancore. Ancient Tamil literature also mention the name of Periyar.

The Mullai Periyar project is to the people of the Tamil Nadu, especially to the people living in the southern districts of Theni, Madurai, Dindigul, Sivagangai is their agricultural operations.

The Periyar dam, one of the oldest dam, in India has the unparallel distinction of being the oldest irrigation projects for trans-basin diversion of water to meet out the requirements of the drought affected areas in Tamil Nadu. It was completed in October 1895.

The river Periyar which originates at Western Ghats at an altitude of 5,000 feet above mean Sea Level at Thekkady, the largest and longest river in the former Travancore State. It flows northward and then westward 118 miles in the State before entering into the Arabian Sea. It is called Periyar or big river.

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#### **VAIGAI DAM**

The Vaigai Dam construction work was started in 1954 and was an completed at estimated cost of Rs. 330 lakhs and the area benefited covered 22,818 acres. The masonry dam was completed on 30 September, 1958 when the work on earth dam ended on 31 October 1958. The Vaigai dam was formally inaugurated by the then Honorable Chief Minister of Madras State K. Kamaraj on 21 January 1959 and extension of the irrigation to new areas.

The Construction of the Vaigai dam ushered a new era in the irrigation history of the region. The Vaigai Dam helps the people not only to produce electricity in the Periyar Power House, but also prevents the waste of water on all seasons. It added additional area of cultivations in this area and brought prosperity to the people. It developed the socio-economic condition of the people and alleviates their poverty.

# **MANJALAR**

The existing irrigation of about 3361 acres under Manjalar is carried out by means of ten anaicuts across the Manjalar river and the tanks fed by them. The Manjalar being a tributary of Periyar contributes to the requirements of irrigation under Vaigai river also. The Manjalar Reservoir is designed to store such quantity of surplus that will go to waste.

The reservoir site is at about 3 ½ miles north of Devadanapatti village of Periyakulam taluk.

### **MINOR DAMS**

The construction of the irrigation project prevents insecurity of agricultural economy. The government endeavoured to make use of large networks of rivers by construction of dam so that, water could be used for irrigation purpose. The Tamil country which depends on rain for the cultivation compelled to build dams since independence. Hence the government constructed more irrigation projects primarily to ensure that there is enough water in the normal years to irrigate the dry and barren areas. Apart from Periyar and Vaigai various minor dams are constructed for irrigation and drinking purposes.

# SHANMUGANADHI DAM

Shanmuganadhi dam is a minor dam located in the Cumbum valley. Rayappanpatty located on the eastern slope of Western Ghats which is the source of a minor hill stream called Shanmuganadhi (Varattaru) emerged from the hill. The Shanmuganadhi releases the water into the Suruliyar during the rainy season. During the monsoon of the South-West and North-East Seasons, the water flows waste to the valley of Cumbum, at Kamayagoundanapatty and then reaches the Suruliyar.

In order to store the water, the Shanmuganadhi reservoir is constructed across the river near Rayappanpatty village of Uthamapalayam taluk. The project was technically sanctioned for Rs.695 lakhs. However, the project led to the revision of the estimate increased from 695 lakhs to 704.5 lakhs. The work commenced in the year 1987 and was completed in 2004.

The dam has the capacity of 79.57 million cubic feet and the annual storage of 159.14 million cubic feet. The dead storage of the dam is 16.830 million cubic feet. It has the catchment area of 25.865 sq.km. and the water spread area of the dam is 84.94 acres. The total length of the dam is 638 meter. Annually 159.14 million cubic feet is impounded for the benefit of cultivation.

# **SOTHUPARAI DAM**

Another minor dam in Theni district i.e., Sothuparai dam, located near Periyaklam, is constructed across the Varadamanadhi which originates in the western ghats situated in the western part of the town Periyakulam. This reservoir is located 22 kms from Theni and 12 kms from Periyakulam. The Sothuparai dam built across Varaga river with a volume of 100 million feet was built with the amount of Rs.7.91lakhs, permitted by government Act No. 1637 on 18th August 1982. It connects the two small hills and its height is nearly 165 feet. The Sothuparai Reservoir scheme completed and changed as the reservoir has the total capacity of 2.831m.wa. The dam is constructed

for agricultural purpose. The catchment of the dam is a combination of rain and small streams of Kodaikanal hills and the release of water from Berijam lake, Kodaikanal. It is the second highest dam in Tamil Nadu, following the Sholayar dam of Valparai which comes first.

# MINOR DAMS IN MEGAMALAI REGION

The Megamalai range is located in the Western Ghat hills near Chinnamanur town in Theni district. I cloud land, Highways, pumbing weir has been constructed where water is being pumped into Highways Reservoir involving a head of 75m. The stored water of Highways Dam is diverted to Manalar Reservoir by means of a connecting turn. The Manalar dam pick up water diverted from highways Reservoir and along with water from its own catchment feds the Vanniyar Reservoir through Venniyar Diversion weir. Thus the water impounded in Eravengalar Dam issued for Suruliyar Hydro Electric Project which produces power generation of 35 m.w.

### **CONCLUSION**

During the he pre-British days the irrigation system was neglected in the Periyar Vaigai river basin. The vagaries of monsoons and successive rain failures had often caused drought and famines. These droughts and famines resulted in untold miseries to the people and irreparable damage to the economy of the people especially through the districts traversed by the river Vaigai and its tributaries. After the construction of the two dams provided irrigation facilities to Theni, Madurai, Ramanathapuram, Sivaganga and Virudhunagar districts and their became prosperous districts. The impact of the Periyar – Vaigai Dam and other dams brought radical changes in the socio-economic condition of the people. The dry and barren lands are converted into evergreen cultivable land. The electricity production further accentuate industrial production. Thus the multidimensional irrigational project in Theni district is considered as the real backbone of the Indian Economy.

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# K. Manimaran

Assistant Professor, P.G. & Research, Department of History, N.M.S.S.V.N. College, Nagamalai Pudukottai, Madurai, Tamil Nadu.