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Irrigation Sources of Villupuram District

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Abstract
This paper focuses its attention on the irrigation sources of Villupuram district. It is concentrates mainly on the study of availability of irrigation sources in Villupuram district. Agriculture is the largest and most important sector of the Indian economy. It is often greatly hampered due to irregular, insufficient or uncertain rain. Proper irrigation systems can secure uninterrupted agriculture. Tamilnadu has been one of the driest regions in the south. The Villupuram district is composed of vast stretches of cultivable lands. However, there live hard working and intelligent people, waging a constant struggle against the odds of nature. Though the district enjoys adequate rainfall, in some places of the district rainfall is uncertain, and the agriculturalists largely depend on irrigation. The chief source of irrigation in the district is rain. A few rivers and a large number of jungle streams help the development of irrigation. Besides these, tanks, wells and spring channels also constitute a unique feature of this district. Villupuram district is blessed with numerous rivers for irrigation. Besides river irrigation, dams are considered as the best source of irrigation in Villupuram district. Constructed across river to store vast quantity of water, dams can be used for irrigation in times of scarcity. The important dams of the district are Tirukoilur Anicut, Ellis Choultry Anicut, Vadakkanandal Anicut, Veedur Reservoir and Sathanur Dam. Besides rivers and dams, channels are the most important source of irrigation since the very early times. River water is being stored by constructing dams. Such stored water is drawn through channels to irrigate the land during all seasons. Channels are also laid out from the rivers to divert water to various directions. Besides dam and channel irrigation, Villupuram district is blessed with a number of tanks in most of the villages. Water stored in these tanks is let out for irrigation during scarcity. Most of these are fed either by rain or by rivers and channels. Wells plays a significant role as a source of irrigation. They are more dependable though they irrigate very limited area. Villupuram district, one of prominent of the Tamilnadu states is provided with a network of irrigational facilities. All these irrigational facilities promote economic development and further extension is found necessary to facilitate cultivation and enhance the economic status.

Keywords: irrigation, rivers, dams, channels, tanks, wells

1. Introduction
Agriculture is the largest and most important sector of the Indian economy. It is often greatly hampered due to irregular, insufficient or uncertain rain. Proper irrigation systems can secure uninterrupted agriculture. Tamilnadu has been one of the driest regions in the south. The Villupuram district is composed of vast stretches of cultivable lands. However, there live hard working and intelligent people, waging a constant struggle against the odds of nature. Though Villupuram enjoys a high temperature throughout the year, April, May and June experience the hottest climate. But it is blessed with regular monsoon. Generally south-west (June-October), north-east (October-December) and south-east monsoons provide adequate rains. Though south-west monsoon provides scanty rain to this region, the north-east monsoon provides the heaviest rainfall. The district has an average rainfall of 1,011.6 millimeters every year and is favored by both the approaching south-west and retreating north-east monsoons. Though the district enjoys adequate rainfall, in some places of the district rainfall is uncertain, and the agriculturalists largely depend on irrigation. In view of this, among the 32 districts in Tamil Nadu, the present paper is an attempt to study the irrigation sources of Villupuram district only.

2. Methodology
This study makes an attempt to examine the irrigation sources of Villupuram district. It is primarily a fact finding venture on the basis of exploratory method. The availability of the irrigation sources can be analysed with the help of appropriate statistical data collected from the various statistical reports. This study also evaluates availability of the irrigation sources. Thus, this study is partly exploratory and partly analytical based on thematic and historical approaches.

3. Objectives
This study aims to fulfill the following objectives:
1. To find out the availability of the irrigational facilities.
2. To analyses the importance of the irrigation sources.
3. To measure the uses of the irrigation sources.

4. Sources of Information
This study is mainly based on primary and secondary sources. Most of the primary sources kept preserved in Tamilnadu Archives and Department of Economics and Statistics, Chennai besides most of the prominent libraries, are referred to for the present study. Among the primary sources, Census Reports of Villupuram District (2011) are very useful for this study. The secondary sources were also consulted to make a detailed study. They were mainly from the English and Tamil Books, Gazetteers, and Manuals which largely helped to collect details on the irrigation sources of Villupuram district.

5. Background of the District

As far as the geographical location of the Villupuram district is concerned, it is situated in the northern part of Tamilnadu, and it is the largest district in the state with an area of 7194 square kilometres. Villupuram district lies between 11 35' 25" and 12 20' 44" of the northern latitude and 78 15' 00" and 79 42' 55" of the eastern longitude. It was earlier part of South Arcot district, then bifurcated from South Arcot district on 30th September 1993 and was rechristened as Villupuram district. The residual part of the erstwhile South Arcot district was named as Cuddalore district. It is surrounded on east by Bay of Bengal and Union Territory of Pondicherry, South by Cuddalore district, the West by Salem and Dharmapuri distracts, and on the North by Thiruvannamalai and Kanchipuram districts. At present Villupuram district comprises of 1,490 revenue villages, 4 revenue divisions, 13 administrative taluks, 22 blocks, 15 town Panchayat unions, 1,099 village Panchayats and 3 municipalities. According to 2011 Census Report, the district had a population of 34,58,873 people of which males account for 17,40,819 and females account for 17,18,054. The density of population of the district per square kilometres is 481 and sex-ratio of 987 females for every 1000 males. The urban population is 5,19,088 and rural population is 29,39,785. Villupuram district holds an important place in the field of agriculture. Next to Coimbatore, Villupuram district has the largest net sown area in the state. The net area sown in the district was 3,08,341 hectares and the net area irrigated in the district was 1,96,172 hectares in 2016-17. The percentage of net area irrigated was 50.92 out of net area sown. The gross area irrigated in the district 2,40,481 hectares and the gross area sown in the district was 3,73,694 hectares in 2016-17. The percentage of gross area irrigated was 62.43 out of gross area sown.

6. Irrigation Sources

The chief source of irrigation in the district is rain. A few rivers and a large number of jungle streams help the development of irrigation. Besides these, tanks, wells and spring channels also constitute a unique feature of this district. The spring channels are dug in the sandy river beads in order to exploit the under flow when the freshest in these rivers has ceased. This method is very often practiced in Tirukoilur and Villupuram taluks, particularly among the beds of rivers Malattar and Ponnaiyar. Some of these spring channels are large enough to irrigate 200 to 500 acres of land. In addition to this, numerous irrigation wells and some rain-fed tanks also support agriculture in the district.

6.1 Rivers

Rivers are the gift of nature and they provide water supply to a large portion of lands. Villupuram district is blessed with numerous rivers for irrigation. The river irrigation account is less than 4.3 percentage of total irrigated area in the district. The Ponnaiyar is the principal river and the other important rivers are Gomukhi, Manimuktha, Gadilam, Malattar, Sankaraparani and Varahanathi. All these rivers are non-perennial and run in valleys and have been harnessed for irrigation purposes by anicuts built across them at various stages of their course. Even during the 19th and 20th centuries, a number of projects were taken up for the purpose of irrigation.

6.2 Dams

Besides river irrigation, dams are considered as the best source of irrigation in Villupuram district. Constructed across river to store vast quantity of water, dams can be used for irrigation in times of scarcity.The important dams of the district are TirukoilurAnicut, Ellis Choultry Anicut, Vadakkanandal Anicut, Veedur Reservoir and Sathanur dam.

6.1.1 Tirukoilur Anicut

There is an old anicut across the Ponnaiyar, four miles away from Tirukoilur, called the Tirukoilur Anicut. It was built in 1863-64 to increase the supply in the then existing channels. Five channels take off from it to irrigate the lands in the Villupuram, Tirukoilur and Cuddalore taluks. As the river gets silted up periodically due to torrential rain, it is proposed to replace the top two feet of masonry with two feet falling shatters to allow silt to pass during floods. Out of its five channels one called the Pambai channel, formed for utilizing the course of the Pambai, a jungle stream falls into the Varahanathi river. It irrigates 22,181 acres of land in the Villupuram taluk. In addition, there are four channels known as the Reghavaiyan, Vadamarudur, Shittalingamadam and the Malattar Channels which take off from the south of the anicut. Water drawn through these channels fills most of the tanks in Tirukoilur and Cuddalore taluks which irrigate about 15,000 acres of lands in these areas. Moreover, the river Malattar, after irrigating 4,400 acres of land situated in the first 10 miles, falls into the Gadilam.

6.1.2 Ellis Choulty Anicut

Another anicut known as Ellis Choultry Anicut is a small barricade constructed across one among the important channels known as Alangal Channel which take off from the river Ponnaiyar. Before its construction, the water diverted through this channel could irrigate only 10,000 acres of land. Aiming to bring more land under irrigation for cultivation, in 1952 this barricade was proposed to be constructed at about 9 miles to Villupuram at a cost of Rs.12.7 lakhs. Consequently 5,400 acres of land were also brought under the irrigational map. Two channels, known as the combined Maragatha Pura Palangal channel and Valasareddi channel, take off on the left and each of these bifurcates into two channels about a furlong from their take-off at the anicut. In course of time new channels were also dug out to irrigate more lands. With this ambition, a channel, known as the Erralur channel, was laid to irrigate Yenadimangalam and other villages. It may also be noticed that about two and a half miles below the anicut, another channel takes off on the right and feeds the huge Valavanur tank in the Villupuram taluk.

6.1.3 Vadakkanandal Anicut

Built across the Gomuki River, the Vadakkanandal Anicut has a channel on the left. It irrigates 600 acres. To bring more area under cultivation, in 1946 a channel was excavated on the right of it to feed a chain of about 8 small tanks with an ayacut of 755 acres. Since then another channel on the right side, about 4 miles long, was also excavated to stabilize the existing ayacut of 511 acres and to irrigate a new ayacut of 187 acres. In 1953 a reservoir was constructed about 10 miles to the north–west of Kallakurichi and above the Vadakkanandal Anicut to propel water to a

main channel about 6 miles from the left flank of the river to irrigate about 5,000 acres.

6.1.3 Veedur Reservoir
The Veedur Resevoir project consists of a storage reservoir built across the Varahanathi in Tindivanam taluk in 1957-59 for a length of 19,540 feet. This project converted several acres of barren lands in Tindivanam and Villupuram taluks into arable areas. The scheme was intended to irrigate 3,200 acres of which 1,000 acres are stretched in Pondicherry state. The total cost of the project including direct and indirect charges was Rs.67.49 lakhs to be shared in the proportion of 11:5 by the Tamilnadu and Pondicherry states.

6.1.4 Sathanur Project
The Sathanur Project executed in the North Arcot district is a major source of irrigation for both Tiruvannamalai and Villupuram districts. The reservoir had a capacity of 4,600 million cubic feet in the first stage. But its storage capacity increased to 8,000 million cubic feet ultimately. Further, the water released from the reservoir was again blocked by another anicut situated 4 ½ miles below the dam. Irrigation was carried on by a canal on the left side of the anicut 22 miles long with necessary branch channels and distributaries to irrigate 15,300 acres in Tiruvannamalai district and 4,700 acres in Tirukoilur taluk in Villupuram district. To cherish this ambitious plan a provision of Rs.171.97 lakhs was allotted in the state plan to complete this scheme. Besides, a proportionate provision of Rs.40.21 lakhs was included in the Second Five Year Plan for this scheme on the basis of the area to be irrigated in South Arcot district.

6.2 Channels
Besides rivers and dams, channels are the most important source of irrigation since the very early times. River water is being stored by constructing dams. Such stored water is drawn through channels to irrigate the land during all seasons. Channels are also laid out from the rivers to divert water to various directions. The number of channels in the district was 196 in 2016-17. The area irrigated by channels in the district was 955 hectares in 2016-17. The important channels in this district are Raghavaiyan, Vadamarudur, Shittalingamadam, Pambai, Maragathapuram, Alangal and others. Thus, the water has drawn to many places through the channels help agriculturists to cultivate their land in time.

6.3 Tanks
Besides dam and channel irrigation, Villupuram district is blessed with a number of tanks in most of the villages. Water stored in these tanks is let out for irrigation during scarcity. Most of these are fed either by rain or by rivers and channels. The number of tanks in the district was 2,085 in 2016-17. The area irrigated by tanks in the district was 26,250 hectares in 2016-17. The important tanks in this district are Thiruvennainallur, Arumpattu, Perumpakkam, Natham, Siruvathur, Pakkam, Manalur, Panamalai, Melmalayanur, Ongur, Gidangal, Kattidaiyar, Senkurichi, Aamur, Aayanthur, Aalur, T.Kollathur, Melvalai and others. In addition, small rainfed tanks found mainly in Kallakurichi, Gingee and Tirukoilur taluks, enabled the agriculturalists to carryout intensive cultivation. Knowing the important tanks for irrigation, several major irrigation tanks were brought under the control of Public Works Department. Several tanks in Tirukoilur and Villupuram taluks obtained water from the Ponnaiyar River.

6.4 Wells
Wells plays a significant role as a source of irrigation. They are more dependable though they irrigate very limited area. It could be noticed that 1,68,522 wells in 2016-17 were used in this district for irrigation. Besides these, there were tube wells gaining popularity in the region. It could also be seen that about 41,726 wells in 2016-17 were used for domestic purposes only. The area irrigated by wells in the district including tube wells was 2,13,276 hectares in 2016-17. By and large well irrigation held a prominent place in the district for it was less expensive but more dependable to cultivate small tracts of lands.

7. Conclusion
From the study, it is obvious that Villupuram district, one of prominent of the Tamilnadu states is provided with a network of irrigational facilities. The analysis proved the obvious fact that the augmentation of irrigational facilities was mainly aimed at increased food production. All these irrigational facilities promote economic development and further extension is found necessary to facilitate cultivation and enhance the economic status.

8. References

1. Aiyndhandin Sathanaigal, Thennarkadu Mavattam (Tamil), Directorate of Information and Publicity, Government of Madras, Madras, 1956.
2. Baliga BS. Gazetteer of India, Madras, South Arcot District, Government of Madras, Madras, 1962.
3. Census of India, Tamilnadu, Series - 34, Part XII - B, District Census Handbook, Villupuram, Village and Town Primary Census Abstract (PCA), Directorate of Census Operations, Tamilnadu, 2011.
4. Chellam VT. A History of Tamil Nadu, Thirumalai Book House, Madras, 1985.
5. Cuddalore Matrum Villupuram Mavatta Neerpasana Karutharangu Malar (Tamil), Cuddalore, 2007.
6. District Statistical Hand Book, Villupuram District, Department of Economics and Statistics, Villupuram, 2016-17.
7. Madras Information, 1957; 9:12.
8. Madras Information, 1958; 12:5.
9. Nambiar PK. Census of India 1961, V0l. IX, Madras, Part X-III, District Census Handbook, South Arcot, Vol. I, The Director of Stationery and Printing, Madras, 1965.
10. Patthandu Sathanaigal, Thennarkadu Mavattam (Tamil), Directorate of Information and Publicity, Government of Madras, Madras, 1961.
11. Perumal DP. Tamilnadu Mavatta Kurippugal (Tamil), Kavikuyil Publications, Madras, 1967.
12. Second Five Year Plan, South Arcot District (Madras State), Government press, Madras, 1957.
13. Somalay. Thennarkadu Mavattam (Tamil), Pari Nilayam, Madras, 1963.
14. Sundara Shanmuganar. Kedilakarai Nagarikam (Tamil), Meyyappan Tamizhaivagam, Chidambaram, 2001.
15. Tamilvanan Lena. Tamilga Mavatta Nool Varisai: Thennarkadu Mavattam (Tamil), Manimekalai Publications, Madras, 1986.