

Proceedings of the Public Works Department in Irrigation Schemes before 1956 in Kanyakumari District

Dr. Santhosha Kumari. H, Assistant Professor,
Department of History
Scott Christian College (Autonomous), Nagercoil.
S. Sindhu, Research Scholar,
Ph.D History, Reg.No.20213161082003
Scott Christian College (Autonomous), Nagercoil.

Abstract

Lack of proper irrigation and uneven distribution of rainfall resulted in low agricultural production. Further, the taluks of Tovala and Agasteeswaram formed Nanchilnad which was aptly called "The Granary of Travancore". The areas in these taluks were the chief river-bed and their cultivation mostly depended upon channels and channel fed tanks. The places in remaining taluks depended on rain fed tanks. But the tanks contained only just enough for cultivating a little acre of land. In the primitive stage, the ryots of South Travancore availed of water from rivers and wells to irrigate their lands. Though well irrigation was less expensive and more dependable, it could irrigate only an acre or two in their immediate vicinity. Consequently, well irrigation in South Travancore did not play a vital role.

Keywords: Irrigation, River, Dams, Canals, Streams, Ponds, Lakes.

Tob Regul Sci.™ 2022;8(1): 1938-1945

DOI: doi.org/10.18001/TRS.8.1.148

Introduction

In South Travancore agriculture was the basic occupation of the people. Lack of proper irrigation and uneven distribution of rainfall resulted in low agricultural production. Therefore, the farmers were forced to seek other jobs especially rearing of cows, buffaloes, goats and poultry to earn money for their daily bread. Nanchilnad and Edanad were the most fertile areas in the Nagercoil division where paddy was successfully cultivated. Further, the taluks of Tovala and Agasteeswaram formed Nanchilnad which was aptly called "The Granary of Travancore". The areas in these taluks were the chief river-bed and their cultivation mostly depended upon channels and channel fed tanks.

The places in remaining taluks depended on rain fed tanks. But the tanks contained only just enough for cultivating a little acre of land. In the primitive stage, the ryots of South Travancore availed of water from rivers and wells to irrigate their lands. Moreover, the

irrigational methods were not only crude but insufficient to meet the requirements of the agriculturists. Realising its importance, the state paid primary importance to irrigation in the first half of the 19th century. It concentrated on the construction of storage reservoirs for impounding water during monsoon season and supply water for agricultural purposes during drought or the failure of monsoons.

Travancore was credited with different types of irrigation such as river, dam, channel, drainage channel, and well irrigations. Though well irrigation was less expensive and more dependable, it could irrigate only an acre or two in their immediate vicinity. Consequently, well irrigation in South Travancore did not play a vital role.

River Irrigation system

The importance of securing adequate water for irrigation was felt from the very early times in Travancore. So the government adopted various methods to store water and to supply in times of dire necessity. When irrigation in South Travancore was in its infancy, irrigation mainly depended upon the major rivers like Paralar, Kothayar and Palayar and streams. These rivers took their rise on the watershed between the Velimalai hills and end of Western Ghats. They irrigated the lands of the southernmost region of Travancore. But the ryots adopted their own primitive methods. They were not properly guided to make use of water available from these rivers. So the kings of Travancore cherished to convert Nanchilnad into a granary by utilising river waters. In course of time, the ryots of Talakulam also utilised the water of Valliar River for irri

gation purposes. Nature endowed Trivandrum division with rivers and streams. The peasants of Neyyattinkara used the water of Neyyar River for cultivating their lands. In the Trivandrum taluk, the ryots utilised Killiar water to irrigate their lands. There were bigger streams which too supplied water to most of the low lying fields. Thettiyar in Trivandrum taluk was the collection of many streams. So the ryots of this area put up temporary bunds at times of scanty flow of rivers and streams. Thus, before launching major irrigation schemes, the agriculturists adhered to the primitive methods of cultivation.

The Paraliyar

River Paraliyar originates in the hills found on the north of Mahendragiri Mountain at an attitude of 1600 metres above the sea level and flows south and southwestern direction. It is intercepted by Perunchani dam. It receives water from Pechipparai dam through the left bank channel before it reaches the weir called Puthen dam. It is understood that it is the earliest irrigation system in the whole of South Travancore. The engineers of the Pandyan rulers suggest that about thousand years ago the Pandyan kings constructed a dam called Pandyan dam. The dam was twenty feet height. It was built of massive square stones across the Paraliar and cut a channel through solid rock for a distance of about two miles or three kilometers through the saddle forming the extreme water shed.

The Pandyan canal which was an engineering marvel conducts the water into Palayar where eleven anicuts were constructed to carry water for agriculture in Nanjilnad within a distance of twenty miles. There were eight principal channels besides minor channels. By 1750 A.D., another dam known as the Puthen dam was constructed to irrigate Edanad. A channel called the Padmanabapuram Puthanar was also constructed to carry water to Edanad. This canal carries water to a portion of Kalkulam taluk. But these two works were not sufficient to supply water to Nanjilnad and Edanad with the available quantity of water for irrigation. In July 1881, Dewan Ramaiyar made an official tour through the Southern taluks of Travancore in the course of which he minutely inspected the irrigation work at Nanjilnad. He found that the progress of the work was found to be unsatisfactory, so he immediately ordered the Chief Engineer to take immediate steps to bring about an improvement. On his part, the Chief Engineer reported that four works to be carried out immediately.

Perunchani

To bring more lands under cultivation in Nagercoil division, in 1868, Barton, Chief Engineer, surveyed the site, at Perunchani to construct a dam across the Paralayar river about seven miles above the Pandian anicut. The catchment basin of the proposed reservoir was about 40 square miles and the rain fall in the basin was very heavy. In fact, a large reservoir at Perunchani was of considerable value to the cultivation of Nanchilnad area. But, within a short period, the scheme was given up. In 1872, W.Barton, Chief Engineer instructed S.Horsely, the Engineer in charge of the P.W.D in South Travancore to clear the site of the proposed dam and to make trial excavations for the escape weirs. Although, the excavation was estimated to cost Rs.20,000/-, W.Barton preferred the project to take up execution after studying the sub terranean soil. When investigation of the project was going on, A.Seshiah Sastri became the new Dewan of Travancore who ordered to stop the investigation work. Dewan Nanoo Pilai the Dewan of Travancore assumed charge in 1877.

He wanted the Kodayar water being harnessed for supplying lands hitherto not benefitted by water supply. He also promised an amount of Rs.1 lakh for the purpose of improving existing irrigation system in Nanchilnad. Later the scheme was dropped due to financial strain. However, after a long period, the need of construction of Pechiparai dam was gradually felt. In 1927, the rainfall was very low. In spite of the efforts of the P.W.D in the distribution of the waters of Kodayar equitably, the crops at the tail ends of the channels failed. Besides, the drought that followed in 1935 was also unprecedented. Large areas of crops withered. Therefore, the government was forced to give remission of tax for an amount of Rs.23,000,00/-. The effect of repeated crop failures at the tail ends deterred farmers from proceeding with conversion of dry lands into wet. Further, the farmers of Nanchilnad suffered heavy losses on account of drought in 1935. In 1937, they represented to the Dewan about the travails. But the government had no concrete proposal to help the farmers.

In 1946, the State directed the P.W.D to renew the Perunchani Scheme. Accordingly, in 1946, the P.W.D started the dam work and excavated most of the right flank foundations. The foundation for the central section was under execution and the weir was concreted up to the foot of the foundation level. The final alignment to the channel was also fixed. Besides, the P.W.D completed the investigation work and obtained the estimate of dam work from an expert engineer. In 1948, at the recommendation of C.P.Ramaswami Iyer, the Dewan of Travancore, the government sanctioned Rs.4,45,000/- for the construction of larger reservoirs. The work commenced on 11 July 1948. The dam site was 42 kilometers from Nagercoil. It was completed in 1953 at a cost of 43.71 lakhs. Perunchani dam is constructed across a picturesque valley lying in between two hillocks and the site chosen is an ideal place for a dam. The Perunchani reservoir is a straight gravity masonry dam of 1224' long. It had a gross storage capacity of 2300 Mc', water spread area of 3.24 square mile and catchment area of 61.87 square miles. At present, the Perunchani dam in Kanyakumari District, Tamil Nadu is supplying water constantly to the lands of the ryots and saves them from acute poverty.

Pechipparai (Kodayar)

The Kodayar project was the major irrigation scheme in Travancore. 26.1 lakhs. Started in January 1899, its construction work was completed in 1906. Owing to the negligence of irrigation schemes in South Travancore, the cultivation in Nanchilnad and Edanad slowly declined. His survey revealed the fact that the failure of crop was due to the lack of irrigation facilities. Horsley stressed the importance of irrigation system and suggested to bring water from Kodavar River to cultivate the lands in Nanchilnad and Edanad. The idea of constructing a dam on Kodayar «at any eligible spot termed Pechipari» came from Captain Horsley on 20th February 1837. Horsley who was engaged on public works in Travancore wrote to the Resident Colonel J. Fraser proposing the construction of a dam across the Kodayar river, eight miles above the ruined Cacachel dam to divert the waters of Kodayar to the Pandian dam and convey the water through a new channel.

During this period, Dewan, Nanoo Pillai took much interest on the construction of Kodayar Scheme. Jopp who succeeded A. Jopp, the foundation of the dam was excavated. In the meantime, the rock known as 'Pechipari' was the actual site selected for the construction of the masonry dam. Jopp, Cecil Smith, who assumed the office as the Chief Engineer revised the estimate further and the cost therefore went up to Rs. 54 lakhs. He also brought to the notice of the government that the right bank channel which was designed to irrigate 16,000 acres of land in Vilavancode and Neyyattinkara taluks could not function successfully due to the inadequate supply of water from the reservoir and the high cost of work. Two under-sluices were erected at the river bed. 80.3 lakhs. This dam was the biggest in South Travancore with a catchment area of 80 square miles. The Kodayar Scheme was a legacy left by the State of Travancore for the welfare of the Ryots of the Nagercoil division. During the year 1925, it maintained 321 miles of

irrigation channels and 53,963 acres of assessed land enjoyed the benefit of the Kodayar Project. It irrigated 1380 acres of wet lands in Agasteeswaram taluk in 1928.

In the same year, it impounded water for the conversion of 1,791.73 acres of dry lands into wet lands in Tovala and 9856 acres of land in Agasteeswaram taluk. In 1930, the Kodayar Scheme irrigated 11,555.80 cents of wet lands in Kalkulam taluk. The reservoir was closed on 5 March 1943 after releasing the water to raise the Kumbhom crop. The approximate area cultivated for the Kanni crop of 1942 was 55,674 acres. During this year, the reservoir had surplus water of four times and the water level reached 44.20. In 1946, the gross outlay on the Kodayar project upto the end of 1947 was Rs. 88.21 lakhs. A total length of 326.94 miles of irrigation channel was maintained within this system.

Dam Irrigation system

In the early period, there was no grand project for irrigation. In order to increase the agricultural production, the Government of Travancore constructed many dams. One such was the Pandian dam constructed across the Paralayar at Ponmanai village. It linked Paralayar with Palayar. This was the first major irrigation work in Nagercoil divisn. The work was executed about nine hundred years ago. Though it was called a 'dam' it only served as a diversion weir and not reservoir. It diverted the water of Paralayar into Kodayar through an artificial channel known as Pandian kal. In due course of time, the Pandian dam was totally abandoned. In 1837, Captain Horsley, the Engineer of Travancore who toured the southern districts of Travancore inspected the Pandian dam and Pandian kal.

In 1888, S.Horsely, the Engineer observed that the length of the Pandian dam was 270' and it had a sluice in the middle of 2.5 width, the ciii of which was 2.5 below the average cast. Sherman, the acting Divisional Engineer of South Travancore spoke very highly about the Pandyan dam and Pandian kal in the meeting arranged in connection with the opening ceremony of the combined head works of Pandian kal and Padmanabhapuram Puthenar Channel. Puthen dam was constructed across Paralayar just below the Pandian dam during the reign of Martandavarma (1729-1758), 'the Maker of Modern Travancore' in 1735. It was a massive anicut built of fitted rough stair about 24' above the rocky bed of the river Paralayar.

In course of time, the Puthen dam was not maintained properly which led to the leakage in the dam. But after a long period, the government took steps to strengthen the dam by constructing a strong and water tight face wall at a cost of Rs.12,975/-. The dam supplied water for irrigating the taluks of Kalkulam and Old Eraniel. In addition to these, the P.W.D felt the need for dams to feed water to the tanks. In 1932, it re-constructed the damaged portion of the Valliar dam to feed the Kadiapatinam tank.

Channel Irrigation system

One such irrigation system is known as channel irrigation. Apart from the main channels, a number of branch channels were dug from the main channel to irrigate different and

distant areas. Since the areas on the south east of Suchindrum were suffering from acute water scarcity to irrigate the lands, the government undertook the Nanchilnad Puthenar Scheme. Kottukal channel was named after Kottukal, one of the significant villages in Neyyattinkara taluk. The flood of 1904 spoiled the fields for cultivation. Krisfma Pillai, member from Neyyattinkara. Natesa Iyer, the Chief Engineer of Travancore, prepared a plan towards the improvement of irrigation constructing two channels one on the eastern side and the other on western side. But the government sanctioned Rs. 21,150/- in 1927 to extend the eastern side of the Kottukal channel and the P. In 1936, the government allotted Rs. D made the people use the river water for dual purposes of irrigation and bathing. Vilavancode taluk which came under the Nagercoil division entirely depended on rainfall for cultivation. D investigated to open an irrigation channel from Thirparapoo in the Kuzhithurai River.

In 1925, one Sankaranarayana Pillai and others of Themanoor Desom in Nagercoil division sent a letter to S. Robinson, the government agreed to dig a kal for irrigating the land of the petitioners. D constructed a ii to supply water to the lands of Sankaranarayana Pillai and others. As a first step, it strove hard to extend the Padmanabhapuram Puthen channel beyond Adayamadai to Thiruvithancode, Mulagumoodu, Neyyoor, Colachel, Allenchy and Thengapattanam. This was followed by the extension of Padmanabhapuram Puthenar to Erattakarai. During 1912, all the sub channels of Erattakarai including the one extended to Muttom were completed at an outlay of Rs. A separate administrative unit was formed for the management of the Erattakarai channel and its branches were known as 'Erattakarai Channel Sub-Division'.

The A.V.M. Canal

The canal between Chennankara and Trivandrum was the first of its kind in the erstwhile Travancore state. It was constructed during the period of Dewan Venkitarao (1821-1839). However, the Ananthan Victoria Marthandavarma Canal, popularly known as the A.V.M. Canal, was the only work of its kind in the whole of South Travancore. Of the title, A.V.M., 'A' stands for the Travancore deity Ananthapadmanabha Swamy, 'V' stands for the British Queen Victoria whose representative was there in Travancore and 'M' stands for the maker of modern Travancore king Marthandavarma. The construction of A.V.M. Canal was completed in July 1860 during the reign of Uthiram Thirunal Marthandavarma (1846-1860). By 1860 the canal between Poovar and Colachel was completed. The actual length of the completed canal was 17½ miles including 1½ miles of natural lakes or reservoirs. However, the A.V.M. Canal work has to be suspended due to the commencement of the Varkala Canal work at Travancore. In 1860, Ramavarma succeeded Uthiram Thirunal Marthandavarma and revived the work in 1863. By February 1864, a further length of 10 miles between Poovar and Thengapattinam was completed. The coastal villages numbering more than 20 on the canal side like Pozhiyoor, Kollemcode, Neerodi, Marthandamthurai, Vallavilai, Eraviputhenthurai,

Thengapattinam and Colachel depended on the transport for most of their needs including navigation.

This canal offered easy transport facilities to men and materials and enabled Mondaicadu to emerge as a more prominent religious centre. Until 1950, the pilgrims from Kerala used the A.V.M. canal as their route to reach Mondaikadu for the Bhagavathiamman festival. The A.V.M. Canal began at North Paravoor in Ernakulam District of Kerala and passed Poovar in Kerala and Pozhiyoor, Kollencode, Neerodi, Marthandamthurai, Vallavilai, Erayummanthurai, Chinnathurai, Thoothoor, Enayam, Thengapattanam at Vilavancode Taluk, Colachel and Mondaikad, where Devi Mondaikattamma temple is situated at Kalkulam taluk. Another usefulness of the A.V.M. Canal is that it prevents salinisation of drinking water sources from Colachel to Kollemcode. Further its usefulness from agriculture and coconut cultivation is of very great. It serves as a source of development of the rural economy. The present condition of the A.V.M. canal is a shock and shame to the administration and the inhabitants of the district. The canal is completely polluted and occupied by weeds.

Streams Irrigations

Apart from these rivers, there are small streams which originate from the mountains. One such stream was Ulakkaiaruvi near Azhakiapandiapuram. It helps the agriculturists for cultivation. The Ulakkaiaruvi stream runs through the nearby villages. This river is yet to be fully harnessed and utilized for the drinking purposes. There are other small streams which join at Kalikesam and form Kalikesam river. At Keeriparai a torrent is formed into a bigger stream, but is filled with water during rainy season and dry during other seasons. There are numerous small streams running from the mountains but they join in the jungles with some streams and help cultivation in the forests and hills. There are other streams that flow in the hill side. The Alankal joins with Valliyaru at Thalakulam. Thus rivers are the backbones of irrigation in Kanyakumari district. Apart from these rivers there are many tanks that help the agriculturists in Kanyakumari district.

Ponds

There are many natural ponds, such as Parakkai kulam, Putheri kulam, Thathaiar kulam, Kaniya kulam, Veerani kulam in Agastheeswaram taluk. Peria kulam, Nalli kulam, Eraniel kulam, Vellimalai kulam, Thalakkulam, Kurunthenkottu kulam, Attoor kulam and many in kalkulam taluk, so also in Thovalai taluk there are many ponds. In the case of Vilavancode taluk, the natural ponds are limited. Apart from these there are large numbers of small ponds that satisfy the local needs of the place in which they are situated. Normally the rained and natural tanks store water sometimes from the springs. Others store water during rainy seasons. Besides these there are river fed ponds. These ponds are large in number. If we go through the flow chart of the rivers it will be very clear that how many tanks are filled by a single river especially Chittar Pattanankal and Pazhayar irrigation schemes.

Lakes

Besides these, the Manakudy kayal, the Thengapattanam Lake, and the Mukkudal Lake are some of the important lakes that cater to the needs of the people.⁶⁸ The Mukkudal Dam is used for the drinking water to the people of Nagercoil. The water is brought from Mukkudal to filter the house in Nagercoil. At the same time, the people of Boothapandy and Thittuvilai made representations and petitions to the Government. As a result of it, the Government directed the Chief Engineer to prepare a report. It was proposed that water from Mukkudal reservoir could be brought to Nagercoil town. The village panchayats also agreed to meet the annual charges for the working of the scheme. As the Government was fully satisfied, it called for a detailed plan and detailed estimate for the scheme. The scheme was submitted and used for drinking water. Thus, the earlier irrigation systems were well planned aiming at the welfare and benefit of the people.

Conclusion

In an agrarian state, irrigation played a key role. D paid adequate attention and improved traditional irrigation by adopting various irrigation schemes such as dam, channels, tanks and wells which minimised the effect of drought and encouraged cultivation. The channels such as Padmanabhapuram Puthenar, Anandanar and Thovalai extended irrigation in Nagercoil division. D helped the ryots to obtain water to the distant and tail end lands. In some areas irrigation was carried out through tanks. However, after a prolonged period, the government realised the hardships of the ryots of Vilavancode and Neyyatinkara taluks, as the P. W.D. was instructed to work out the Neyyar Irrigation Scheme. Yet, the state was lethargic to work out the right wing channel to the advantage of the ryots of Vilavancode and Neyyatinkara taluks.

References:

1. Sreedhara Menon, A., "Kerala District Gazetteers", Trivandrum, 1962.
2. Nagam Aiya, V., "The Travancore State Manual", New Delhi, 1989.
3. Harris, D.G., "Irrigation in India", London, 1923.
4. "Irrigation Projects of Kerala Public Works Department", Government of Kerala, Trivandrum, 1974.
5. Velu Pillai, T.K., "The Travancore State Manual", Trivandrum, 1940.
6. Travancore Directory, Trivandru, 1938-1939.
7. File No.D.Dis, 197/1942, P.W.D. Trivandrum, dated 22nd January 1942.