Chapter IV

IMPORTANT DAMS IN KANYAKUMARI DISTRICT

There are many dams both small and big in Kanyakumari district. The agricultural operations and the drinking water needs of the people of this district largely depended upon the dams. Knowing this the ancient kings constructed dams. Of all the dams the earliest dam was Kakachel dam. This dam was a masonry dam that was made up of massive stones. It was not a regular dam. This dam acted as a diversion point. Following this the Pandya kings constructed the Pandian dam. This dam was also not a regular dam. It also acted as a diversion point. Then during the period of Travancore kings, the Puthen dam was constructed. It also acted as a receiving point of the water that flows from Pechipparai dam.

The Ponmanai Puthen Dam

During the reign of Marthanda Varma he wanted to make improvement work at Nanchilnadu, the granary of Travancore. In an attempt to improve irrigation for the benefit of the people of Nanchilnadu, the Maharaja undertook the construction of Ponmanai Puthen dam to irrigate the lands of Kalkulam and supply drinking water to the inhabitants of Padmanabhapuram. The idea came after collecting information about Pandyan dam which was constructed by the
Pandyan kings.\(^1\) The overflow of the dam went to a river called Kuzhithuraiyar and the water of that river ran waste into the sea. Realising the practicability of utilizing the water for irrigation he planned the construction of Ponmanai Puthen dam.\(^2\) Connected with this, canals, tanks and reservoirs were also excavated and feeding channels were opened to fill the ponds for irrigation. Thus the lands which were depending on rain for agriculture were converted into two time cultivable land and enriched the rural economy.\(^3\) When the construction of the channel was started, a part of the locality was found rocky and the channel had to go through the middle of it. The work was stopped for want of skilled labourers. The Maharaja himself came and personally supervised the work. He directed the workers to make hole on the sheet of rock, fitted an umbrella to protect himself from the scorching sun and supervised the work.\(^4\)

There are many other dams in Kanyakumari District. Of these dams, Pechipparai, Perunchani and Chittar dam I and II are the important dams. They supply the needed water to the agricultural operations of the district. Pechipparai and Perunchani dams and a network of channels are irrigating 25,900 hectares of land. The construction of Pechipparai was done with much


\(^2\) Ibid., p. 90.

\(^3\) Ibid.

\(^4\) Ibid., p. 13.
problem and sacrifice of health by the pioneer engineers like Jopp and Alexander Minchin.

The Pechipparai Dam

Even though there was a diversion from Pandian kal to Pazhayar, it did not fully satisfy the irrigational needs of the people of Nanchilnadu. The crops were facing acute water shortage especially during poor rainfall or even the flow from the rivers did not cater to the needs of the people. The farmers felt that they were suffering without sufficient water. They also felt that good amount of water go waste during rainy season. If the waters of Kothaiyar and Paraliyar are harnessed in some point it will be useful for cultivation.\(^5\) Hence, the Village Assembly met at Kadukkarai and decided to meet the Maharaja. As per the decision they met the Maharaja and made a representation.\(^6\) Further, the farmers argued that a lot of fertile and cultivable lands in Nanchilnadu above the flow level of Pazhayar was lying fallow because of the uncommandability of the existing channels of Pazhayar. If the storage reservoir is constructed some more hectares can be brought under cultivation in Edanad\(^7\) and Nanchilnadu.\(^8\)


\(^6\) Mudaliar Manuscript, M.E. 1887, p. 9.

\(^7\) Edanadu – Kalkulam and Vilavancode taluks are called as Edanadu.

\(^8\) Narayanamoorthy, C., *op.cit.*, p. 10.
Dewan Nanu Pillai examined the demands of the people of Nanchilnadu. He was very much convinced with the request. He also felt that the demands of the people were genuine. Hence, he took the initiative for the construction of the Pechipparai dam.\textsuperscript{9} Maharaja Sri Mulam Thirunal had a kind heart towards the people of South Travancore. Hence he gave his consent without much hesitation. A dam across Kothaiyar made the dream of the people fulfilled.\textsuperscript{10}

The following Chief Engineers in the P.W.D. M/s G.T. Walch, A.H. Jacob, Mr. Jopp, C.A. Smith and A.H. Bhslow were connected with the construction of the dam. Executive Engineers such as O.S. Barrow and Mr. Alexander Minchin took keen interest. Their efforts in the construction of the dam are highly appreciable.\textsuperscript{11} The dam was constructed on the design and pattern of Periyar dam at Madurai.\textsuperscript{12}

The following are the salient features of the dam:

1. Type - Straight Gravity type Masonary dam
2. Year of construction - 1896-1906
3. Length of Dam - 1396 feet
4. Top level of Dam MSL - + 310 feet

\textsuperscript{9} Narayanamoorthy, C., \textit{op.cit.}, p. 10.
\textsuperscript{10} \textit{Ibid.}
\textsuperscript{11} \textit{Ibid.}, p. 71.
5. Max water level - + 302 feet  
6. Full reveres level - + 302 feet  
7. Sluice sill level - + 254 feet  
8. Water spread area - 5.85 sq. miles  
9. Cross capacity - 5306 Mcft  
10. Net capacity (useful capacity) - 4450 Mcft  
11. Dead storage - 956 Mcft  
12. Catchment area - 80 Sq. miles  
13. Average rainfall - 2176 mm  
14. Max flood discharge - 39,000 cusecs  
15. Average annual yield - 14,200 Mcft  
16. Length of surplus - 736 feet (6 x 40 x 15)  
17. Cost - 26’10 + 15.00 = 41.10 lakhs  
18. Latitude - 8 21 1  
19. Longitude - 77 16

The dam has a catchment area of 2048 sq. m and reservoir is surrounded by dense forests which are famous for their valuable trees and wild animals. A sect of hill tribes called the Kanikars settlement exist there. The dam is a straight gravity type masonry dam. This dam was built across Kothaiyar about
a mile below Killar, Chittar and Kuthiyar. These tributary rivers bring sufficient waters to the dam during rainy season.\textsuperscript{13}

Further the following details will add the construction pattern and strength. The type of construction of the dam was purely masonry. The top of the dam has a mean sea level of 94.5 m. The maximum water level is 92.0 m. The sluice still level is 77.4 m metres. The Pechipparai dam has a water spread out area of 15 sq.km. It has a catchment area of 204.8 sq. km. The dam gives an average annual yield of 402 n. cumps. This dam was built across Kothaiyar river about 1.61 km.\textsuperscript{14}

The water from Pechipparai dam is highly useful for the agricultural as well as domestic use of the people of Kalkulam and Vilavancode taluks. The water from Pechipparai is collected at Puthen dam.\textsuperscript{15} From there it takes a course of 2.20 km and reaches Chellamthuruthi. At Chellamthuruthi it forks into two regulatory kals, one runs 2 km to the west and reaches at Surulucode headwork. At Surulucode again it forks into two. One branch further goes to the west and forms Ananthanar and another branch goes to River Pazhayar and 15,821 acres of paddy fields are cultivated.\textsuperscript{16}


\textsuperscript{14} Gopalakrishnan, M., p. 297.

\textsuperscript{15} Executive Engineer, P.W.D., Nagercoil, Flow Program of Pazhayar Basin sub-division.

\textsuperscript{16} Ibid.
From Churulacode the Ananthanar main channel is formed. It runs a distance of 24 kilometres and irrigates 9902 acres of paddy fields. It runs on the direction for about 3094 metres and supply 776 acres of paddy field. Further it runs a distance of 400 meters and irrigates 475 acres of paddy fields. Again it runs towards the southern direction and forms Krishnancoil kal watering 496 acres of paddy fields. Then it takes its course and forms Asaripallam channel. It irrigates 723.41 acres of land. It further runs and forms Athikadai channel and irrigates 1141 acres. Then it goes to Thengamputhur channel and irrigates 833 acres.\(^\text{17}\)

From Churulucode the other diversion joins Pazhayar and on its course it has small anicuts. Their names are as follows:

<table>
<thead>
<tr>
<th>Name of the Anicut</th>
<th>Channel</th>
<th>Acres</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Veerapuli Anicut</td>
<td>Veerapuli kal</td>
<td>259</td>
</tr>
<tr>
<td>2. Kutty Anicut</td>
<td>Kutty Dam kal</td>
<td>117</td>
</tr>
<tr>
<td>3. Pallikondan Anicut</td>
<td>Pallikondan kal</td>
<td>286</td>
</tr>
<tr>
<td>4. Chattupudue Anicut</td>
<td>Peyode kal</td>
<td>112</td>
</tr>
<tr>
<td>5. Chettithop Anicut</td>
<td>Arasiar kal</td>
<td>651</td>
</tr>
<tr>
<td>6. Veeranarayana Anicut</td>
<td>Vilavadi kal</td>
<td>483</td>
</tr>
<tr>
<td>7. Mangalam Anicut</td>
<td>Theraikal</td>
<td>2092</td>
</tr>
</tbody>
</table>

\(^{17}\) Report of the Executive Engineer, P.W.D. and Flow program.
Further from Puthen dam it takes a diversion and mixes with Pandyan kal at Chellamthuruthi\textsuperscript{19} channel called padmanabhapuram Puthanar channel and it goes to many places such as Thiruvithamcode and from there it runs to a place called Thuravu and feeds minor canal. Another diversion goes to Eraniel and goes to Colachel. It feeds thousands of acres of lands for cultivation.\textsuperscript{20}

Beyond this Pechipparai dam supplies 11.275215 million M3 million litre of water per year to the district. Though it did not supply directly, it is through different channels. Thus Pechipparai dam is the most important dam. The economic life of the people depends on the Pechipparai dam. Apart from this Perunchani dam is another important dam.

\textsuperscript{18} Report of the Executive Engineer, P.W.D. and Flow program.

\textsuperscript{19} Gopalakrishnan, M., \textit{op.cit.}, p. 297.

\textsuperscript{20} Report of the Executive Engineer, p. 9.
The Perunchani Dam

In an attempt to manage the deficiency in the Kothaiyar system the Perunchani dam was constructed in the up-stream of Pandian dam in 1953 to store flood water of Paralayar river. The details are given below:

<table>
<thead>
<tr>
<th>Details</th>
<th>Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction year</td>
<td>1948 – 1958</td>
</tr>
<tr>
<td>Length of the dam</td>
<td>373 M</td>
</tr>
<tr>
<td>Type of dam</td>
<td>Masonry</td>
</tr>
<tr>
<td>Top of dam mean sea level</td>
<td>94.2 M</td>
</tr>
<tr>
<td>Maximum water level</td>
<td>93.3 M</td>
</tr>
<tr>
<td>F.R.L.</td>
<td>93.3</td>
</tr>
<tr>
<td>Sluice sill level</td>
<td>69.8</td>
</tr>
<tr>
<td>Water spread area</td>
<td>9.5 Sq. km</td>
</tr>
<tr>
<td>Gross capacity</td>
<td>81.80 m. cum</td>
</tr>
<tr>
<td>Catchment area</td>
<td>154.4 Sq. km</td>
</tr>
<tr>
<td>Average rainfall</td>
<td>2240 mm.</td>
</tr>
<tr>
<td>Average annual yield</td>
<td>218 M. cum</td>
</tr>
<tr>
<td>Surplus regulator</td>
<td>4 Nos.</td>
</tr>
<tr>
<td>Vents</td>
<td>12.2 m x 4.6 m</td>
</tr>
</tbody>
</table>
The dam was constructed at Perunchani about 9.66 km east of Kulasekaram.\textsuperscript{21} Because of the existence of these two dams, agriculture especially paddy and other cultivation are carried out widely in Kanyakumari district. As the water did not satisfy the needs of the people of Kanyakumari district, in an attempt to raise the storage capacity of Pechipparai and Perunchani dams 1.83 meter was raised during 1960-1970.\textsuperscript{22} In 1971-1972, the full reservoir level of the Pechipparai and Perunchani dams were raised by 61.\textsuperscript{23}

\textbf{Usefulness of the Dams for Agriculture}

Besides paddy cultivation the dams are useful for dry cultivation. Government fruit farm situated in Kundal village near Kanyakumari was established in 1922 by Maharaja Sri Mulam Thirunal of Travancore. After the merger of present Kanyakumari District with Tamilnadu, the maintenance of the farm has been entrusted to the State Agricultural Department. Special varieties of mango were cultivated under the Indian Council of Agriculture Research. In order to facilitate research activities, an additional area of 5.69 hectare of land was added to the farm in 1964 by purchasing the adjoining land. The farm serves as a model farm and model nursery centre for special varieties of mangoes and other fruits. In September 1979, the farm came under the

\textsuperscript{21} Gopalakrishnan, M., \textit{op.cit.}, pp. 297-298.

\textsuperscript{22} \textit{Ibid.}, p. 301.

\textsuperscript{23} Tamil Arasu, Vol. II, 16\textsuperscript{th} March 1972, No. 18, p. 29.
newly formed Department of Horticulture. This farm is the main source of supply of pedigree plants of different fruit kinds for the centrally assisted.

**Pineapple Nursery at Pechipparai**

Pineapple Nursery farm was started in 1975 in Pechipparai village in an area of 9.8 hectare of forest land and is situated adjoining the irrigation channel of Pechipparai dam. Except roads and pathways, the entire area is covered with pineapple crop. The main object is to produce new variety of pineapple for distribution and expansion of area under this variety which is very well suited for industrial purpose.²⁴ Annually an average of 1.5 lakhs suckers are produced and distributed to the growers through hill area development scheme.

Since the farm is maintained under rainfed conditions the sucker production is subject to the vagaries of weather so to say rainfall. The failure of monsoon from 1982 to 1986 curtailed the production of suckers. During the financial year 1985-86, the expenditure was Rs. 0.83 lakhs only. It has proposed to improve irrigation facilities also to produce and distribute 1 lakh suckers annually.

Pineapple fruits produced in this farm are sold to the Kanyakumari fruit co-operative (KANYAFCO) at Marthandam. To step up the revenue of the farm, black pepper has been tried over the forest trees.

²⁴ Report of Joint Director of Agriculture, Nagercoil, p.7.
Pepper Nursery at Valiya Yela

Pepper nursery, which was established in 1967, was made permanent in 1981. The total area of the farm is situated on the road from Pechipparai to Kothayar dam near O point. The farm is situated in the forest land. An area of 5.6 hectares is under pepper, clove and nutmeg cultivation apart from the nursery.

The farm produces annually two lakhs pepper plants of the variety kuttanadan for distribution to growers of this district and in other parts of Tamil Nadu hill area development scheme is also implemented on an area of 3 hectares through which annually 1 lakh rooted clove seedlings are produced for distribution to growers.

Sericulture

Sericulture was first introduced in Kanyakumari district during 1978-79. A sericulture extension centre was established at Nagercoil during 1980-1981. The centre is engaged in supplying layings to the farmers and it also provides technical guidance to the sericulturists. During 1983-84, fifty farmers were imparted training for 3 months and a monthly stipend of Rs. 100 was given for chawkie rearing. Era-wise details of the farmers trained from 1979-80 to 1983-84 are given below.25

25 Report of the Deputy Director of Agriculture, p. 3.
Sericulture by Tribals

Hill tribes namely Kanis of Pechipparai have also taken up sericultural work. About ten Kani families were engaged in this work during 1983-84 and a sum of Rs. 50,000 was sanctioned to them as loan for buying appliances and for the construction of silk worm rearing sheds.

Paddy

Paddy is the main food crop of this district. It is raised in two seasons. First crop is sown in the month of April-May and second crop is raised in the months September-October.\(^{26}\)

Tapioca is raised as a subsidiary food crop in this region. The main planting season is April-May. In some pockets planting is also done in September-October as second season crop. It is purely raised as rain fed crop in this region, commensurate with the setting up of monsoon.

Coconut is an important cash crop in Pechipparai. The main planting season is May-July. Pulses are raised purely in the rice fallows and as mixed crop with tapioca. The important pulses are raised as mixture with black gram and cowpea. In the months of April-May and September-October pulses are raised as mixture with tapioca. In the months of February-May pulses are exclusively raised.

\(^{26}\) Gopalakrishnan, op.cit., p. 1203.
Vegetables are cultivated during January-February and July-August and pot watering is the local practice. Vegetables are also raised as 3\textsuperscript{rd} crop after the harvest of 2\textsuperscript{nd} crop of paddy in some pockets of this region which is seldom done in other districts. Banana is cultivated mainly from March-May and September-October. Ground is raised during March-April and October-November as rain fed crops.

Rice is the main food of the people of Kanyakumari district. It is raised in two successive seasons. First crop is sown in the month of April-May which is known as kannipoo and second crop of rice is raised in the months of September-October known as kumbapoo.

**Semi dry cultivation**

This system of cultivation is mainly followed in Agastheeswaram, Kalkulam and Vilavancode taluks. When there are summer showers in the months of April-May the seeds are sown broad at the rate of 100 kgs per hectare.\(^\text{27}\)

**Wet transplanted cultivation**

This system is practised in channel-fed areas of Thovalai and also a major area in Vilavancode taluk. During the first season TKM-9, ADT-36, TPS-1 are the predominant varieties while in the second season, IR-20, Ponni, Gopalakrishnan, op.cit., p. 1203.
White ponni, AV-2, TPS-2 and CD-1009 are the high yielding grains cultivated in the region. Ponni, a medium duration variety is generally recommended for second season. But in Vilavancode taluk it is cultivated mostly during the first kannipoo season.

**Agriculture Extension Centres**

There are 19 agricultural extension centres in Kanyakumari district. They are functioning at Nagercoil, Boothapandi, Thiruvattar, Melpuram, Munchirai and Marthandam.

Each agricultural extension centre is manned by an agricultural officer. The extension centre plays an important role in providing technical guidance to the farmers. Farmers are also able to get inputs like seeds of high yielding varieties. Pesticides and biofertilizers azolla etc. The agricultural extension centres function for the betterment of the farming community.  

There are other dams such as Chittar I and II, Mampazhathuraiyar and Poigai dam. These dams are constructed at different periods. In 1972, the excavation of Radhapuram channel resulted in the extension of irrigation facilities about 17000 acres of land. During the same period an interconnecting channel was excavated to connect the two reservoirs Chittar dam one and two. The canal is 3,300 feet long with a bed width of 30 feet. Thus it is clearly

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28 Report of Joint Director of Agriculture, Nagercoil.

understood that Pechipparai and Perunchani are the two important dams that cater the needs of the major portion of the district and agricultural population. The importance of the dams to the people cannot be denied.

The Mukkudal Dam

Nagercoil is situated seven miles south of Aramboly pass. Nagercoil had a number of suburbs such as Kottar, Vadasery which were important pilgrim centres where Lord Thanumalay Temple known as Suchindram temple is situated. These places were running short of drinking water. The Bootpahandy and the neighbouring panchayats are also in high demand for water. Hence the Government directed the Chief Engineer to prepare a report. He proposed that the 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 estimate for the scheme.

In September 1920, the Dewan visited Nagercoil town and observed the need for water supply scheme for the town. The Nagercoil Municipal Council also passed a resolution requesting the Government for a water supply scheme.

30 Velupillai, T.K., op.cit., pp. 174-175.
to provide pure water in all the months in the year.\textsuperscript{33} To that effect Kuriyan, the Chief Engineer suggested filtering Kothaiyar water for the drinking purpose of the Nagercoil town at the expense of Nagercoil Municipality.\textsuperscript{34} The Government also promised its share to the Municipality in the form of a large grant and large loan repayable in equal instalments. Several schemes suggested by the Government at various periods could not be carried out owing to their prohibitive cost. But the Municipality in its Council meeting dated 6.4.1923 decided to have a comprehensive scheme at a cost of Rs. 18,500/-.\textsuperscript{35} The Council viewed it imperative to provide protected drinking water to all the thirteen wards at the earliest.\textsuperscript{36} The President of the Nagercoil Municipal Council assured that the Municipality would do its best to find funds for a part of the cost. At last, as per the request of the Nagercoil Municipal Council, a filter house was built in 1943 at Krishnankoil, 2 kms north-west of Nagercoil.\textsuperscript{37}

This scheme made Nagercoil the second to get protected drinking water with the help of a filter house, while Trivandrum stood first in the field. Today, due to the wider expansion of the town and its over population, the scheme has become inadequate. Yet the filter house adds attraction to the Nagercoil town.

\textsuperscript{33} Resolution No. 1, Nagercoil Municipal Council, dated 6.4.1923.
\textsuperscript{34} Report of the President, Municipal Court, Nagercoil, dated 24.01.1921.
\textsuperscript{35} Nagercoil Municipal Council Meeting, dated 6.4.1923.
\textsuperscript{36} Letter No. 1238, dated 12.04.1923, President, Nagercoil Municipal Council to Revenue and L.G. Section, Trivandrum.
\textsuperscript{37} Inscription on the wall of the Filter House, Krishnankoil, Nagercoil.
There are other dams such as Chittar dam I and II, Mampazhathuraiyar and Poigaiyar dams. These dams are constructed after 1956. In 1972, Radhapuram channel was excavated. Hence water supply is needed for additional 17,000 acres of land. Hence an interconnecting canal was excavated in the foreshore of the two reservoirs. This place is called as channelkarai. This canal is 3300 ft. long with bed width of 30 feet. This canal is also intended to transmit a part of the flood discharge from dam II to Dam I for surplusing into the river from Dams.

Thus the dams are of high economic value to the people of Kanyakumari District. The Pechippara and Perunchani dams are highly useful for the cultivation of paddy and other crops such as plantain and coconuts. Apart from these they are used for cultivation of dry crops also. Though the Mukkudal dam’s usefulness for agriculture is limited it is mainly used for drinking water. If Mukkudal dam is not used for drinking water, the headquarters of the present Kanyakumari District would have been depopulated. Thus dams are always useful to the people. After 1956, the usefulness of the dams and irrigational projects met with many changes.

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