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ORIGINAL ARTICLE

HISTORICAL GEOGRAPHY: AGRICULTURE , ANICUT SYSTEMS AND IRRIGATION WORKS IN ERSTWHILE SOUTH ARCOT DISTRICT, TAMIL NADU

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Abstract:

Cultivable land is a valuable asset of a village. Proper irrigation of land yields profit to cultivators and revenue to the Government. Expanding population and agriculture have made land increasingly valuable, and government moved to realsie as much of that value as possible in immediate in the past and present. Waste land considered to have abandoned by cultivators. In villages, waste land included a variety of types and uses. Some had never been farmed. It was a dry land for grazing, for fire wood, for brick clay, and for future residential sites. Some land have been deprived of irrigation by a broken tank but not suitable for dry crops. Some have been used in long-fallow farming, planted once in as many as ten years. For quite a long period, composite South Arcot District remained a backward area both in agriculture and allied activities. The people of this District, though hard working in nature remained unemployed due to vast tract of uncultivable barren land. Therefore to alleviate the sufferings of the people, the subsequent governments had paid proper attention to develop agriculture and other allied activities to make the people self-sufficient.

Agriculture is the largest and most important sector of the Indian economy.1 It plays a crucial role in providing food to the nation, employment to the population, raw materials to the industry and surpluses for the national economic development. Besides, growth of agriculture is responsible for the rise and fall of the nation.

Various activities connected with agriculture contribute to the economy in a large scale. It is the contributor of the largest amount of goods and services in the production of the country. It provides much employment opportunity to the vast majority of the Indian masses. In villages, about 80 per cent of the people depends upon cultivation and allied agro industries. A considerable part of the labour force in towns and cities also finds jobs in marketing, export and other allied activities connected with agriculture. Agriculture meets almost the entire food needs of the people and provides a sizeable part of exports and imports. In the budget of the state government, the land revenue and land expenditure occupies an important item. The manufacturing sector and services like trade and transport depend upon agriculture to a very large extent. Besides, agricultur provides raw materials for consumer goods and industries like food processing, tea vanaspati, sugar and cotton cloth. All such industries are fed by non-foodgrain products.

Pandit Jawaharlal Nehru once rightly remarked that "If agriculture in the country fails, we fail, the Government fails and the nation fails. There is no hope for us but to succeed in agriculture". South Arcot District is one of the prominent agricultural districts of Tamil Nadu. The District has advantages of agro climatic condition which is favourable to cultivate almost all the crops namely, paddy, sugarcane, groundnut, gingili, cereals, cotton and millets. In addition to the cultivation of these crops, the allied agriculture activities are also prosperous. In view of this, it is highly relevant to point out the major source of river of irrigation for agriculture in this district.

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INTRODUCTION

The Historical Geography of agararian India began to assume its contemporary forms in the 1950s, when the census of India mapped ecological and demographic regions, in 1952,[1] and Daniel Thorner mapped agrarian regions of economic development , in 1959.[2] In the 1970s , ecological regions gained prominence in South India especially Tamil Nadu, where Burton Stein traced geographies of integrating regions.[3] In 1983 , Ranajit Guha attepted to reconstruct the historical geography.[4] Tamil Nadu is one of the driest states in India. In Tamil Nadu, the South Arcot District is comprised of a vast stretch of cultivable lands. The people of this district are hardworking and sagacious nature. They wage a constant struggle against the vagaries of the nature. This District experiences a high temperature throughout the year, April , May and June are the hottest months which affect the works of the people. This District is also blessed with regular monsoon. Generally South West Monsoon (June –October) North East Monsoon (October-December) and South –East Monsoon take place and provide adequate rains. Though South-West monsoon provides scanty rain to this region, the North-East monsoon provides the heaviest rainfall.

The South Arcot District enjoys an average rainfall of 1.182.9 millimeters every year and is blessed by both the approaching South-West and retreating North-East monsoons.[5] Though the district enjoys adequate rainfall, in some places agriculturists largely depend on irrigation to sustain the crops. The soil of the district is mostly of red ferruginous type , very, often, sandy and highly arenaceous, especially in the coastal taluks of Tindivanam, Cuddalore and Chidambaram. The sub-soil is found to be rocky and the surface soil in some places are very poor in quality. The fine fertile soil of the black type which is mostly of the clayey and loamy varieties, retains moisture for long periods and requires less of watering. Irrigational facilities are found only in limited regions 1ike Virdhachalam taluk and parts of Cuddalore and Chidambaram taluks. The red ferruginous soil which covers 65% of the geographical area of the district, requires constant watering and hence for such soils irrigation is a imperative . In some places of the District, the rainfall is uncertain and the agriculturalists largely depend on irrigation through canals, tanks and wells.

IRRIGATION

Irrigation is a most crucial one in an agrarian economy. It denotes the natural or scientific application of water on earth.6 The prosperity of agriculture is conditioned by the timely use of several sources by the farmers. Water is the single most important source which accelerate the tempo of agricultural development. If soil is the storehouse of plant nutrients, water acts as its carrier. When rainfall is plentiful and is distributed well over the year, adequate water does not pose a problem. But when rainfall is uncertain and agricultural activities suffer and hence irrigation of land becomes a vital Element in the development of agriculture. Especially, in a country like India, wher nearly 60 per cent of the land is still dependent on rainfall that is ,vagarious in nature, Irrigation assumes absolute Importance.

In irrigation activities, the South Arcot District comes fourth after Thanjavur, Chingleput and North Arcot. The net area irrigated in this District during 1967-1968 was 984567 acres which was about 49%.[7] The farmers used electric motor, tractor, power tillers and oil engines during the cultivation period. A careful field survey reveals the fact that there 10,096 oil engines and 21,251 electric pumps in this District in 1966.[8]

SOURCES OF IRRIGATION

With regard to the sources of irrigation, the main source of irrigation the District is river. A few rivers and a large number of jungle streams help the development of irrigation activities. Besides these, tanks, wells and channels also contribute for the irrigation. The spring channels are dug in the sandy river beds in order to exploit the under-flow when freshest in these rivers has ceased. This method is very often practiced in Tirukoilur and Villupuram Taluks, particularly along the beds of rivers. Malattar and Ponnaiyar. Some of these spring channels are large enough to irrigate 200 to 500 acres of land. Moreover, numerous wells and some rain-fed tanks also support the cause of irrigation and the growth of agricultural activities in this District.

RIVER IRRIGATION

Rivers are the gift of nature and they provide water supply to a large portion of lands. South Arcot District is blessed with numerous rivers for irrigation. The main rivers are the Coleroon, the Ponnaiyar, the Vellar, Gadilam and manimukhtanadi which assist irrigation.[9] However, except Ponnaiyar, the other rivers are non-perennial. But all these rivers run in valleys and have been utilized for irrigation purposes by constructing anicuts across them at various places of their course. Even during the last quarter of the Nineteenth Century, a number of projects were under taken for the purposes of irrigation.

The important irrigation projects of this District are the Tirukoilur Anaicut , the Vridhachalam Anicut, the Pelandorai Anicut, the Shetiatope Project, and the Tholudur Project. The important irrigation projects undertaken during the plan are the Sathanur Dam and the Vidur Reservoir Projects across Varahanadi.[10]

Chidambaram Taluk is mostly benefited by the Colerroon (Kollidam), the Ponnaiyar, the Vellar and their tributaries which irrigate about 10 per cent of the area in the Vridhachalam Taluk. After traversing from north to south, it could be observed that a series of small anicuts were constructed across the Gingee river .In 1953 it was proposed to form a reservoir across the Tondiyar river at Veedur half a mile below its confluence, at an estimated cost of Rs.52.86 lakhs for works and Rs.53.90 lakhs for direct and indirect charges.

Special attention was bestowed upon either to store more water in the existing dams or to construct new dams. With this objective sometimes the height of certain dams was increased. A regulator was installed across the Pambaiyar to raise the water level in order to improve the existing irrigation of the Poyyapakkam Sengathangal, Kappiampuliyur, Thangal, Thoravi, Vakkur, Pagandi, V.Mathur, Vadanur and Thirumangalam tanks on either side of it. Out of the area of 2,338 acres commanded by the regulator, only 186 acres are under direct irrigation, and the remaining 2,150 acres are indirectly irrigated by the tanks filled by water let out from the dams through channels.[11]

There is an old anicut across the Ponnaiyar, four miles away from Koilur called the Tirukoilur anicut.[12] It was built in 1864 to increase supply in the then existing channels. Five channels take off from it to irrigate the land in the Villupuram, Tirukoilur and Cuddalore Taluks. As the river gets silted up periodically due to torrential rain, it is proposed to replace at top two feet of masonry with two feet falling shutters to allow silt to pass the rising floods. Out of its five channels, one called the Pombai channel, formed

utilizing the course of the Pombai, a jungle stream falls into the Varahnadhi river. It irrigates 7,272 acres of land in the Villupuram Taluk.[13] In addition there are four channels known as the Raghavaiyan, Vadamurudur, 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.[14]

ELLIS CHOULTRY ANICUTS

Another anicut anicut known as Ellis Choultry Anicut is a small barricade constructed across one among the important channel known as Alangal channel which takes off from the river Ponniyar. Before its construction, the water diverted through this channel could irrigate only10 ,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 Maragathapuram Alangal channel and the Valadareddi 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.[15]

ANICUTS ACROSS THE GADILAM

Four anicuts were constructed across the Gadilam river, namely, the Dama, the Tiruvadi, the Vanamadevi and the Tiruvendipuram anicuts.[16] Among these, Dama anicut is not important, because it irrigates only limited areas. The Tiruvadi anicut , situated 13 miles from Cuddalore, was built in 1848 to replace an earthen dam.[17] It supplies water to a channel laid on the north bank of the river. The Vanamadevi

anicut, situated 9 miles away from Cuddalore was built in 1863. It supplies water to a channel to fill a tank situated on south. The Tiruvendipuram anicut located 4 miles from Cuddalore was built in 1836. It is 436 feet long and irrigates very rich lands spotted around Cuddalore.[18] It also helps to fill the tank situated at the foot of Mount Capper. The channels from these an icuts irrigate about 8,500 acres in the Cuddalore Taluk. The area under the Gadilam channels is mostly fertile and water supply there is almost perennial. In addition in 1953 an anicut was constructed across the Gadilam at Puthanendal and a Channel was excavated on the right flank of the anicut to bring 519 acres under cultivation.[19]

TOLUDUR PROJECT

For a long time, some projects used for direct irrigation from both banks of the Vellar for storing its surplus water in a series of small tanks on the left of the river were under active consideration of the Government. In 1913, they took a practical shape which is called as Toludur project , at an estimated cost of Rs.20,64,380. The project was expected to bring in a net revenue of Rs.l,28,854. Knowing the feasibility and income, the work was taken up in 1913 and completed in 1923. During the period of its construction, the estimate had to be revised twice. The irrigation under the project commenced from 1923 and the actual expenditure upto 1951-1952 came to about Rs.26 lakhs and its return was 2.71 per cent.

Named after Lord Willington, the then Governor of Madras inaugurated the headwork of this-reservoir on 8 August 1923. It was constructed across the Periya Odai, a natural drainage course, within the limits of Kilacheruvu, Ivanur and Kiranur near Tittagudi in the Vridhachalam Taluk. Its bund is 2 miles 4 furlongs long and it has a water-spread area of 61/2 square miles.

In addition to its supply from the Vellar, it receives supplies from a free catchment area of 50 square miles. Surplus vents have been constructed at the left flank of the reservoir to discharge the run off from its free catchment. The channel below the surplus vents is 6 furlongs long and joins the Periya Odai at its tail end. With two fillings, the reservoir was expected to command its full ayacut acres. A channel from the South bank irrigates 2000 acres of waste lands.[20]

PELANDURAI ANICUT

The Pelandurai anicut situated twenty miles from Toludur and ten from south of Virudhachalam[21] was built on the ruins of an ancient anicut at a cost of Rs.2,38,000 from 1870 to 1876. But the anicut underwent several changes consequent on recurring floods in 1877, 1880, 1884 and in 1885. The regulator consisted of 17 vents of 29 feet each fitted with 6 feet high weight-lift shutters. It irrigates to an extent of 13,978 acres of lands to the south of the Vellar. It also specially brought fertility to about 9,000 acres of red land surrounding Srimushnam and its neighbourhood in the Chidambaram Taluk, which was formerly a very poor tract.[22]

The Shatiatope anicut across the Vellar was constructed in 1848 close to the end of Viranam tank. It is 530 feet long and carries the bridge on the Trunk Road from Panruti to the Lower Anicut. A part of the anicut was built of sandstone brought from Gangaikondacholapuram in the Tiruchirapalli District. It supplies one channel on the left (north) known as Raajan Vaikkal or the Vellar Rajan channel which has several branches. It irrigates directly 18,970 acres by means of four distributaries known as the Ariyagoshty, Manampattan, Odaiyur and Morattur channels and it also feeds Wallajah tank. The surplus water of this tank is let out through a sluice into the Perumal tank. [23]

The anicut stands just below a bend in the river and so difficulties have occurred several times from the tendency to scour which frequently arose in front of the anicut . Aprons frequently suffered, and leaks had to be frequently stopped. So also in 1885 five arches of the bridge next to the north tank also collapsed and a portion of the anicut below them sank as their foundations were scoured by leaks. In order to prevent such mishaps, the foreshore drainage channel of the Viranam tank was widened and its foreshore was strengthened. The spill on the left margin is now safely passed through Komara Odappu, which has 25 vents of 8 feet span built in 1929.[24]

The crest of the lower anicut , on the Coleroon was cut down during 1898- 1903 by 4 feet and fitted with 6 feet shutters to assure a constant supply for the Shatiatope anicut system and to enable early cultivation with the Coleroon supplies. As the supply of Wallajah tank was maintained with some difficulty the crest of the Shatiatope anicut t was lowered in 1904 by 4 1/2 feet, and 7 ½ feet lift-shutters similar to those put at Pelandurai. These shutters have also the advantage of permitting the use of the Coleroon water in the Vellar. In order to improve the supply to the Vadavar and the Viranam tanks, the crest of the lower Coleroon anicut was lowered by two more feet and the existing 6 feet shutters were replaced by 8 feet shutters during 1906-1909. The Vadavar was also widened and the Full Tank Level of the Viranam tank

was raised by 2 feet during 1906- 1913.[25]

MEMATTUR AND VRIDHACHAIAM ANICUTS

Th Memattur anicut constructed across Manimuktanadi in 1873 was away from Vridhachalam. It is 412 feet long and suppljes a chain of nine tanks from a channel which is 7 miles 4 ½ furlongs long on the south bank of river.[26] The total area of land under the ayacut is 5,200 acres. In 1870 another anicut was constructed across the same river namely Vridhachalam anicut which stands miles below Vridhachalam. It is 334 feet long and it provides liirtigation on both the banks of the river, its ayacuts under the north and south main channels being 7, 714 and 1,700 acres respectively. Subsequently, another reservoir was also constructed across the river at Pallagacneri, 4 miles away from Kallakurichi, and 4,250 acres of land reaped the benefit.[27]

VADAKKANUNDAL 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 eight saml tanks with an ayacut of 755 acres. Since then another channel on the rightside, about 4 miles long, was also excavated to stabilise the existing aycut of 511 acres and to irrigate a new ayacut of 187 acres. In 1953 a reservoir was constructed about ten miles to the north-west of Kallakurichi and and above the Vadakkanundal anicut to propel water to a main channel about six miles from the left flank of the river to irrigate about 5,000 acres.[28]

SATHANUR PROJECT

The Sathanur Project executed in the North Arcot District is a major source of irrigation for both North Arcot and South Meat Districts. Under this project, a reservoir was formed across the river Ponniyar near Sathanur in North Arcot District.[29] The reservoir had a capacity of 4,600 million cubic feet in the first stage. But its storage capacity increased to 8000 million cubic feet u1timateIy. 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 North Arcot district and 4,700 acres in Tirukoilur Taluk in South Arcot District.[30] To cherish this ambitious plan a provision of Rs. L711.97 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 b irrigated in in South Arcot District.[31]

VIDUR RESERVOIR PROJECT

The Vidur Reservoir Project consists of a storage reservoir built across the Varahanadi in Tindivanam Taluk for a length of 19,540 feet.[32] This project converted several acres of barren lands in Tindivanam and Vilupuram taluks into arable areas. The scheme was intended to irrigate 3200 acres of which 1,000 acres are stretched in Pondicherry State.[33] 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 Tamil Nadu and Pondicherry States.[34]

To conclude, many irrigations works in South Arcot District are the legacies of the Colonial British Government. They attempted to bring out waste lands into cultivable lands. For that, they constructed many anicuts across the perennial rivers in order to facilitate agrarian activities throughout the year. South Arcot District in blessed with river irrigation which caters the needs of the local cultivators who by nature hardworking and laborious.In the Independent Tamil Nadu the Popular Governments are maintaining the anicuts and renovating them in all possible ways. They also involved in the construction of small dams .

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