IRRIGATIONAL DEVELOPMENT DURING THE PRE-INDEPENDENCE DAYS

Irrigation as old as civilization is practised in Tamil Nadu from time immemorial. During the Sangam age only the deltaic regions were endowed with irrigation. The ancient kings of Tamil Nadu, in view of offering better governance to their subjects bestowed much attention on irrigation. But after them most of the conquerors of the far south took interest in politics only and so they did not concentrate on the irrigational or any similar development of the State.\(^1\)

In South India especially in Tamil Nadu, irrigation works sprang up under the local leadership. Occurrence of frequent wars often destroyed the existing system of irrigation and the destroyed water courses were left without proper repair and maintenance. The Britishers without deviating much from their destination took some interest in the field of irrigational developments. Yet the irrigational development in Tamil Nadu continued as a neglected chapter and did not show any symptom of improvement before independence. It was only after independence based on the need for augmenting food production, the government gave priority

to the development of irrigation\textsuperscript{2}. However, as a prelude to the study, a
peep into the system that existed under the kings and the British seems
inevitable.

1.1. Irrigational Development under the Kings

Hardships of the people caused by the monsoon failure went
unchecked in the early days. Many of the ancient Tamil Kings tried to
mitigate such hardships of the people by providing irrigational facilities\textsuperscript{3}. Accordingly they built a number of irrigation works for the conservation
and equitable distribution of river flows in the deltaic regions of the river\textsuperscript{4}.

Some ancient rulers took stupendous pains to provide
irrigation facilities to extensive rural areas. They all tried hard to control
and direct more and more waters in each locality for the larger benefit of
the people\textsuperscript{5}. The Sangam literature gives detailed description of the Tamil
dynasties of Chera, Chola, Pandya, Pallava, Chalukya and Rashtrakuta and

\textsuperscript{2} Raj Gill, “India’s Crowning Glory” Yojana, Vol. XXXIII, October, 1989, p.4.
\textsuperscript{3} Madras Information, Vol. XIII, June 1959, p.2.
\textsuperscript{5} Madras Information, Vol. XVI, September 1961, p.9.
their contribution to development projects. Rulers of these dynasties took great interest in promoting agriculture\(^6\).

Among the ancient rulers, the Chola Kings are proverbial for their enormous contribution to irrigated agriculture\(^7\). They were the pioneers in the construction of bridges and dams\(^8\). However, irrigation in the Cauvery delta has been so used from the beginning of the Christian era\(^9\). The efforts of Chola kings led to unprecedented prosperity and wealth in the region and their famous anicuts helped a lot for the prosperity of Thanjavur district\(^10\).

Different types of evidences are there to know the achievements of the early rulers in their administration at different levels. Among them there are several stone edicts bearing information about the interest of the local rulers in providing irrigation facilities to the farmers\(^11\). Old stone inscriptions and monumental irrigation works still exist in this

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7 Ibid., p.57.
State. All of them bear witness to the fact, that the Chola and Pandya kings were vying with one another for improving irrigation\(^{12}\).

The ancient kings promoted the tank irrigation throughout Tamil Nadu\(^{13}\). Along with that well irrigation was also practised in Tamil country. References are there about lift irrigation, for which bullocks were used to lift water from deep wells\(^{14}\). This type of irrigation which prevailed in pre-British period was predominantly executed, maintained and managed by the people themselves\(^{15}\). Early efforts of administration in the field are very rare but some of them found expression in the formation of outstanding schemes like the Grand Anicut.

### 1.1.1. The Grand Anicut

Among the early Tamil Kings the Cholas had a renowned place in administrative reforms, especially of irrigation works. In the history the name of Karikal Chola stands in the forefront with his Grand Anicut across the river Cauvery\(^{16}\) built in the second century A.D.\(^{17}\). It is

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13 Anjaneya Swamy, G., \textit{op .cit.}, p.58.
14 \textit{Ibid.}, p.57.
otherwise known as ‘Kallanai’. The Grand Anicut is a solid piece of masonry work built of stone and brick by Karikal Chola\textsuperscript{18}. It bears a tribute to the administrative skill of the Cholas in working out public utility measures\textsuperscript{19}. The work, as its name implies, is still very grand, despite the lapse of about two thousand years\textsuperscript{20}.

The river Cauvery unlike the other rivers of Tamil Nadu flooded around the country every year systematically. And hence the lower valley of Cauvery, in ancient times, was known by the name ‘Punal Nadu’ with the meaning the land of floods. As a precautionary measure Karikal Chola constructed embankment for the Cauvery River. Thus the visionary Chola king apparently rescued the land from the annual visitation of flood by building high flood banks\textsuperscript{21}.

Grand Anicut is an ancient masonry built across a bypass from the Cauvery in the Coleroon below the Srirangam Island. The anicut watered the fertile lands of Thanjavur district, for the promotion of paddy cultivation and won for the district, the title “Granary of South India”\textsuperscript{22}.

\textsuperscript{19} Report of the Madras State Administration, 1967, p.3.
\textsuperscript{20} A. Mohana Krishnan, \textit{Selected papers on Irrigation}, Trichy, 1990, p.139.
\textsuperscript{21} Madras Information, Vol. XVI, September 1962, p.9.
\textsuperscript{22} Administration Report of the Public Works Department, Madras State, 1956-1957, p.3.
This construction of the second century A.D. stands as an amazing monument of engineering skill by the Tamils. It is a marvelous piece of hydraulic structure built across a mighty river. The weir built in stone and clay across the Cauvery was about 330 m. long, 12 to 18 m. wide and 4.6 to 5.5 m. high. The construction of the dam served irrigation and withstood the annual Cauvery floods. It stood as the only major structure across large rivers for harnessing the surface flows in the historical past.

Tradition attributes to the Chola Kings the construction of the famous anicuts across the Cauvery in Tanjore District. Karikala’s construction of this dam made him popular among the anicut Tamil Kings and won him the honorific title “Karikal Peruvalathan”. Later the British remodeled the Grand Anicut in the 19th century and made it a real insurance against floods.

The Grand Anicut across Cauvery is claimed to be one of the most ancient structures in the world and the oldest irrigation project in the

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Indian sub continent\textsuperscript{30}. Its construction paved the way for the perennial irrigation system from the Cauvery river\textsuperscript{31}. Engineers are excited by the pioneer work done by Karikal Chola about 1800 years ago. It expressed the greatness of the Tamils towards their concern over conservation of water. With the outcome of the Kallanai, the Chola country became more fertile than other countries\textsuperscript{32}. While judged from modern engineering standards, the engineering skill displayed by our ancestors is astonishing\textsuperscript{33}.

The historic Grand Anicut is visited by a large number of tourists and engineers. The beautification of the surrounding areas with gardens, parks and statues at some places has rendered the place more impressive and attractive. A male shrine dedicated to Sri Hanuman, the gardening deity is located in the middle of the anicut. This shrine attracts considerable number of pilgrims\textsuperscript{34}. A statue of King Karikal Chola has also been erected to adorn the parks. It is a humble tribute to him for his marvellous work\textsuperscript{35}.

\textsuperscript{30} Report of the Madras State Administration, 1964, p.147.
\textsuperscript{33} G.O. Ms. No.3986, P.W.D., November 13, 1954.
\textsuperscript{34} Madras Information, Vol. XI, September 1957, p.30.
\textsuperscript{35} Ibid.
The Chola kings in addition to the Grand Anicut dug a number of channels and canals from the river. Karikal Chola himself was responsible for excavating a number of irrigation channels from Cauvery. “Porunararrupadai” states that it was Cauvery that made the Chola King and his Kingdom the most fertile and prosperous. It led to unprecedented prosperity and wealth in the region. Karikal Chola also built a number of irrigation tanks to ensure production of crops throughout the year. Some of the important tanks are Cholavaridhi tank and Sodiyambakkam tank. Later Rajendra Chola (1012 - 1044 A.D.) constructed a lake at Gangai Konda Cholapuram in the 11th century A.D. to be nick named as ‘Chola Gangai’. Today this lake is known as ‘Ponneri’.

In general the Chola administration made an indelible imprint in the history of the Tamils. It is also believed that the irrigational development under the Cholas enabled them to claim a glorious phase in the history of South India. Their contribution for the economic prosperity

37 Porrunararupadai is one of the famous works in Ten Tens (Pathupattu) of Sangam Literature. It was composed by Mudathamakanniyyar. The term ‘Porunar’ denotes ‘warrior’ and ‘Arrupadai’ represents ‘generosity’. It reveals the historical significance of the Chola King Karikala.
38 T.M. Srinivasan, op.cit., p.15.
40 Winnin Pereina, op.cit., p.172.
41 G. Anjaneya Swamy, op.cit., p.58.
of the country stood in no way second to their cultural contributions. The prosperity which resulted from irrigated agriculture brought name and fame to them and a renowned place to the Tamil country in the ancient history of Indian sub-continent\textsuperscript{43}.

The Pandya Kings also had the credit of constructing some stone anicuts and Channels across the Tambraparani river. The ultimate benefits of them were reaped by the people of Tirunelveli District\textsuperscript{44}. Vaigai is the legendary river of the Pandya Kings and for ages waters of river Vaigai were extensively used for irrigation in the Madurai and Ramanathapuram districts. But for this river and the Pandya rule this hottest and driest region in the Tamil country would have been drafted to a haunted place in the history of South India\textsuperscript{45}.

The Pallava rulers while distinguishing themselves for their architectural contribution promoted agriculture by undertaking tank irrigation works throughout Tamil Nadu. The Parameswara tank and Tirayaneri tank were the contributions of the Pallavas on irrigation. Vajiramega, Gudimallam and Ukkal tanks were constructed during the later part of the 8th century A.D. The large tanks at Kanakavallieri,\textsuperscript{43} M.S. Randhawa, \textit{History of Agriculture in India}, Vol.I., New Delhi, 1980, p.457.\textsuperscript{44} Madras Information. Vol.XIII, June 1959, p.2.\textsuperscript{45} \textit{Gazeteer of India, Tamil Nadu State, Ramanathapuram District}, 1972,pp.231-232.
Solapuram and Kaveripak were constructed during the 9th century A.D. and of them the Kaveripak tank is still functioning⁴⁶. Thus the dams, weirs, barrages and large number of tanks constructed by the ancient kings are a standing testimony to their knowledge and experience of irrigation, devotion to duty and dedication to the cause of administration⁴⁷.

After the decline of Tamil kingdoms, the country witnessed a series of invasions during the period from 1300 to 1770 A.D. by the Delhi Sultanate, the Vijayanagar Empire and Maratha Kings. They nominated viceroys to rule part of Tamil Nadu. Each of these viceroys established dynasties and organised their own armies. The invaders ignored the good of the invaded and completely neglected the irrigation system. Beside this, the French and the Dutch on the one hand and the British on the other fought a number of wars in the Tamil country for their supremacy and at last the British emerged victorious and established their regime⁴⁸. Negligence of the subsequent rulers in the field of irrigation could be made good to some extent under the British regime in the Tamil country.

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1.2. Irrigational Development under the British

In 1800 the British took Thanjavur from the Marathas by the treaty of 1799. They found that the Marathas had neglected the irrigational facilities and so the English planned for the improvement of irrigation found neglected in Tamil Nadu. The British initiated their activities in the area of irrigation with the renovation, improvement and the extension of the then existing works. It is said that the frequent occurrences of famine gave rise to the idea of irrigational development on the part of the British. However, it should be understood that up to the middle of nineteenth century the British government did not pay any attention to the irrigation work. And even some of the works they inherited from their predecessors were ruined due to negligence.

The British for the first time wanted to improve the existing irrigation system before undertaking any new projects. The increasing demand for wider extension of irrigation by the people necessitated the British government to start investigations so as to plan for the better

53 G. Anjaneya Swamy, *op.cit.*, p.44.
utilization of water for irrigation\textsuperscript{55}. In 1804 for the first time Captain Caldwell repaired the Grand Anicut in Thanjavur\textsuperscript{56}. He provided dam, stones on the crest and at the sametime raised the river embankments above the Grand Anicut\textsuperscript{57}. Later weirs on anicuts were constructed across various streams and water was diverted through canals for the purpose of irrigation\textsuperscript{58}. The British undertook irrigation development largely as a response to flood control\textsuperscript{59}. Among them Sir Arthur Cotton\textsuperscript{60} played a major role for the planning and execution of a number of major works in


\textsuperscript{56} Madras Information, Vol.XIII, June 1959, p.2.


\textsuperscript{59} Report of the Madras State Administration, 1958, p.184.

\textsuperscript{60} Sir Arthur Cotton was the famous British General as well as a notable engineer. He entered the Madras Engineers in 1819. He devoted his life to the construction of irrigation and navigation canals throughout the British Empire in India. He transferred Thanjavur district into the richest part of the state of Madras. Genius of Cotton’s Master mind was honoured by the Madras government. He founded the Indian School of hydraulic engineering. It was he who appreciated the work of Grand Anicut. He wrote in 1874, “It was from the Indians, we learnt how to secure a foundation in loose sand of unmeasured depth. With this lesson about foundations we built bridges, weirs, aqueducts and every kind of hydraulic work. We are thus, deeply indebted to the native engineers.
Tamil Nadu. Of the major works the Upper and the Lower Anicut stand in the forefront\textsuperscript{61}.

1.2.1. Upper Anicut

Sir Arthur Cotton was the most notable engineer of the British. It was he who constructed the Cauvery delta system. He built a major weir at the head of the Srirangam Island in 1834, where the Cauvery branches off into Coleroon and to the Cauvery\textsuperscript{62}. He built the Upper Anicut across Coleroon in 1836 to divert more water into the Cauvery\textsuperscript{63}. It was followed by the construction of Lower Anicut.

1.2.2. Lower Anicut

The Lower Anicut across the Coleroon was built in 1840 A.D. by Sir Arthur Cotton\textsuperscript{64}. It was built 70 miles below the Grand Anicut across Coleroon\textsuperscript{65}, to ensure supply to areas originally irrigated by river


\textsuperscript{63} S. Krishnamurthi, \textit{Influence of the Mettur Irrigation and Hydro Electric project on Agriculture and Agro-Industries}, Annamalai Nagar, 1957, p.4.

\textsuperscript{64} Administration Report of the Public Works Department, Madras State, 1956-57, p.4.

\textsuperscript{65} S. Krishnamurthi, \textit{op.cit.}, p.4.
channels\textsuperscript{66}. The Lower Anicut was substantially improved in 1906\textsuperscript{67}. The old Anicut weir was converted into a regulator of 70 vents fitted with lift shutters 33 feet, 4 inches span and 8 feet high\textsuperscript{68}. The Lower Anicut supplies water to the Veeranam tank through the Vadavar Channel\textsuperscript{69}.

The Vadavar and North Rajan Canals were constructed to irrigate Chidambaram taluk of South Arcot district. Similarly the Kumikimannar and South Rajan Channel were constructed to irrigate lands in Shiyali taluk of Thanjavur district\textsuperscript{70}. When compared to these channels the Barur project stands prominent.

1.2.3. The Barur Project

The terrible Madaras famine of 1877 geared up Sir Arthur Cotton, the eminent engineer for the construction of several irrigational projects\textsuperscript{71}. Accordingly the Barur project was the first one undertaken as a

\textsuperscript{66} Administration Report of the Public Works Department, Madras State, 1956-1957, p.4.
\textsuperscript{67} Administration Report of the Public Works Department, Madras State, 1961-1962, p.4.
\textsuperscript{68} Administration Report of the Public Works Department, Madras State, 1956-1957, p.4.
\textsuperscript{70} Administrative Report of the Public Works Department, Madras State, 1961-1962, p.4.
famine relief work in 1877. It was completed in 1888 and it benefited the
Pudukkottai region. Since that date several improvements have been made
from time to time\textsuperscript{72}. The famine of 1877 not only caused the construction
of irrigational projects but also led to the foundation of the Famine
Commission of 1880. Since then the British government specially
recognized its duty of constructing irrigation works\textsuperscript{73}.

1.2.4. Periyar Reservoir Project

Mulla Periyar Project was the outcome of an agreement
effected on 29 October 1886 between erstwhile Madras and Travancore-
Coachin governments. Today it is a bone of contention between the
successor States Tamil Nadu and Kerala. The Periyar Reservoir Project
was constructed across the river Periyar\textsuperscript{74}. The construction of the Periyar
dam was started in 1887 and completed in 1899 at a cost of Rs.50 lakhs to
the maximum benefit of the people of Madurai district\textsuperscript{75}.

The already existing idea of Engineer A.T. Mackenzie to
divert the river. Periyar into Madurai with the help of a small dam was
given up in 1850. Few years later in May 1882 Colonel J. Pennycuick was
entrusted with the responsibility of carrying out the scheme. As an

\textsuperscript{72} Gazetteer of India, Tamil Nadu State, Pudukkottai District, 1983, p.297.
\textsuperscript{73} A.N. Sharma, Economic Structure of Indian Agriculture, Bombay, 1984, p.440.
\textsuperscript{74} Madurai District Gazetteer, Vol. I, Madras State, 1906, p.150.
\textsuperscript{75} Gazetteer Unit, Notes on Irrigation, Madurai District, p.3.
outcome of the prolonged negotiation between the princely state of Travancore and British members an agreement was arrived 1886 by which the Travancore government granted a 999 years lease to the Madras Government. Based on this agreement the Periyar project was constructed\textsuperscript{76}. The project is a mammoth engineering feat boldly conceived and courageously executed by men of indomitable will, both native and foreign engineers\textsuperscript{77}. It was constructed under the able leadership of Colonel Penny Cuick\textsuperscript{78}. The engineers constructed an immense masonry dam, 175 feet high\textsuperscript{79} and had a storage capacity of 299 m.cu.m.\textsuperscript{80}.

The Periyar dam is a unique structure built in the deep jungles of the Western Ghats on the river Periyar. It irrigates the drought prone and famine sticket regions of Madurai and Ramanathapuram districts\textsuperscript{81}.

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\textsuperscript{76} Madurai District Gazetteer, Vol. I, op.cit., p.150.
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\textsuperscript{77} A. Mohana Krishnan, Water Resources Development and Management, Trichy, 2004, p.56.
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\textsuperscript{78} Colonel Pennycuick, a British Royal Engineer served in Public Works Department of India from 1860-1896. He acted as Chief Engineer in the construction of the Periyar Dam. He was also nominated to the Madras Legislative Council in 1893.
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\textsuperscript{79} Report of Irrigation in India, Review for the year 1916-1917, p.15.
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\textsuperscript{81} A. Mohanakrishnan, Water Resources Development and Management, Trichy, 2004, p.252.
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The project envisaged benefits for 90,000 acres of first crop paddy and 60,000 acres of second crop paddy. Transfer of surplus waters from the west flowing river Periyar across the Western Ghats through a tunnel is the first attempt in the world of such inter basin transfer for irrigation purposes. With the help of the Periyar dam Madurai district was saved from recurrence of famines and it has ushered in significant economic development of the entire region. The most important outcome of the project was the socio-economic impact on the part of the Kallars and Maravars. They settled down in peace and prosperity by tilling land and adding to the wealth of the country.

By 1930 the Madras government developed the idea of generating electricity from the project. In the light of the original deed the Travancore government opposed the idea of the former. After forty years on 29 May 1970 Tamil Nadu and Kerala signed an agreement under which Tamil Nadu was allowed to generate electricity from the project and it surrendered fishing right in favour of Kerala. Later in 2006 February the Supreme Court by an order permitted Tamil Nadu to raise the water level of the Mulla Periyar dam from 136 to 142 feet. This helped to protract the

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82 Ibid., p.13.
83 Ibid., p.56.
dispute and at present the Kerala an over forward with its programme of a new dam construction and the Tamil Nadu government’s effort is to retain the existing structure. Thus the grand old Mulla Periyar dam at present stepped in history and controversy. 

1.2.5. Berijam Reservoir

Berijam reservoir was an important irrigation work undertaken in the Madurai district. In Kodaikanal at an elevation of 7,100 ft. there was originally a swamp known as the Berijam Swamp. It was about two miles long and ran nearly north and South. The southern portion of it drained into the Varahanadhi and northern portion into the Amaravathi. The construction of the Berijam reservoir was first suggested by Colonel Penny Cuick in 1887. It had a capacity of 77 ½ million cubic feet to supply water for irrigation to a number of tanks around Periyakulam taluk in Madurai District. The scheme was completed in 1912, at a cost of Rs.1,38,500. It brought 4,570 acres under irrigation. In addition to this the scheme was enlarged to supply drinking water to the Periyakulam municipality.

87 Ibid.
1.2.6. Srivaikundam Anicut

The Srivaikundam anicut was constructed in 1899\textsuperscript{88}. This anicut with two main channels was constructed across the river Tambraparani in Tirunelveli District. Of the two the North main channel on the left is feeding a series of tanks and finally emptying into the Korampallam tank. On the right side the South main channel takes off the supplies to the large Kadamba tank and a series of tanks below it. It runs upto Tiruchendur and stands as a marvellous piece of work in Tirunelveli district\textsuperscript{89}.

1.2.7. Setiatope Anicut

The Setiatope anicut was constructed in 1895 across the river Vellar\textsuperscript{90}. The Rajan Channel taking off from this anicut served for tanks and canal irrigation. The system irrigates about 34,000 acres in South Arcot district and extends upto Cuddalore in the East. It was added with lift shutter in 1906\textsuperscript{91}.

\textsuperscript{88} Madras Information, Vol.XIII, February 1959, p.75.
\textsuperscript{89} Administration Report of the Public Works Department, Madras State, 1961-1962, p.4.
\textsuperscript{90} Madras Information, Vol.XIII, February 1959, p.75.
\textsuperscript{91} Administration Report of the Public Works Department, Madras State, 1961-1962, p.4.
1.2.8. Irrigation Project After 1900

After 1900, the irrigational development in the country changed remarkably. During this period, the existing reservoirs were repaired and new projects were constructed so as to benefit as many number of people as possible\textsuperscript{92}. The British government remodelled and constructed several major canals in the country during the nineteenth and twentieth centuries\textsuperscript{93}. Appointment of the Indian Irrigation Commission and its advent to Tamil Nadu added additional colour to the existing structures.

1.2.9. Indian Irrigation Commission of Tamil Nadu

The English viewed irrigation as a major aspect in its Indian administration. To study the problems in detail and suggest remedial measures it appointed a commission in the name of Indian Irrigation Commission\textsuperscript{94}. The first Indian Irrigation Commission was setup in 1901\textsuperscript{95}. The main cause for the setting up of this Commission was the

\textsuperscript{92} Madras Information. Vol.XIII, February 1959, p.75.
tragic situation caused by the famines in 1897-98 and 1899-1900. Its main purpose was to ascertain the utility of irrigation as a means of protection against famine, extent of irrigation development and the scope for further irrigation works.

The Indian Irrigation Commission came to Tamil Nadu in 1902 under the leadership of Colonel Scott Monscrieff. It submitted its report in 1903 regarding selection, financing and maintenance of irrigation works. As a result the Government of India came forward to sponsor and fund several irrigation projects. At the same time the Madras engineers investigated the available irrigation facilities of the presidency and proposed a number of irrigation projects. The Cauvery-Mettur project was one among them. A new development took place after the Commission’s Report. It made certain far-reaching recommendations mainly with a view

98 Scott Monscrieff was the Chairman of the Indian Irrigation Commission of 1901. The Commission was appointed by Lord Curzon, the viceroy of India to draw a comprehensive irrigation plan for India. The commission was named for its Chairperson as Scott Monscrieff Commission. The Commission recommended in 1903, measures for an irrigation of an additional 6,500,000 acres. The recommendation was accepted by Lord Curzon in 1905 is a landmark in the government of India’s irrigation policy.
to protecting people from disastrous famines\textsuperscript{100}. On the basis of the recommendation of the Irrigation Commission several old works were repaired and new ones were also undertaken. The most important Setiatope Anicut across Vellar was added with lift shutters in 1906\textsuperscript{101}.

\subsection*{1.2.10. Toludur Reservoir Project}

The Toludur Reservoir project was constructed in 1925 across river Vellar to the benefit of South Arcot district\textsuperscript{102}. This project was otherwise known as Willington Reservoir and entrusted with lift shutters\textsuperscript{103}. The Toludur project has a capacity of 200 million cubic feet to irrigate an area about 25,000 acres and benefits the Tiruchirapalli district also. The capital expenditure of about Rs.26.22 lakhs was incurred to reap the return of 2.59 percent\textsuperscript{104}. All the said schemes came before the enactment of the Montague-Chelmsford Reforms.

\begin{thebibliography}{99}
\bibitem{101} Administration Report of the Public Works Department, Madras State, 1961-1962, p.4.
\bibitem{102} Madras Information, Vol.XIII, February 1959, p.75.
\bibitem{103} Administration Report of the Public Works Department, Madras State, 1961-1962, p.5.
\bibitem{104} Administration Report of the Public Works Department, Madras State, 1956-57, p.5.
\end{thebibliography}
1.2.11. Irrigation after Montague-Chelmsford Reforms

Before the Montague-Chelmsford reforms, the government of India was the owner of the major irrigation works and the provincial governments acted as agents for supervising the irrigation works. But after the Montague-Chelmsford Reforms Act of 1919 supervision and controlling of the irrigation work was transferred to the provinces. So the provincial governments could sanction and execute new irrigational works\(^{105}\). Between 1921 to 1935 a number of notable irrigation works were constructed. Among them Mettur project in Tamil Nadu is the most important one\(^{106}\).

1.2.12. The Cauvery-Mettur Project

The proposal for the Cauvery Mettur project was first made by Sir Arthur Cotton in 1834 for improving the conditions of irrigation in the Thanjavur delta. But the project estimate was approved only in 1924. The execution of the project witnessed a long dispute with the Mysore government regarding the division of the surplus waters of the Cauvery\(^{107}\).

\(^{105}\) S.Y. Krishna Swamy, Rural Problems in Madras, a Monography, Madras, 1947, p.97.

\(^{106}\) A.L. Rao, op.cit., p.128.

\(^{107}\) S. Krishnamurthi, op.cit., p.1.
Sir C.P. Rama Swami Aiyar took much interest to settle the longstanding dispute with the government of Mysore regarding the sharing of water. The effort of Sir C.P. Rama Swami Aiyar became effective by an agreement with the Mysore Government. The project estimate was revised in 1924 and the execution of the scheme was started on 2 July 1925\textsuperscript{108}.

The Cauvery-Mettur project was started in 1925\textsuperscript{109} and was completed in 1934\textsuperscript{110}. As the name implies, the project is solely related to the river Cauvery\textsuperscript{111}. It was mainly started due to the acute difficulties felt by the peasants of Thanjavur delta. The South West monsoon supply is copious and dependable, while the North East monsoon supply is irregular and frequently affected Thanjavur delta irrigation. This project was constructed to remedy these maladies by storing the surplus floods during South West monsoon and distributing them evenly throughout succeeding irrigation period.\textsuperscript{112}. The Cauvery-Mettur project was opened for irrigation

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\textsuperscript{108} Ibid., p.5.  \\
\textsuperscript{109} Administration Report of the Public Works Department, Madras State, 1961-1962, p.5.  \\
\textsuperscript{110} A.L. Rao, \textit{op.cit.}, p.128.  \\
\textsuperscript{111} S. Krishnamurthi, \textit{op.cit.}, p.3.  \\
\textsuperscript{112} Administration Report of the Public Works Department, Madras State, 1961-1962, p.5.  
\end{flushright}
on August 21, 1934 by Sir George Frederick Stanley, the then Governor of Madras. So this project also known as Stanley Reservoir\textsuperscript{113}.

The Stanley Reservoir ensured water supply to the upland tracts in the Pattukottai, Mannarkudi and Arantangi taluks of Thanjavur district and the Thanjavur region itself\textsuperscript{114}. It was built across Cauvery in Salem District near Tamil Nadu Mysore border\textsuperscript{115}. The renowned Stanley Reservoir irrigates a vast area of three lakh acres of land\textsuperscript{116}. The Stanley Reservoir is 5,300 feet long and 214 feet high at the deepest point\textsuperscript{117}. It has the credit of being the largest reservoir in pre-independent India with a live storage capacity of 2,600 m.cu.m\textsuperscript{118} and forms the main storage dam in the Cauvery basin. Prior to the construction of Mettur dam, the Cauvery Delta was only flood irrigated. With the storage at Mettur, floods are moderated and mitigated and the entire area is assured with irrigation for the entire crop. In addition to irrigation the dam provides drinking water

\textsuperscript{113} G. Venkata Ram, \textit{op.cit.}, pp.90-91.
\textsuperscript{114} Administration Report of the Public Works Department, Madras State, 1961-1962, p.2.
\textsuperscript{116} S. Krishnamurthi, \textit{op.cit.}, p.6.
\textsuperscript{117} Administration Report of the Public Works Department, Madras State, 1957-1958, p.2.
\textsuperscript{118} C.B. Mamoria, B.B. Tripati, \textit{op.cit.}, p.148.
supply to Mettur township and Salem town\textsuperscript{119}. Creation of the Irrigation Development Board marked a milestone development in the field.

1.2.13. Irrigation Development Board

In 1930 Irrigation Development Board was created. The main function of this Board was to watch the development of irrigation. All irrigation proposals and projects are examined and reported upon by the Irrigation Development Board before they are submitted to the government for its consideration. The irrigation systems are in general administered by the Chief Engineer for irrigation\textsuperscript{120}.

The Government of India Act of 1935, which placed the irrigation department under the control of popular Ministers, became operative from April, 1937. It paved the way for the furtherance of the irrigational development in the provinces\textsuperscript{121}. And the first project undertaken after this administrative development was the Papanasam project.

\begin{itemize}
\item \textsuperscript{120} S.Y. Krishna Swamy, \textit{op.cit.}, p.97.
\item \textsuperscript{121} Report of the Irrigation Commission, Vol. I. New Delhi, 1972, p.66.
\end{itemize}
1.2.14. Papanasam Reservoir Project

The Papanasam Reservoir project was started in 1938 and completed in 1944\textsuperscript{122}. It is the first reservoir project undertaken in the Tambraparani river basin. This reservoir is otherwise known as ‘Hope Lake’. The project was mainly intended to conserve the flood water in the upper reaches of the Tambraparani and to regulate their distribution to benefit Tirunelveli and Thuthukkudi districts\textsuperscript{123}.

The height of the Papanasam dam is 176 feet and 816 feet is the length of the dam. The storage capacity of the reservoir is 156 m.cu.m. This project is a multi-purpose project with a provision for electricity generation. The first phase of the power station attached with this project was started in 1938 and completed in 1944 and the second phase was started in 1947 and completed in 1951\textsuperscript{124}. This phase of development in the said field could not be continued because of the outbreak of the Second Global War.

\textsuperscript{122} Gazetteer of India, Tamil Nadu State, Dharmapuri District, Madras, 1995, p.474.
\textsuperscript{123} Ibid., p.473.
\textsuperscript{124} Ibid., p.474.
1.2.15. Irrigation Development During the War period

Madras under the British rule imported rice from other countries, especially from Burma. This import of rice became a problem during the Second World War and the situations drifted from bad to worse in 1942, following the Japanese occupation of Burma\textsuperscript{125}. As Madras planned for the storage of food materials in advance, the State could tide over the situation and thus kept the food production steady. After this, the government contemplated upon bringing more areas of land under cultivation. To this effect few major irrigation schemes were executed\textsuperscript{126}.

Prior to the food crisis of 1942, the government issued taccavi loans. They were mainly meant for construction of wells as well as to the repair of existing ones. These loans were made available at a prescribed rate of interest and helped to construct many wells\textsuperscript{127}. While augmenting the food production to tide over the situation the government of India launched a unique scheme of “Grow More Food Campaign”.

\textsuperscript{125} Madras Information, Vol.IX, January 1955, p.55.
\textsuperscript{126} Ibid.
\textsuperscript{127} C.W.B. Zacharias, Madras Agriculture, Madras, 1950, p.57.
1.2.16. **Grow More Food Campaign**

The Government of India launched the programme of Grow More Food Campaign in 1942\(^{128}\). It was undertaken to overcome the scarcity of food grains created by the war situation\(^ {129}\). Between 1941-1942 the food production was not satisfactory due to the failure of monsoons and the explosive growth in population. To tackle the situation this scheme was worked out\(^ {130}\) and was seriously contemplated upon in Tamil Nadu. The Madras government started this programme in 1943, with the help of the Government of India. In order to accelerate this campaign the Government of India introduced the subsidy system which became a boon to the Madras government\(^ {131}\).

Madras State was probably the first to launch a vigorous campaign for increased production of food. Under this campaign small irrigation schemes yielding quick results received top priority. The schemes were undertaken on the selective basis in the deltaic regions of the State. Well digging campaign paved the way for increasing production\(^ {132}\).

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130 C.W.B. Zacharias, *op. cit.*, p.43.
The first phase of the Grow More Food Campaign lasted for a period of five years extended from 1943 to 1947\textsuperscript{133}. The government sanctioned liberal grants for the construction of wells\textsuperscript{134}. Consequently 71,844 wells were constructed during this period. A well thus constructed could irrigate five acres of land and produce an extra ton of rice\textsuperscript{135}. Later the Grow More Food Campaign was integrated with the First Five Year plan which emphasized the importance of minor irrigation\textsuperscript{136}. The Grow More Food campaign was renamed under First Five Year Plan as Grow More Irrigation Schemes\textsuperscript{137}.

After the Second World War an irrigation research station was set up at Poondi. It was opened in 1945 and has been rapidly expanding. Here a band of Engineers are engaged in studying and finding out solutions for various problems with the aid of small scale models relating to the design of irrigation works connected with the big projects and improvement of existing irrigation system in the State\textsuperscript{138}.

During the British regime only those irrigation projects which yielded an estimated return equal to the rate fixed periodically as the test of

\textsuperscript{133} Madras Information, Vol. IV, April 1950, p.7.
\textsuperscript{135} Madras Information, Vol. IV, April 1950, p.7.
\textsuperscript{136} P.C. Basil, \textit{Agricultural Problems of India}, New Delhi, 1977, p.106.
productivity were considered for being taken up. The others were taken up only in very exceptional cases if they were likely to serve famine ridden areas. A departure from the general policy was permitted in rare instances. As a result of the pursuance of the above policy almost all the directly remunerative irrigation schemes were executed more or less as commercial venture. And the schemes which were difficult and unremunerative were left out of considerations.

The pre-Independent India’s dependence on agriculture was so intense that the country’s economic and social life revolved around agriculture and peasants. In conformity with the situation the irrigation section of the Madras administration received proper attention of the State from early time onwards. This can be considered as the continuation of the early king’s involvement along that line. It is an undeniable fact that Madras State has been the pioneer in the field of irrigation from very ancient times. The renowned Grand Anicut and the innumerable tanks dotted all over the entire State like pearls bear testimony to the engineering marvel and farsightedness of the master builders of Tamil Nadu.

Their Endeavours in that line are well explained in some of the early Tamil literatures. The English, in spite of many a drawback in its Indian administration continued the existing irrigation systems. Certain

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measures undertaken by the British in its Madras Presidency proved an improvement over the old system. Thus the monarchical measures coupled with the British reforms served a foundation for development of irrigation in the State. This altogether helped the Tamil Nadu government to extend the same further for the benefit of millions after Independence.