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# Identification of Cultural Heritage of Ancient Tamilakam

Dr. N. AMUTHA KUMARI

*Assistant Professor,  
Department of History,  
Scott Christian College (Autonomous),  
Nagercoil.*

*Human beings are those capable of creating expression to their emotions and thoughts in the form of meaningful words and phrases. Even though several living things have the ability to communicate among them, human beings alone have the capacity for thinking rationally and the specialty is that the development of such communication skills was responsible for the growth of languages, which in turn laid the basis for the growth of knowledge. That is why the great scholars portrayed only two things in the world which would dispel the darkness of the mind and the world, one is the Sun that rises in between the mountains and the other is the peerless Tamil born from Pothigai.*

**Keywords:** Ancient Tamilakam, Tamilnadu, Sangam Age and Literature.

**Ancient Tamil language**

Our language is a rich and ancient language. Our Tamil language which is more precious than our life is the source of origin for other languages. The ancient grammar Tolkappiam and Ancient literature are the living examples for our ancient Tamil language (Agrawal, D.P.). Dr. Caldwell, a foreign scholar, who had contributed a lot in the field of comparative study on Dravidian Linguistic Grammar says that “the invaluable treasure of rich contributions in Tamil Literature and the various grammatical treatises in the Classical Language of Tamil are the best examples to establish the ancient richness of

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### *Identification of Cultural Heritage*

Tamil Language and the European Scholar who studied the Dravidian Language like Tamil cannot disregard the community which has contributed for the development of a wonderful language such as Tamil” (Anikurunuru). He has also commended that Tamil is a Unique Language which can function without support of the languages like Northern languages etc.

Besides, our sweet Tamil language has captured the hearts of foreign scholars G.U. Pope, Veeramamunivar and Dr. Winslo. Thirukkural, written by the immortal Sage Thiruvalluvar is considered to be a heavenly treasure to be a heavenly to be a heavenly treasure which has also been translated into various other languages and cherished as a Universal scripture. All these contributions of our forefathers make us feel proud of our great language (Pillai, K.K.,). At the same time, we cannot forget that it is our bounden duty to make our Tamil

Language still more great and rich. Even though it is a long-cherished demand, as a result of our persistent efforts, the Central Government has issued orders declaring Tamil language as a Classical Language (Agrawal, D.P.,). As stated in the Governor’s Address and following the declaration of Tamil as Classical Language, this Government has persuaded the Central Government to fulfil the demands for the Institution of Tamil Classical Language awards in the name of Tholkappiar and Thiruvalluvar. Further, this Government has also emphasized the Central Government to declare Tamil as one of its Official Languages and also to announce Thirukkural as a National Literature.

As part of this and as announced in the Budget Speech, this Government would upgrade the International Institute of Tamil Studies as World Tamil Classical Language Research Institute for undertaking Literary Research on par with the other classical languages of the world and emphasis the Government of India to provide grants to this institution for research in classical languages. Further, action will be taken to establish an Ariviyal Tamil Mandram so that the Tamil Language which is our ancient and living language possessing continuously literature wealth compared to that of the literatures of Worldwide will continue to be a usable language for the present and future for ever. (Aravamudhan, T.G.,) Further, efforts will be taken to urge the Government of India to issue postal stamp to commemorate the memory of Parithimar Kalaignar who was born at Thirupparankundram and earned fame throughout the land by giving the first clarion call for declaring the Tamil as Classical Language and changing his name Suriya Narayana Sastri into a pure Tamil one and to convert the house in which he was born at Vilacheri near

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Thirupparankundram into a memorial and to nationalize his books and provide honorary grants to his legal heirs.

With the aim of bringing credit to the Tamil Language, the developmental activities in respect of Tamil Language, Art and Culture are being pursued in full vigour. The Directorate of Tamil Development, Translation Wing, Directorate of Etymological Dictionary Project, the Department of Archaeology, The Department of Museums, Directorate of Art and Culture, Regional Cultural Centers, Government Music Colleges, Music Schools, Government College of Fine Arts, Government College of Architecture and Sculpture, Tamil Nadu Eyal Isai Nataka Manram, Tamil Nadu Oviyan Nalkalai Kuzhu and Tamil Nadu Jawahar Siruvar Mandrams which are under the control of Tamil Development-Culture Department are undertaking all these works. Tamil culture is the culture of the Tamil people (Srinivasa Iyengar, P.T.). Tamil culture is rooted in the arts and ways of life of Tamils in India, Sri Lanka, Malaysia, and Singapore and across the globe.

### Religion

Ancient Tamil grammatical works Tolkappiyam, the ten anthologies Pattuppāṭṭu, the eight anthologies Eṭṭuttokai sheds light on early religion of ancient Dravidian people. Murugan was glorified as, the god of war, who is ever young and resplendent, as the favored god of the Tamils. Sivan was also seen as the supreme God. Early iconography of Murugan and Sivan and their association with native flora and fauna goes back to Indus Valley Civilization. The Ancient landscape was classified into five categories, thinai, based on the mood, the season and the land. Tolkappiyam, mentions that each of these thinai had an associated deity such Seyyon in Kurinji-the hills, Thirumaal in Mullai-the forests, and Venthana in Marutham-the plains, Kotravai in Palai-the desert and Wanji-ko/kadalon in the Neithal-the coasts and the Seas

The most important Tamil festivals are Pongal, a harvest festival that occurs in mid-January, and Varudapirappu, the Tamil New Year, which occurs on 14 April. Both are celebrated by almost all Tamils, regardless of religion. The Hindu festival Deepavali is celebrated with fanfare; other local Hindu festivals include Thaipusam, Panguni Uttirai, and Adiperukku. While Adiperukku is celebrated with more pomp in the Cauvery region than in others, the Ayyavazhi Festival, Ayya Vaikunda Avataram, is predominantly celebrated in the southern districts of Kanyakumari District, Tirunelveli, and Thoothukudi.

## *Identification of Cultural Heritage*

### Protection

Major ruling dynasties and chieftains maintained large standing army. The wars were frequent and were fought not only for defence but also with a desire to extend one's territories or to save suffering people of neighbouring kingdoms from tyranny or misrule. Sometimes the wars occurred for matrimonial alliances. Such was the mental state of the people that almost everyone trained himself for war and besides the army maintained by the king's potential soldiers were all over the country to join the royal force in times of need. Even kings trained themselves in such activities. The king maintained all the four kinds of armies mentioned in Ancient literature - the chariot, the elephant, the cavalry and the infantry.

There are references to the navy of the Chera that guarded the sea-port so well that other ships could not enter the region (Pillai, K.K.). The Ancient texts also mention about the army camp on the battle field. The king's camp was well made and even in camp he slept under his white umbrella and many soldiers slept around him mostly without sword. The camps of ordinary soldiers were generally built with the sugarcane leaves on the sides and cut paddy crop on the top with paddy hanging from it. Generals and officers of high rank were accompanied by their wives on the campaign and stayed in the special camps built for the officers. The king frequently visited the camp of soldiers and officers to enquire about their welfare. He did so even in the night and in pouring rain. Tamil people had a great respect for the warrior and particularly the hero who died in the battle field. Suffering a back-wound was considered as highly disreputable as there are instances of kings who died fasting because they had suffered such a wound in battle. The hero stones were erected to commemorate heroes who died in war. There was the provision for the prison which indicate the coercive machinery of the state (Pillai, K.K.). Ancient polity was influenced by the North Indian political ideas and institutions in many aspects. Many rulers sought their origin and association with deities like Siva, Vishnu and ancient sages. Many kings are said to have participated in the Mahabharata war like their North Indian counterparts.

### Administration

The king was the very centre and embodiment of administration. He was called Ko, Mannam, Vendan, Korravan or Iraivan. Though hereditary monarch was the prevailing form of government, disputed successions and civil wars were not unknown. The court of the crowned monarch was called avai. The ideal of the 'conquering king' (Vijigishu) was accepted and acted on. The King's birthday (Perunal) was celebrated every year. Kings assumed several titles. For example, the Pandyas were known as Minavar, Kavuriyar, Panchavar, Tennar, Seliyar, Marar, Valudi. etc the Cholas called themselves

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Sennis, Sembiyas, Valavan and Killi, and the Cheras had titles like Vanavar, Villavar, Kudavar, Kuttuvar, Poraiyar and so on. The royal emblem of the Pandyas was the carp (fish), the bow of the Cheras and of the Cholas was the tiger. The sabha or manram of the king in the capital was the highest court of justice.

### Provincial and Local Administration

The entire kingdom was called mandalam. The Chola mandalam, Pandya mandalam and the Chera mandalam were the original major mandalam. Below the mandalam was a major division, nadu (province). The ur was a town which was variously described as a big village (perar), a small village (sirur) or an old village (mudur). Pattinam was the name for a coastal town and Puhar was the harbour area. The administration of nadus was generally carried on by hereditary chiefs. The village was the fundamental unit of administration which was administered by local assemblies called manrams.

### Revenue administration

The commonest and possibly the largest source of revenue was land-tax called Karai, but the share of the agricultural produce, claimed and collected by the king, is not specified. The ma and veli was the measure of land and kalam as measure of grain. A well-known unit of territory yielding tax was a varyam (Vari meant tax) and an officer in-charge of collecting the tax from that unit of land was called a Variyar (Srinivasachari, G). Tributes paid by the feudatories and war booty (irai) constituted a considerable part of royal resources. Trade local and long-distance, constituted a very important source of royal revenue. Tolls and custom duties were ulgu or sungum. The duties to be paid to the king were generally known as Kadamai or Paduvadu.

### Military Administration

Apparently out of the taxes collected from the peasantry, the state maintained a rudimentary army and it consisted of chariots drawn by oxen, of elephants, cavalry and infantry. Elephants played an important part in war. Horses were imported by sea into the Pandyan kingdom. The institution of virakkal or nadukul (hero-stone), which was a practice of erecting monuments for the dead soldiers and worshipping them, was prevalent at that time. The institution of Kavalamaram or Kadimaram was also prevalent. Under it, each ruler had a great tree in his palace as a symbol of power.

### Economy

The Ancient economy was simple and mostly self-sufficient. Agriculture was the main occupation and the chief crops were rice, cotton, ragi, sugarcane, pepper, ginger, turmeric, cardamom, cinnamon etc. Weaving, ship-building,

### *Identification of Cultural Heritage*

metal working, carpentry, rope-making, ornament-making, making of ivory products, tanning etc were some of the handicrafts, which were widely practiced. The market place was known as avanam. This period also witnessed the emergence of various towns like Puhar, Uraiyur, Vanji, Tondi, Muzuris, Madurai, Kanchi, etc. Industry and crafts was given a fillip by a rising demand in the foreign markets (Srinivasachari, G). Trade, both inland and foreign, was well organised and briskly carried out throughout the period. Internal trade was brisk, caravans of merchants with carts and pack-animals carried their merchandise from place to place, Barter played a large part in all transactions and salt was an important commodity of trade. The Ancient period witnessed the rise of maritime activity.

External trade was carried on between South India and Hellenistic kingdom of Egypt and Arabia as well as the Malay Archipelago. The author of the Periplus of the Erythraean Sea (75 A.D.) gives the most valuable information about the trade between India and the Roman Empire. He mentions the port of Naura (Cannanore), Tyndis (Tondi), Muzuris (Musiri, Cranganore), and Nelcynda as the leading ones on the west coast. Other ports of South India were Balita (Varkalai), Comari, Colchi, Puhar (Khabaris of Ptolemy), Saliyur, Poduca (Arikamedu) and Sopatma (Markanam). A landmark in the development of communications was the discovery of the monsoon winds by the Greek sailor Hippalus in around A.D. 46-47. This led to increase in volume of trade. Large vessels made up of single logs called Sangara and very large vessels, called Colondia made voyages (Rayachandar). The Periplus of the Erythraean Sea, written by an anonymous Greek navigator, gives details of Indian exports to the Roman Empire. The main exports were: pepper, pearls, ivory, silk, spike-nard, malabathrum, diamonds, saffron, precious stone and tortoise shell.

It also mentions Argaru (Uraiyur) as the place to which were sent all the pearls gathered on the coast and from which were exported muslins called agraritic. Silk, which was supplied by Indian merchants to the Roman Empire, was considered so important that the Roman emperor Aurelian declared it to be worth its weight in gold. The Roman need for spices could not be met entirely by local supply; this brought Indian traders into contact with south-east Asia. In return for her exports, India imported from the Roman empire such commodities as topaz, tin cloth, linen, antimony, crude glass, copper, tin, lead, wine, orpiment and wheat. The Romans also exported to India wine amphorae and red glazed Arretine ware which have been found at Arikamedu near Pondicherry. They also sent to India a large number of gold and silver coins. Connected with the phenomenon of trade was the growth of money economy in the early centuries. The imported coins were mostly used as

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bullions. The large quantities of gold and silver coins struck by all the Roman emperors beginning from the reign of Augustus (and that of Tiberius) down to Nero (54-58 A. D.) found in the interior of Tamil land, testify to the extent of the trade and the presence of Roman settlers in the Tamil country.

## Martial Traditions

Various Marital Arts including KuttuVarisai, VarmaKalai, Silambam, Adithada, Malyutham and Kalarippayattu, are practised in Tamil Nadu and Kerala. The warm-up phase includes yoga, meditation and breathing exercises. Silambam originated in ancient Tamilakam and was patronized by the Pandians, Cholas and Cheras, who ruled over this region. Silapathiharam a Tamil literature from the 2<sup>nd</sup> century AD, refers to the sale of Silambam instructions, weapons and equipment to foreign traders. Since the early ancient age, there was a warlike culture in South India (Rayachanderi). War was regarded as an honorable sacrifice and fallen heroes and kings were worshiped in the form of a Hero stone.

## Music

Tamil country has its own music form called Tamil Pannisai, from which current carnatic music evolved. Has its own music troops like Urumimelam, Pandimelam (present day's chendamelam), Mangala Vathiyam, Kailayavathiyam etc. Ancient Tamil works, such as the Silappatikaram, describe a system of music, and a 7<sup>th</sup> -century Pallava inscription at Kudimiyamalai contains one of the earliest surviving examples of Indian music notation (Pillai, K.K.). Contemporary dance forms such as Bharatanatyam have recent origins but are based older temple dance forms known as Sadirattam as practiced by courtesans and a class of women known as Devadasis.

## Conclusion

Ancient polity was characterized by the patriarchal and patrimonial systems in which the administrative staff system and various offices were directly controlled by the rulers. We also notice social inequalities with the dominance of the Brahmanas. But the acute class distinction, which appeared in later times, were lacking in Ancient age. Agriculture was the backbone of Ancient economy. The trading activities, especially trade relations with the Mediterranean World enriched their economy. The foreign elements also influenced the socio-economic and cultural life of people. The beliefs and

### *Identification of Cultural Heritage*

customs practiced by ancient people suggest the complex nature of their religion. Both, animism and idol worship, were followed during the ancient age. Many of the traditions of the age continued and survived in the later periods and some exist even till today.

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## Effect of Different Feeding Manner on The Growth, Enzyme Activity and Economic Traits of Bombyx Mori. L

T. Thanga Suji

*Ph.D. Scholar,  
Department of Zoology,  
Muslim Arts College, Thiruvithancode*

Dr. M. Thilsath Fatima Quraiza

*Assistant Professor in Zoology,  
Muslim Arts College, Thiruvithancode,*

*Silkworm is one of the most economically important insects worldwide. The V<sup>th</sup> instar stage is very important because the larvae have enough nutrients for growth, development and silk production. In present investigation found out two different feeding manner such as starvation and over feeding produce enzyme and economic changes in B. Mori. Highly nutritive food is important for enzyme activity. Particularly, amylase is the key enzyme involved in insect's digestion and carbohydrate metabolism. In amylase enzyme activity was analyzed in fore gut, mid gut and hind gut of fifth instar larvae of silk worm. In this study showed the amylase activity was high in mid gut region ( $1.02 \pm 0.009$ min) when the larvae fed with over feeding when compared to control but hind gut larval enzyme activity ( $5.00 \pm 0.02$ minutes) was taken more time. Maximum growth ( $70.11 \pm 4.07\%$ ) was observed in 1% overfeeding treated groups. Economic traits such as cocoon weight ( $1090 \pm 110.11$ mg), shell weight ( $200 \pm 10.11$ g), shell ratio ( $18.34 \pm 2.55\%$ ) and filament length ( $740.00 \pm 13.89$ m). The feeding at regular intervals throughout larval period was very important for growth and development of worms.*

**Keywords:** Benzyme Activity, Amylase and Economic Parameter.

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The silkworm *Bombyx mori* L. is monophagous insect whose exclusive food is Mulberry leaves. This feeding characteristics of the silkworm greatly limits the development of the sericulture. The larva is the only stage in which the animals feed and excrete in the whole life cycle. This stage especially the 5<sup>th</sup> instar is very important because the larvae have enough nutrients for growth development and silk production. Enzymes play a vital role in the metabolism of dietary food in the body of an organism. Many investigators have carried out the biochemical studies with respect to the role of enzymes in various stages of the metamorphosis of insects. Digestion is usually controlled by digestive enzymes and is dependent on their localization in gut. In silkworms, the digestive enzymes in the midgut breakdown the complex form of nutrients present in the food into simple forms. These simpler forms are easily absorbed into the body through the semi permeable alimentary canal. The larval mid gut is formed of an epithelial cell monolayer composed of columnar, goblet and stem cells. The columnar cells are mainly responsible for good digestion and absorption.

Enzymes are large biological molecules responsible for the thousands of biochemical inter-conversion that sustain life without enzymes, metabolism would neither progress through the same steps, nor be fast enough to serve the needs of the cell silkworm mid gut digestive enzymes have been studied by Kanekatsu, 1972. Amylase are the important enzymes, involved in the metabolism of carbohydrates in silkworms. The two forms of hydrolases,  $\alpha$ -amylase and  $\alpha$ -glucosidase are key enzymes involved in starch breakdown and absorption, respectively. It is now believed that inhibition of these enzymes involved in digestion and uptake of carbohydrates can significantly alter (Ashutosh and Jha, 2011; Jeroh et al., 2011) the total carbohydrate level in the midgut and haemolymph. Different amylase enzymes were identified by analysis of digestive fluid and haemolymph in different strains of silkworm, *Bombyx mori* L. (Abraham et al. 1992).

Feeding frequency perhaps is the most important factor in silkworm rearing as it has a direct effect on the growth and development of worms on one hand and with the cost of silkworm rearing on the other (Sannappa et al. 2004). The number of feedings varies in various places depending upon many factors (Das et al. 1994). Optimal feeding frequency is of vital importance for proper growth and development of insects (Sehnal, 1985). It has been clarified unequivocally that *B. Mori* grows very fast and needs adequate feed during the last two larval instars because of the feeding stage consuming about 80-85 percent of the total feed (Krishnaswami et al. 1988). This leads to the increase in body size and dry weight of cellular mass which are dependent on the rate of environmental conditions in each instar in the rearing bed.

#### *Effect of Different Feeding Manner*

feeding frequency and overcrowding in rearing bed affects the economics of cocoon crop significantly as over feeding leads to leaf wastage and higher leaf cocoon ration while overcrowding of silkworm in rearing bed leads to insufficient consumption of feeds poor growth and higher incidence of disease. Resulting in low cocoon yield, of inferior cocoon quality (Ahmed et al.2015).

The cocoon weight shell weight and shell ratio are important commercial parameters of the cocoon stage for quality reeling performance. Saratchandra et al. (2002) reported superior Mulberry variety particularly triploids responsible for higher cocooning characters. Shell weight has a positive co-relation with cocoon shell ratio. Higher shell ratio percentage is important for silk filament and different feeding frequencies behaved differently in respect of shell ratio.

Nutrition is an important growth regulating factor in silkworm, and with this background, the study investigated the growth parameters, length and width of larvae, amylase enzyme activity of fore gut, mid gut and hind gut well as the cocoon characteristics of silkworm larvae fed with different feeding manner such as starvation and over feeding.

#### **Materials and Methods**

The multivoltine hybrid (PMXCSR2) silkworm, *B. Mori* were obtained from the State Government Sericulture Centre at Konam, Nagercoil Town. The emerging larvae were reared by the standard method of Krishnaswamy,1978.The first instar larvae were selected randomly and grouped in to 6 different batches for experiment. Control was also set up. Control larvae fed with 4 hrs interval. Each group consists of three replications each with 30 larvae. In experimental groups divided in to 2 major groups (Starvation and over feeding) each group consists of 3 divisions. Starvation had 1 hr, 2hrs and 3 hrs delays respectively. Over feeding had 1 hr, 2hrs and 3 hrs earlier feeding times respectively. Growth parameters, enzyme activity and economic traits are recorded following standard methods.

Amylase activity of foregut, mid gut and hind gut was analysed by the method of assay. Growth parameters of silkworm caterpillars (V<sup>th</sup> instar) were analyzed based on the methods developed by Waldbauer (1968).Economic parameters: The cocoons were harvested on the fourth day after spinning and the cocoon characters were recorded in experimental and control groups. Assessment of various cocoon parameters was made as follows (Sonwalker, 1993). All the data were analyzed statistically by t-test.(Zar,1984).

## Results

Table 1 shows the amylase activity on gut of *B. Mori* larvae when treated with different feeding manner (Starvation) and (overfeeding). In overfeeding (2min) treated group was observed maximum reduced midgut amylase content ( $1.02 \pm 0.009$  min) when compared to control ( $1.00 \pm 0.001$  min).

Growth rate (%) of *B. Mori* larvae treated with different feeding manner is presented in Table 2. The maximum growth rate ( $70.11 \pm 4.07\%$ ) was observed when the larvae fed with 1 hr interval overfeeding and the minimum ( $27.55 \pm 1.90\%$ ) was noted in 3 hrs interval starvation when compared to control.

Effect of different feeding manner such as starvation and over feeding on length and width of *B. Mori* larvae was represented in Table 3. Length ( $6.7 \pm 0.019$  cm) and width ( $0.9 \pm 0.0011$ ) was highest when the larvae fed with 1 hr over feeding and the lowest result was recorded in 3 hrs starvation (Length  $5.5 \pm 0.015$  cm and width  $0.4 \pm 0.061$  cm respectively).

Table 4 shows the silk gland ratio (%) of *B. Mori* larvae treated with different feeding manner of starvation and over feeding the silk gland ratio were increased ( $14.02 \pm 1.08\%$ ) and decreased ( $10.20 \pm 0.48\%$ ) in 1 hr over feeding and 2 hrs starvation respectively.

Table 5 show economic traits of *B. Mori* treated with different feeding manner. The maximum cocoon weight ( $1090 \pm 110.11$  mg), shell weight ( $200 \pm 10.11$  mg), shell ratio ( $18.34 \pm 2.55\%$ ) and filament length ( $740.00 \pm 13.89$  m) was recorded when the larvae fed with 1 hr over feeding.

## Discussion

Silkworms are voracious eaters of Mulberry during its larval stages and around 80 percent leaf is consumed in the last two instars. High lighting importance of food intake reported that the production of 1 gm larval dry weight (Horie, 1978). The enzyme system in the silkworm plays a vital role in determining the performance of the larvae in terms of effective transformation of organic food molecules of the leaf into useful biomolecules. The consumption of Mulberry leaf during final instar accounts for more than 80% of the total consumption during its larval life. In the present study, hind gut ( $5.00 \pm 0.021$  minutes) of starvation larval enzyme activity was taken more time than control and minimum time was recorded in the fore gut ( $0.90 \pm 0.01$  minute) of over feeding larval amylase enzyme.

Kedir et al. (2015) reported that three to four times feeding per day resulted in higher larval weight, lower larval mortality and shorter larval duration than two or one time per day. Similar observation was made by

#### *Effect of Different Feeding Manner*

Chandrashekarn (1996), commercially larval survival constitute an important characters from rearer's point of view. In the present study, significant difference was recorded in the over feeding treated larval group.

The maximum growth rate ( $70.11 \pm 4.07\%$ ) was observed when the larvae fed with 1 hr interval and the minimum ( $31.86 \pm 2.90\%$ ) was noted in 3 hrs interval when compared to control. The significant variation for larval survival can be attributed to more incidences of silkworm diseases and weakness due to starvation. Similar observation was made by Sannappa et al (2004) reported that feeding at regular intervals throughout larval period was very important for optimum growth and development of worms. In the present investigation, length ( $6.7 \pm 0.019$  cm) and width ( $0.9 \pm 0.0011$ ) was highest when the larvae fed with 1 hr over feeding.

The silk gland is the major site of silk protein. It synthesizes and store 93 proteins that are implicated in larval growth and development including 2 silk proteins viz: fibroin and sericin (Nirmala et al. 2003). Feiying et al. (2005) studied the protein variety of middle silk gland cells of the fifth instar larvae of silkworm, *B. Mori* at different development stages and concluded that the silk gland has the capacity to produce large amount of proteins. In this finding, the maximum and minimum silk ratio were ( $14.02 \pm 1.085$  and  $10.20 \pm 0.48$  %) noted in 1 hr overfeeding and 2hrs starvation respectively. This study was supported by Kamili (1994), who reported that silk gland weight is highly correlated to silk production and different silkworm strains have different silk gland weight influencing their silk production ability.

Table - 1

Treatment	Amylase activity (minutes)					
	Starvation			Over feeding		
	Fore gut	Mid gut	Hind gut	Fore gut	Mid gut	Hindgut
Control	$3.00 \pm 0.018$	$1.00 \pm 0.001$	$4.00 \pm 0.017$	$3.00 \pm 0.018$	$1.00 \pm 0.001$	$4.00 \pm 0.017$
1	$3.00 \pm 0.016$	$2.00 \pm 0.014$	$5.00 \pm 0.021$	$0.90 \pm 0.017$	$3.00 \pm 0.012$	$4.00 \pm 0.014$
2	$2.00 \pm 0.011$	$3.00 \pm 0.011$	$3.00 \pm 0.019$	$2.50 \pm 0.009$	$1.02 \pm 0.009$	$2.00 \pm 0.015$
3	$3.00 \pm 0.013$	$2.00 \pm 0.016$	$4.00 \pm 0.013$	$3.00 \pm 0.013$	$3.50 \pm 0.013$	$3.00 \pm 0.014$

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The enzyme system in the silkworm plays a vital role in determining the performance of the larvae in terms of effective transformation of organic food molecules of the leaf into useful biomolecules. The consumption of Mulberry leaf during final instar accounts for more than 80% of the total consumption during its larval life. In the present study, hind gut ( $5.00 \pm 0.021$  minutes) of starvation larval enzyme activity was taken more time than control and minimum time was recorded in the fore gut ( $0.90 \pm 0.01$  minute) of over feeding larval amylase enzyme. This report was in agreement with Lokesh et al.(2006), who found out that the food consumed in this stage is effectively utilized for the production of silk proteins as well as to support its metabolism. These findings are confirmative with Ishaya et al. (1971). Their findings indicate the larvae of *Spodopteralittoralis* when fed on leaves with additional factor acts as a stimulant for digestive enzymes probably through hormonal mechanism.

The cocoon weight, shell weight and shell ratio are important commercial parameters of the cocoon stage for quality reeling performance. In the present work, the maximum cocoon weight ( $1090 \pm 110.11$  mg), shell weight ( $200 \pm 10.11$ mg), shell ratio ( $18.34 \pm 2.55\%$ ) and filament length ( $740.00 \pm 13.89$  m) was recorded when the larvae fed with 1hr over feeding. This study was supported by Sajgotra et al. 2018 and they reported that the highest value of cocoon parameters were recorded by feeding frequency of four times and closely followed by three times treated groups.

## Conclusion

From the present work concluded that the possibilities of feeding manner response gut enzyme activity, growth parameters and economic traits of *B. Mori*. This investigation also reported the physiological performances like enzyme activity in silkworms. The significant improvement was noted in the larvae fed with 1 hour overfeeding treated group because the digestive enzymes in the mid gut breakdown the complex form of nutrients present in the simpler forms. These simpler nutrients produce high energy for growth and economic traits in *B. Mori*.

Table 1: Effect of different feeding manner on gut amylase activity of *B. Mori* larvae ( $V^{\text{th}}$  instar)

N=30

# Effect of Different Feeding Manner

Table - 2: Growth rate (%) of *B. Mori* larvae (V<sup>th</sup> instar) treated with different feeding manner (starvation and over feeding)

Treatment		Initial weight (mg)	Final weight (mg)	Growth weight (%)
Control		2160.00±132.01	3540.00±63.21	63.88±49.04
Starvation	1	1530.00±109.80 (-31.5)*	2320.00±87.14 (-36.6)*	51.63±4.29 (-18.3)*
	2	1440.00±130.67 (-36)*	1960.00±80.93 (-47.4)*	63.11±5.89 (-1.15)*
	3	980.00±67.09 (-59)*	1250.00±93.00 (-68.7)*	27.55±1.90 (-54.4)*
Control		2160.00±132.01	3540.00±63.21	63.88±49.04
Overfeeding	1	2810.00±160.50 (32.5)	4780.00±112.80 (37.2)	70.11±4.07 (9.34)
	2	2870.00±106.10 (35.5)	3980±130.00 (13.2)	38.67±2.78 (-37.8)*
	3	2950.00±160.00 (39.5)	3890±190.07 (10.2)	31.86±2.90 (-48.03)*

N=30

Per cent deviation over control values in parentheses

\*Not significant

All other deviations significant at P≤0.05 (t-test)

Table - 3: Effect of different feeding manner on length and width of *B. Mori* larvae ( V<sup>th</sup> instar)

Treatment	Starvation		Over feeding	
	Length (cm)	Width (cm)	Length (cm)	Width (cm)
Control	4.3±0.003	0.5±0.09	4.3±0.003	0.5±0.09
1	6.5±0.013 (51.15)	0.9±0.070 (8.00)	6.7±0.019 (0.04)*	0.9±0.0011 (0.02)*
2	5.8±0.011 (34.87)	0.8±0.063 (6.00)*	6.5±0.002 (0.09)*	0.7±0.0012 (0.01)*
3	5.5±0.015 (27.90)	0.4±0.061 (-2.00)*	6.0±0.009 (0.06)*	0.5±0.0011 (0)*

N=30

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Per cent deviation over control values in parentheses

\*Not significant

All other deviations significant at  $P \leq 0.05$  (t-test)

Table - 4 : Effect of different feeding manner on economic traits of *B. Mori*

Treatments		Cocoon Weight (mg)	Pupal Weight (mg)	Shell Weight (mg)	Shell Ratio (%)	Filament Length (m)
Starvation	Control	1020±63.95	880±60.17	140±14.81	13.72±1.73	372.10±49.32
	1	1010.00±55.41 (0.90)*	860.00±45.46 (2.2)*	150.00±19.51 (7.1)*	14.5±0.21 (5.67)*	679.00±18.22 (79.82)
	2	1020.00±71.86 (0)*	850.00±62.33 (-3.3)*	170.10±5.71 (21.3)	16.66±2.11 (21.40)	730.14±10.00 (93.11)
	3	990.00±55.01 (-2.7)*	850.10±44.10 (-3.3)*	140.00±2.87 (0)*	14.14±1.01 (3.05)*	529.20±10.87 (40.87)
Over feeding	1	1090.00±110.11 (6.3)*	890.10±65.00 (1.1)*	200.00±10.11 (42.61)	18.34±2.55 (55.03)	740.00±13.89 (95.6)
	2	1110.00±109.08 (8.1)*	950.00±42.09 (7.7)	160.00±4.78 (14.2)	14.41±3.02 (5.0)*	640.00±17.67 (69.68)
	3	1030.00±98.76 (0.9)*	890.00±57.45 (1.1)*	140.00±9.07 (0)*	13.59±6.08 (-0.44)*	690.00±15.05 (82.68)

N= 30

Per cent deviation over control values in parantheses

\*not significant

All other deviations significant at  $P \leq 0.05$ (t-test)

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## Economic Settings in Villupuram – A Historical Perspective

Dr. K. Appadurai

*Assistant Professor in History,  
T. K. Govt Arts College,  
Vriddhachalam.*

Dr. P. Jeyabalakrishnan

*Associate Professor in History,  
T. K. Govt Arts College,  
Vriddhachalam.*

*The economy of Villupuram is usually determined by two factors, namely monsoon and trade. Economists and scientists strongly believe that more and more development of infrastructural facilities in the rural areas bring the rural economy closer to the main stream economy and thereby it helps bridging the gap between the rural and urban economics. Villupuram is primarily agriculture-based and the cultivators are mainly small and marginal farmers owning 70 percent of the land. Villupuram, due to its historical importance and strategic location, has the potential to progress in various sectors of development. The government has introduced various schemes to promote economy, eliminate poverty and malnutrition. Villupuram an agrarian and industrial backward area and large number of farmers in Villupuram depends on animal husbandry for their livelihood. In addition to supplying milk, meat, eggs, wool and hides, animals, mainly bullocks, are the major source of power for both farmers and dryer. Though it has a few irrigated pockets majority of the area under cultivation is rain fed. Transport has a dynamic role in the strategic and economic, development because of its built-in flexibility and adaptability to a variety of operating conditions and ability to extend its services to the vast rural areas. Co-operative societies are playing a significant role in the development of the rural economy. They are the democratically controlled member institutions covering a large number of services in Villupuram.*

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Economic history is generally insolvent of any striking incidence. The factors that brought about changes were amazing not for their stunning nature but for the slow intensity of their growing effects. The economy of Villupuram is usually determined by two factors, namely monsoon and trade. Economists and scientists strongly believe that more and more development of infrastructural facilities in the rural areas bring the rural economy closer to the main stream economy and thereby it helps bridging the gap between the rural and urban economics. In other words, it can be stated that the infrastructural development could remove the rural-urban inconsistency in the economic and social development by bringing equity and parity in the development process.<sup>1</sup> Infrastructure plays a pivotal role in the economic development of the region. It is more so in the case of States in economic evolution where the service sector is emerging as the leading provider to the GDP.

Villupuram which was situated in the north-west of Villupuram is blessed by nature. Yet the economic condition was generally unstable due to internal conflicts and failure of monsoons. Villupuram has a population of 4,837. The sex ratio is 987. The child sex ratio is low 941, lower than the general sex ratio. Villupuram is primarily agriculture-based and the cultivators are mainly small and marginal farmers owning 70 percent of the land. One-third of the total geographical area is net irrigated area with an irrigation intensity of one. Villupuram is industrially backward in spite of its strategic location with a network roads and rails. The literacy rate of Villupuram, 79.1 per cent, is low when compared to district and state average.<sup>2</sup> The Government has introduced various schemes to promote economy, eliminate poverty and malnutrition. Villupuram, due to its historical importance and strategic location, has the potential to progress in various sectors of development.

### **Irrigation**

As the river Pamba, a tributary of Gadilam in Villupuram is not perennial, the major sources of irrigation are tube wells and open dug wells. The net irrigated area in Villupuram is 765 hectares which forms 27.7 per cent of the total area of Villupuram and 49.85 per cent of the net cultivated area of 1000 hectares.<sup>3</sup> River irrigation account for less than five per cent of the total irrigated area and the district is largely dependent on ground water and tanks. Out of the 1000 hectare meters of utilizable water recharge around 840 hectare meters have already been utilized leaving a balance of 160 hectare meter which can be economically exploited. The major irrigated crops in the district are paddy, millets, pulses, groundnut, sugarcane, gingelly, vegetables, fruits,

medicinal plants, yam, watermelon and flowers. Judicious use of water with modern water management techniques, yield of those crops can be boosted and thereby export potential can be explored. The productivity of food crops like paddy, millets, groundnut and pulses can also be increased to the target levels by proper water management practices.

## Agriculture

Agriculture is the mainstay of economy and the routine life of the people centered upon an agrarian economy which was based upon the possession of land. Indeed, the main avocation of the people was agriculture. Villupuram an agrarian and industrial backward area. Though it has a few irrigated pockets majority of the area under cultivation is rain fed. The rainfall pattern of the district is erratic. During failure of monsoon producers generally skip the crop or go for cultivation of less water utilizing crops like millets and pulses. Majority of the landholdings are owned by marginal farmers. Women are engaged as agricultural labourers mostly in transplanting, processing and rearing of livestock.<sup>4</sup> Under farm sector the commodities that could be prioritized are groundnut, gingelly, pulses and millets. Groundnut and gingelly are widely cultivated in all areas of Villupuram. It is cultivated under both irrigated and and in all three seasons in a year. When the water availability is low the farmers skip paddy and cultivate groundnut, gingelly and black gram.

Though groundnut and blackgram are widely cultivated in Villupuram, the production of groundnut is very high in Villupuram. There is a need to improve the seed quality among the farmers. Seed production, delayed marketing, groundnut based food products are major opportunities from Groundnut. Thenai and cumbu are the millet cultivated in Villupuram which has a high market value. The potentiality of millet crop like thenai and cumbu and medicinal crops unique to this area is not fully tapped. Floriculture is picking up in Villupuram as the market potential is high. There is a high potential to improve the productivity in all the crops. It has occupied fourth place in the district in terms of cultivation of fruit crops like guava. In allied sectors dairy is very well established. Additional Feed mixtures units is to be established which could supplement the dairy development. In Non-Farm sector, handloom weaving are widespread in Villupuram. Mat weaving is predominant in Villupuram and Koliyanur blocks. Stone carving is a major enterprise in Villupuram. Tourism is one major opportunity which could be promoted in Villupuram.

### *Economic Settings in Villupuram*

#### **Cropping Pattern**

Important crops grown in Villupuram are paddy, black gram, groundnut, cumbu, maize, kora (thenai), varaku, red gram, turmeric, guava, watermelon, tapiaco, yam (karnai), small onion, indigo dye, coleus medicine, jasmine and sugarcane. The most important cash crop in the district is sugarcane, groundnut, turmeric, non-food crops and coleus. It is cultivable under both irrigatable and rainfed condition. Based on the season and Crop Report of 2019-20, the major crops in Villupuram considering the area of cultivation, production and yield are groundnut, blackgram, cumbu, thenai and gingelly.<sup>5</sup> Sugarcane and paddy are the major crops in Villupuram, but both these crops require more water. Groundnut, blackgram, cumbu, thenai and vegetables stand as primary crop. The district significantly contributes to the state's production on groundnut, cumbu, black gram, gingelly and maize. Among these crops, in the production of groundnut, Villupuram occupies second place in the district. Other crops like cumbu, black gram and gingelly occupy first place in the district, which is a remarkable contribution by the village. Maize occupies fourth place in the district.

Foundation seeds and certified seeds are provided by government departments. However, since the quantity provided is insufficient, farmers procure them from local market and even from other villages. Therefore, there is a good opportunity for setting up a seed production unit in the future. Apart from agriculture crops, Villupuram also contributes to the district's share on horticulture crops significantly. Villupuram occupies fourth place in the district in terms of total vegetable cultivation area. Among which yam and watermelon occupies first place in the State in terms of cultivation area. kovakai and coleus occupies third place and turmeric, guava, cashew, Tapioca occupies fourth place in the district. Villupuram occupies first place in the district in cultivation area of non-food crops like casuarina, eucalyptus. Medicinal and dye crop like indigo occupies fourth place in the district.<sup>6</sup>

#### **Marketing and Storage Infrastructure**

Marketing of agriculture is done through various regulated markets, co-operative marketing societies, UzhavarSandhai, wholesale markets and local markets. Apart from these weekly markets and daily markets also exists in the village. There are two Regulated markets functioning under the control of Villupuram Market Committee in Villupuram. The annual transaction of agricultural produce ranges from 2400 Mts to 2600 Mts. The annual receipt of market fees ranges from Rs 2.4 crores to Rs 3.5 crores. The total value of the products transacted ranges from Rs. 22 crores to Rs. 32 crore per annum. Of the total production of paddy, 55 per cent is sold out through the Regulated

markets. So also, cumbu 75 per cent, Ragi 38 per cent, groundnut 16 per cent gingelly 159 per cent, Cotton 31 per cent and Pulses 20 per cent and sometimes cotton from Koliyanur is sold in Villupuram Regulated market.

### Regulated Markets

Regulated market is wholesale market where buying and selling is regulated and controlled by the State government through the market committee. The primary object of regulating the market is to safeguard the interest of the producer sellers raise the standards of the local Markets where the first exchange of the goods takes place. Villupuram has two regulated markets through which the farmers sell their agriculture products directly to the government. The average annual rice production in the district was 796 tonnes. However, the transaction of paddy through regulated markets in the village was only 301 tonnes.<sup>7</sup> Therefore, the reasons for the poor market arrivals to the regulated markets should be identified and the more facilities need to be created in the regulated markets to attract larger arrivals.

### Transport Facilities

Transport has a dynamic role in the strategic and economic, development because of its built-in flexibility and adaptability to a variety of operating conditions and ability to extend its services to the vast rural areas. Villupuram has rich religious heritage which attracts large number of tourists. With the people formed policies of the government, road transport is becoming more and more a social instrument for the development of the people. Electricity is the most decisive input for economic development. The industrial and service sector activities depend to a greater extent on the availability of electricity. The district has the record of covering all the villages and hamlets with electricity connectivity. About 238 huts were given electricity connection under the government sponsored single lamp scheme. Street light provision is the important liability of the local panchayats. It has a total of 107 lamp posts in 345 houses. Villupuram junction Railway station, Mundiampakkam Railway station are the very nearby railway stations to Villupuram. It is well connected by bus facilities. As the road passenger transport operations are being regulated by the state and the state-owned transport corporation being the largest operator, the State has the least bus fare structure when compared with the nearby places. Besides, the state has introduced several socially relevant schemes in the transport operations for various sections of the community.

### *Economic Settings in Villupuram*

The following schemes are worth monitoring.

- (i) Free bus-pass for school and college students.
- (ii) Concessional tickets for farmers to carry the produce to the market places.
- (iii) Operating fleets even at loss to remote villages.

All the places are connected with main town. Government as well as private bus services are operated in the district. But when analyze the transportation facilities of rural habitations, it is not up to the mark. Still there are a few habitations in most of the nearby villages which do not have bus facilities at all. It is very much observed in some remote places that, bus facilities are very low even to the nearest block head quarters.<sup>8</sup> Special attention is needed in hilly areas as well as remote habitations to improve the transportation facilities. Villupuram is well connected by road and Villupuram is also an epicentre from North to South of Tamil Nadu. Villupuram Railway Junction is one of the important and busy railway junctions of Southern Railways, which connects the district with other parts of the nation. The Great South Trunk Road (NH45) from Chennai to Trichy is an important highway corridor. Tourists from other area of Tamil Nadu are well connected through the National Highway of the area. Hindustan Unilever production company is situated in Ariyur, Pondicherry where more than 300 lorries per day passing through Villupuram blocks namely Vanur, Koliyanur and Villupuram. Those who wing from and around Villupuram hurry from Pondicherry to other places like Chennai, Trichy, Bangalore etc.,

### *Communication System*

It is an era of knowledge and information. The changes that have taken place in the communication sector are unimaginable. The mobile services have reached almost every village and almost everyone in one way or other uses the phone services in his or her day-to-day life. Besides BSNL, the private mobile players are expanding their operations in a very competitive manner to reach everyone. As per the census 2011, out of total households in the district 4.4 percent households only have landline connection in their houses. 60.2 percent of the people only have the mobile connection. 3.4 percent of the households in Villupuram have both landline and mobile connections. It clearly indicates the increasing use of mobile phones in Villupuram. Still, communication based infrastructure facilities in the hilly areas needs to be improved more. The changing trend among the younger generation, impact of social media and the availability of smart phones at a minimum cost are the major contributors of the increased number of mobile users.

### Financial Institutions

Co-operative societies are playing a significant role in the development of the rural economy. They are the democratically controlled member institutions covering a large number of services in Villupuram. Their presence in the agricultural credit, rural banking, agricultural processing, marketing, consumer goods distribution, public distribution, milk procurement and supply, etc., need to be appreciated here.

### Industrial Units

Villupuram is the main junction which connects the southern and northern district of Tamilnadu. The national high way and the major railway junctions are the positive element of Villupuram. Despite its connectivity industrial establishments are very low because Villupuram mostly depends on agriculture and the availability of skilled man power is also minimum. There are some sugar factories and other small factories around Villupuram. But the employment opportunities are very low in these factories.<sup>9</sup>

### Human Development

The most important resource for scaling up of infrastructure facilities is the availability of trained knowledgeable and skilled manpower. In all areas of development, training and skilling of manpower are required. As the infrastructure establishments are very low and low, the economic development of the area also gets affected. The quality of the infrastructure must be sustained for people's harmonious commitment with the environment. However in the context of Human Development, the state and the district administration in particular has to initiate all the required infrastructure services in the form of universal access to housing, water supply and sanitation, energy, transportation, irrigation connectivity, healthcare and education. Villupuram is mostly characterized by plains and a sizable number of households without even house sites. Without approved space or house site, households are not able to make use of the housing schemes designed by the government. Therefore, the administration has to take necessary steps to identify the households without house sites, verify their status and make them eligible beneficiaries.

The seasonal unemployment problem may be overcome by engaging the labour in civil construction works, viz., construction of village roads, dispensaries and school buildings. These programmes will not only reduce the seasonal unemployment but also create national wealth. Creation of industrial

### *Economic Settings in Villupuram*

estates will attract formation of more small and medium scale industries in Villupuram.<sup>10</sup> Climate change is also viewed as a cause of poverty. Changing climatic condition requires a shift in cropping and farming practices which could not be immediately accomplished. Stable and sustainable strategies may be formulated for bringing the shift in cropping and farming practices. The problem of inequality and disparity in income and economic status of the society should be seriously addressed. The seasonal unemployment problem can be overcome by engaging the labour in civil construction works viz., construction of village roads, dispensaries and school buildings. These programmes will not only reduce the seasonal unemployment but also create national wealth. Creating extensive public health measures would also provide employment to large number of people. There is no power generation by Electricity Board in Villupuram. Creation of power generation unit may improve the power distribution system which may attract industries.

A stable strategy with special reference to national policies on education and industry should be formulated to transform people into an eligible workforce irrespective of caste and religion. The physical features of the area played a significant role in the economic affluence. The towns which were situated near the sea flourished due to the extensive trade which they carried on across the seas and they became centers of commercial importance. The luxury and comfort of isolated towns stood in contrast with the all round poverty in the country. When there was abundant rain, rice and other provisions were very cheap. But when there was lack of rain, the price of these commodities and rice went up and the price rose by thirty two times.

### *National and State Schemes*

The Government of India schemes in the district are NMSA (National Mission on Sustainable Agriculture), NADP (National Agriculture Development Programme), NFSM (National Food and Sustainable Management), PKVK (Paramprakash Krishi Vikas Yojana - Production of organic farming) and IFS (Integrated Farming system). Tamil Nadu State schemes are Seed procurement under TANSEDA and also covered under TNIAMP. FPOs are covered under the Collective farming scheme and SFAC scheme. Horticulture area development programmes and also covered under PMKSY for micro irrigation and MKSP for women's empowerment in agriculture and horticulture related activities. MSDM (Mission on Sustainable Dry land Agriculture), Collective farming are established farmer producer organisations. Seed production farm, PM Fasu Bhima Yojana.<sup>11</sup>

### Animal Husbandry

The livestock and poultry sector provide ample opportunity in this district as the agricultural labourer's population earn income from this sector during the off season or non-cropping periods. Large number of farmers in Villupuram depends on animal husbandry for their livelihood. In addition to supplying milk, meat, eggs, and hides, animals, mainly bullocks, are the major source of power for both farmers and dryer. Thus, animal husbandry plays an important role in the rural economy. Moreover, livestock sector provides supplementary employment and sustainable source of income to many small and marginal farmers. There was a dip in 2011 Livestock population which may be because of disease like blue tongue etc., Sheep population seems to increase steadily because of value for its meat within the district and also transported to neighbouring villages. Anthiyur goat and sheep is very famous in Villupuram and every week sales of Goat and sheep are approximately 300 numbers, their meat rates of female is Rs.200 per kg and male is Rs.250 per kg. Which indicates that there is a good opportunity for meat (sheep and goat) farmer Producer Company in the future.

### Dairy and Poultry

Dairy sector is important not only as the producer of highly nutritious food products, but also for the sustenance of poor farmers and over all prosperity of the farming community. Villupuram holds about three milk societies at various places. Among the villages, Koliyanur possess the highest number of three societies followed by which, Villupuram, Sankarapuram and Kallakuruchi block constitute above four milk societies. Poultry rearing is one of the important activities of Animal Husbandry Sector in Villupuram. The village produced 1463 broiler and fowls 2047.12

### Sericulture

The scope for improving sericulture further is bright in Villupuram as the demand for silk yarn has been growing every day. Self-help groups were best promoters of sericulture, which would generate rural employment on a large-scale. 120 acres of land is under mulberry cultivation in Villupuram. Training in mulberry farming, rearing silkworms is done through a large network of Government Departmental Institutions of Sericulture such as silk quality development farms, Government Sericulture training centre, Government Sericulture Farm, Base seedlings (grain age) development farms, Government Bivoltine grain age centres, govt. cocoon markets, silk reeling unit, silk twisting unit, technical support and service centre for rearing

### *Economic Settings in Villupuram*

silkworm, with the above maintained facilities sericulture industry has good scope in Villupuram.

### Land Development Scheme

The aim of the scheme is to enhance the utilization of land as well as to generate income by providing subsidy with loan assistance from bank for irrigation facilities like sinking of bore wells, open wells, pumpsets, drip irrigation and irrigation on rotation For the financial year 2018-19, a sum of Rs.300 lakh has been allocated as subsidy for the benefit of 200 persons. Under this scheme financial assistance is given for the development of lands by creating water sources, irrigation facilities and electrification for irrigation. A Maximum quantum of Rs.7.50 lakh including the subsidy is provided.

### Entrepreneur Development Programme

For the Socio-economic development of Scheduled Tribes, loan assistance is provided for income generating activities. The minimum cost of the project is Rs.1.50 lakh. Under the scheme, 50% of the project cost subject to a maximum limit of Rs.3.75 lakh per individual is released as subsidy. In order to reduce the impoverished conditions of AdiDravidar people financial assistance is provided to start various business activities within the age group between 18 and 65 irrespective of their educational aptitude. Under this scheme, both individuals and groups are benefitted. For the financial year 2018-19, a sum of Rs.650 lakh has been allocated as subsidy to benefit 550 persons.

### Self Employment Programme for Youth

Financial assistance is provided to the educated un-employed youth in the age group between 18 and 45, who desire to establish their own profession or business enterprises. For the financial year 2018-19, a sum of Rs.37 lakh has been allocated as subsidy for the benefit of 325 persons.

### Revolving Fund Assistance to Self Help Groups

Revolving Fund assistance is provided completely for AdiDravidar self help groups for eradicating poverty through promotion of Micro and Small Enterprises. A subsidy of Rs.25,000/- is given as one time grant to the

accredited Self Help Groups from the year 2012-13. The bank will give Rs.50,000/- as loan which will augment the corpus fund of SHGs. For the financial year 2018-19, a sum of Rs.75 lakh has been allocated as subsidy for the benefit of 300 SHGs with 4500 beneficiaries or members.

#### Fast Track Power Supply

Fast Track Power Supply scheme for Scheduled Tribe farmers for EB Deposit of Rs.75,000/- per beneficiary to TANGEDCO through TAHDCO was introduced by the Government in the year 2018-19.

#### Schemes Under Full Grant

TAHDCO, not only assists for income generating programmes by providing loan and subsidy but also supports the youth in pursuit of civil services, setting up of their profession and any other deserving person not covered under any other schemes through 100% grant.<sup>14</sup>

#### Collector's Discretionary Fund

Under the scheme an assistance upto Rs.20,000/- is granted. Preference is given to differently able, destitute widows, indigent artists, unmarried women above 30 years of age and children with no parent or guardian and any other person who is considered as deserving by the District Collector. For the financial year 2018-19, a sum of Rs.56 lakh has been allocated as subsidy for the benefit of 280 persons.

#### Skill Development Training

To create eligible employment opportunities and to strengthen their skill needs specific to trades among the youth belong to AdiDravidars, several skill development training programmes are organized through Empanelled Institutes of Tamil Nadu Skill Development Corporation. These training programmes equip the youth for wage employment or self employment and are conducted from 10% allocation under SCA Fund.

#### Loan Assistance to Women Self Help Groups

Under the scheme, the Self Help Groups exclusively of tribal women can avail assistance for various income generating activities like handicrafts, horticulture, floriculture, establishment of canteen in tourist spots and other tourism and hospitality related professions. Under this scheme, a subsidy of 50% of the project cost or a maximum of Rs.3.75 lakh is released as subsidy.

#### Central Government Works

The Adidraavidar and Tribal Welfare boys and girls hostel buildings, Eklavya Model Residential School buildings, Classrooms and Laboratory buildings under Vanbandhu Kalyan Yojana (VKY) Scheme are being constructed under the Government of India fund.

#### State Government Works

The construction of ITI buildings for AdiDravidar and tribal students, ITI hostels, class rooms, Science Labs, Hostels, Working Women Hostels, Compound Wall, Community Hall, Toilet Block, laying of black top roads, maintenance and repairs of tribal hostels are being undertaken under State Government Scheme.<sup>15</sup>

#### Industrial Scenario

There is a good scope for industry in Villupuram. Traditional industries like weaving of lungi spreads over at Gingee, Kandamangalam, Koliyanur and Mugaiyur blocks of the district. Another traditional work of wood carving spreads over at Villupuram and Chinna Salem Blocks of the district. The main activity of this district (i.e.) Rice Mill is spread throughout the district and particularly at Villupuram, Sankarapuram, Vikravandi and Villupuram Blocks. Villupuram has achieved self-sufficiency in the milk production and the surplus if any, can be used for dairy products. Blue metal industries are emerging at Mailam and Marakkanam blocks of the district. Wheat products and food processing units are coming up at Vanur block. Oil extraction units are coming up in the district as the oil seeds production is growing in the district. The main large-scale unit of the district is Sugar Mills which spread over at Villupuram taluk and Kallakurichi, Sankarapuram blocks of the district. The district is covered well with National Highway Roads and rail links of 180 km length which facilitates more industries of various activities in the district. Villupuram provides enough scope for the development and growth of industries engaged in printing, Oil extraction and hand mark jewellery.

#### Other Industrial Sectors

Villupuram district is developing in industrial sector. The Sugar industry is the major industry in the district. There are four sugar factories at Mundiampakkam, Periasavalai, Kacharapalliyam, Mungailthuraipattu near Villupuram. In the area of small-scale industries there are three Rice mills, one Sago factory, two Rice bran oil extracting units and two Cotton Ginning Mills. Besides this mineral water, ceramics, automobile workshop are also running in

Villupuram. Work of wood carving spreads over at Koliyanur and Chinna Salem Blocks of the district. There are three Handloom weavers co-operative societies are existing in Villupuram.

Out of which only three societies are functioning, besides 20 individual weavers are engaging in this sector and produce silk sarees and cotton lungies too. Now the societies and weavers are facing the problem of accumulated stock, high cost of production, competition from power loom sector and they remain idle for most of the days. Traditional industries like weaving of lungi spreads over at Gingee, Kandamangalam, Kanai and Villupuram blocks of the district. Sedimentary rocks more available in Vanur, Vikravandi and Mailam Blocks and therefore, Granite, Multi-colour Granite, rough Stone related works are going on in these area. Blue metal and house making gravels units are more in Villupuram, Villupuram and Vikravandi Blocks. Since Villupuram District ranks second place in Tamil Nadu in the area cultivating and producing rice, small scale industrial units are mostly Rice mills.

It should be noted that Villupuram district is the highest in sugarcane cultivating area and ranks first in Tamil Nadu. Paddy milling and grading units are located in Villupuram. Milk collection centre about 1000, chilling units for milk procurement from small and medium women farmers are also more in the village. Milch animals rearing are more than 3.5 lakhs in the district. Schemes of TAHDCO are aimed at encouraging enterprise Development for Scheduled Caste and Scheduled Tribe. Land purchasing scheme, land development scheme, fastrack power supply, shops, purchase of lorries, tractors, power driller, tourist car, mini diaries, power laundry, tailoring and chappal making. Self-employment programme for youth like Siddha doctor and dentist, etc., Revolving fund and economic assistance for SHG. Eligibility for all scheme subsidiary 30% of project cost or 2,200 lakhs whichever is lower There are about 2 types of 6 units of Micro small and medium enterprises in the village which provides employment to about 293 employees with an investment of 81.74 lakhs which are agro based.<sup>16</sup>

#### Oil Extraction Unit

The clusters are spread along Villupuram and L.N.Patti village of Sankarapuram. Around 250 men and women engage along with the farmers in the locality to produce groundnut oil. Five members are employed per unit, each member is paid around Rs.300 per day for 100 Kg groundnut extraction.

#### Mat Weaving

The clusters are spread along Villupuram of Koliyanur Block. Eleven employees work per unit and each employee is paid Rs.25 per mat and earn about Rs.400 per day.

### Pickle Making

The clusters are spread along Anathur village of Vallam Block. Women around the locality are engaged in agro-based organic pickle making. Seven members work per unit and are paid around Rs.550 per day.

### Hand Loom Weaving

The clusters are spread along Villupuram, Villupuram, Vikravandi, Kanai, Thiruvannainallur and Sankarapuram Blocks. There are 165 units exist and 470 families engaged in it.

### Major Exportable Items

The availability of agricultural harvest of rice and groundnut, handloom products and unskilled or skilled labours give opportunity to invest in Agro and Food processing and handloom sector. Some of the major exportable items from Villupuram to other parts of the State are Sugar, Ponni rice, Herbal products, Edible oil, Handloom products like lungies and Silk sarees (Siruvanthadu silk)

### Investments

There is a continued investment in the industrial complexes manufacturing Handloom and silk saris components in the short to medium term. There is also significant investment in textiles. The ongoing and prospective investments hint at a structural shift from an economy based on agriculture to an economy dominated by large scale industries and manufacturing in the district. Most of the investments has been made in handloom and fisheries sector. Handloom sector comprises of 23% food and agro based product comprises 61% the total investment.<sup>17</sup>

### Service Sectors

The contribution of the service sectors to districts output is observed to display moderate growth, with trade, hotels and restaurants remaining the largest contributor to district GDP. The banking and insurance and real estate sectors also show a positive rise and have jointly contribute to 27% of the district GDP in 2018-19. Approximately 2.07 lakh people are employed in organized services.<sup>18</sup>

The medical infrastructure is quite lackluster in Villupuram. There are two hospitals, three dispensaries, two primary health centres and one mobile unit for the hill tribes. The number of doctors and nurses across the hospitals appears to be a little low, given the size and population of Villupuram. There are more than 60 kilometres of surfaced roads running through Villupuram. A significant length of un-surfaced roads, about 78 kilometres, also runs through this village.<sup>19</sup> The high proportion of un-surfaced to surfaced roads suggests a great need for improving infrastructure by converting the un-surfaced roads to surfaced roads. Given the agrarian nature of the district, this is likely to improve market linkages and give a boost to agro based small scale industries.

### Quantitative Skill Gaps

There are numerous number of training institutions on the functional areas of Agriculture, Horticulture, Veterinary, NGOs which provide more effective training for skill development among the youths of Villupuram and potential people who are well trained people are more, we can convert these man power to enhance their life by convergence through project. Mahatma Gandhi National Rural Guarantee Scheme (MGNREGS) plays a vital role in skilling employment opportunities around Villupuram during the year 2018-2019 by different Project Implementing Agencies. Because of which rural women show more interest to join Mahatma Gandhi National Rural Guaranty Scheme (MGNREGS) project. In Mahatma Gandhi National Rural Guaranty Scheme (MGNREGS) 473 candidates had joined and 339 candidates were placed in the relevant departments.

### Entrepreneurship Development

There are high levels of disguised unemployment in the district, due to high employment in agriculture and fragmented land holdings. Furthermore, most of the land area currently used for agricultural purposes is medium sized in nature, which does not allow for large scale mechanization process creating an excess supply of agricultural labourers, resulting in lower wages. The industrial activity in Villupuram is also low and mainly consists of a few small and medium scale rice mills, who potential to absorb the local populace is limited. In the absence of adequate local demand, emphasis must be laid on encouraging people to set up their own businesses through multi-skill programs. However, there is not enough emphasis on this front.

### *Economic Settings in Villupuram*

#### **Skill Development**

Recently a number of government schemes, like tax holidays have given a boost to industrial growth in the district. NGO's too has recently started assessing the need for skill development in Villupuram which are projected to result in more targeted skill development measures for the district.<sup>20</sup> These measures are expected to encourage growth and increase demand for skilled labour within the district. However, the lack of awareness regarding the benefits of skill development and the associated economic opportunities is a key barrier preventing the youth from responding effectively to the changing economic profile of the district and is a major roadblock for the introduction of skilling initiatives.

#### **Annual Credit Highlights**

The banks have projected Rs 79.09 crores for 20-20. Crop loan at Rs 41.00 crores accounts for the major share of 69.85% followed by Investment credit under Agricultural sector at 15.01%, other Priority sector at 15.10% and Non-Farm sector at 7.31% The lending issues faced by the banks were high level of NPA of upto 40%. There were also recent issues in Rice Mill cluster. The banks do not encourage lending to the FPOs. The banks are willing to lend to farmers or Producer Groups directly. But there is a high demand for working capital support from the FPOs. Current credit requirements of the FPOs are met by FWWB (Friends of World Women Banking), NABARD and SFACB.<sup>21</sup>

#### **SHG Bank linkage**

Total credit linkage through SHG in the district in the year 2018-19 is 49 crore through eleven SHGs. Financial literacy centre is present in Villupuram. INSETI (Indian Bank Self Employment Training Institute) is a model of training institute functioning in Villupuram has completed six years of functioning.<sup>22</sup> In Villupuram, SBI is the Lead Bank of the village and four Public Sector Banks and one Private Sector Bank. There are two branches of commercial Banks, two branches of Regional Rural Bank, two branches of District Central Co-operative Bank, operating in the village.

#### **Conclusion**

The human development status of Villupuram can be rated as moderate. The development in various spheres of life is not uniform in Villupuram. There are villages which have performed better in certain aspects of development and have exhibited poor performance in certain other aspects. No village can claim to have registered better performance in all aspects of

human development. The government has launched various schemes, programmes and projects to promote the well being of the people. The schemes have impacted the life of the people; but they are yet to bring the desired results. The administration has, therefore, to examine the loopholes in taking the schemes to the people and initiate measures to plug in the loopholes. Above all, the urge to lead a quality life should ultimately emerge from the people which require a very enabling and cordial environment.

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# Architectural Features in Sithanavasal Cave

G. PASUPATHI

*Assistant professor,  
Department of History,  
Jairams arts and science college, Karur.*

*Sithanavasal cave is located in Pudukkottai district in Tamilnadu. It is an ideal mix of history, nature and architecture. It is good research center for the historians to collect data about the Jain painting style using vegetable dye and there carving style through the architectural structure of the temple. We can also find the beauty of natural surrounding and various different kinds of birds spotted there. It is considers as one of the tourist spot in Tamilnadu. People visit there to see the beautiful Jainpaintings; rock cut Jain monasteries during 9th century. There are also parks for entertainment and also a boating spot is arranged in the lake for the tourist. Sithanavasal cave are carved during 9th century. Jain painted on the rocks and walls using vegetable dye for coloring the painting the temple carved in the hillock are named as arivarkovil. These paintings resemble the great paintings in Ajanta cave. They call these Jain beds of rock as samanarpadukkai. This place brings out the glory of Pandias and Jain through the paintings and also known for the mystery behind the vibrating on inside the cave. it also describes the living hood of Jain monks during 9th century.*

**Keywords:** Mutharaiyars, Sithanavasal village and Cave.

Pudukkottai is the administrative headquarters of Pudukkottai district in the Indian state of Tamilnadu. It is a big town located on the banks of river Vallaru; it has been ruled, At different times, by the Cholas, Mutharaiyars, Early Pandias, Thondaimans, and the British. It is situated about 395 kilometers 245 kilometers 34 southeast of Trichirappalli. The people in the city are employed majorly in tertiary sector activities. Tamil Nadu first woman Asian Shanti Soundarajan is from Pudukkottai.

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Sithanavasal cave is a 2nd century Jain complex of caves in Sithanavasal village in Pudukottai district of Tamil Nadu, India its name is a distorted form of sit-tan-na-va-yil, a Tamil word which means “the abode of great saints”. sithanavasal. The monument is a rock-cut monastery or temple. Created by Jains, it is called the Arivarkoil, and is a rock cut cave temple of the Arihants. It contains remnants of notable frescoes from the 7th century. The murals have been painted with vegetable and mineral dyes in black, green, yellow, orange, blue, and white. Paintings have been created by applying colours over a thin wet surface of lime plaster.

Ancient structures such as Gol Gumbaz, Talagirisvara temple and this one are claimed to be relatively unappreciated. Archaeological survey of India has listed sithanavasal cave in the list of “must see” Indian Heritage. While the Sithanavasal village is dated from 1st century BC to 10th century AD when Jainism flourished here, the temple-cave was initially dated to pallava king mahendravarman-I (580-30 AD) prior to his conversion from Jainism to Hinduism as a saivite. However, an inscription attributes its renovation to a Pandias king probably maransendan (65-670 AD) or Arikesari Maravarman (670-700 AD). The Jainbeds on the hill top are attributed to the Jain era pilgrimage century which lasted till the 9th century AD. However, in the Pudukkottai region, where the monuments are located, there are many archeological finds of the megalithic burial sites from much earlier.

Sithanavasal is a rock-cut-cave, situated on the western side of central part of a hill, which runs in a north-south direction. The hill measures approximately 70 meters 230ft in height, and sits above the surrounding plain which has some archaeological monuments. The Jain natural caverns, called ezhaippattam are approached from the foothills. The cave is approached by climbing a few 100 steps. The architectural features of the Sithanavasal cave include the painting and sculptures found within its precincts. Archaeological survey of India is responsible for the maintenance of the cave and the Jain beads.

Then paintings have been painted in fresco-Sacco technique with many mineral colors. The painting depict beautiful lotus pond with lotus flowers, people collecting lotuses from the pond, two dancing figures, lilies, fish geese, buffaloes and elephants. Mulk Raj Anand said about the paintings as, “Pallava craftsmen used greens and browns and piques, with a genuine ability and a lyrical flow of line. Lotuses spring up from imaginary ponds amid variegated greenery, under a bluish sheen”. In addition, inscriptions of the 9th and 10th century are also seen. The ceiling of the Ardhamandapam is decorated with

mural from the 7th century. The cave temple has simple pillars and sculptures of Jain Tirthankaras. However, most of the frescoes which were covered fully in plaster have been severely defaced or not clearly visible due to inadequate security and maintenance resulting in vandalism in the past five or six decades. Originally the cave temple including the sculptures was covered with plaster and painted. The paintings are with theme of Jain samavasarana, the “most attractive heavenly pavilion” and khatikabhumi.

The layout of the west facing cave is the same as adopted in other rock-cut cave temples in the country during the 7th century. An originally built, it had only a garbha-gritha and an ardhamandapam (semi hall). However, the mukha-mandapa (front hall) was an addition made in the frontage built during the Pandya rule, which collapsed. Subsequently, pillared veranda with a facade was added in front of the cave during the 20th century; the Maharaja of Pudukkottai added this part of structure at the suggestion of Tottenham, the British administrator. It has two pillars and two pilasters and a square base entrance to a hexagonal portico, which were brought from the ruins of mantapas at Kudumiyamalai.

The Ardhamantapam after the front entrance is rectangular in plan of 20.5 meters (67 ft.) long, 2.28 meters (7ft 6 in) wide and 2.5 meters (8ft 2 in) high, and the cubical cell of 2.89 meters (9ft 6 in) width, (a little higher than the garbha-gritha) with a facade which has two pillars and two pilasters at both ends. The pillars as well as pilasters are hexagonal in shape in the middle section while the top and bottom sections are square. Rock beam is sculptured above them as if supporting them: provided with large corbels (potikai in Tamil with ornamentation or fluting, with an intervening plain band. The pillars which support this mandapam are typical of Mahendra-order. The entry into the garbha-gritha is flanked by two niches, which also have smaller size pilasters, similar to the pillar design, with bold relief of lotus medallions carved on them. In the southern and northern didoes of the Ardhamantapam, niches are provided where the 23rd Tirthankara Paravanatha and a Jainacharya (teacher) are respectively carved in bas-relief. Paravanatha is shown seated in “the dhyana (meditative) pose, cross-legged, with the hand placed one over the other, palms upwards, resting on the folded legs”, a five-hooded serpent sheltering his head. An inscription on a pillar to the niche reads (“ruler of the world”), indicating Paravanatha’s divinity. The Acharya is in a similar posture as Paravanatha but with an umbrella over his head. The inscription below this niche reads Tiruvasiriyam (“great teacher”).

A doorway of 5.5 feet (1.7 m) height and 2.5 feet (0.76 m) width from the ardhamantapa leads to the sanctum sanctorum (through a flight of steps),

### *Architectural Features in Sithanavasal Cave*

which has three bas-relief sculptures. The entrance has surul-vyalis (balustrades sculptured with the mythical form of vyalis with twisted trunks). The sanctum sanctorum has a square plan of 2.89 feet (0.88 m) wide and height of 7.5 feet (2.3 m), and at the back wall there are three bas-reliefs, two are of Jain Tirthankaras (as evidenced by the triple umbrellas (chattris) over them) and the third relief is of an acharya (teacher). The ceiling of the garbha-griha which is painted shows a carved wheel with hub and axle that denotes the Dharma-chakra ("Wheel-of-the-Law"). Above the three images in Lotus position (seated posture), paintings are also seen which are surmised to represent a canopy which is carved with carpet designs with striped borders and squares and circles of different sizes with lotus flower designs inscribed within the squares. The circles depict crosses with bulbous ends; the horizontal arm of the cross has depictions of human and lion figures. In the other areas, the ceiling has similar paintings as the lotus pond in the Ardhamantapam. Plastered walls of the Sittanavasal Cave have varying thickness of 1-8 millimetres (0.039-0.315 in). The pigmentation used for the paintings is over 1000 years old. Echo effect is clearly heard, if "om" is recited, only if inaudibly, in the small shrine.

The decorative paintings in the ceiling of the sanctum and ardhamantapam of Aravirkovil though compared to the classical cave painting styles used in the Ajanta Caves but have minor variations in use of the materials for creating the paintings and also reported to provide a link between the Ajanta paintings (4th-6th century AD) and the Chola paintings of 11th century at Thanjavur. The ceilings have depiction of a lotus tank with natural looking images of men, animals, flowers, birds and fishes representing the Samavasarana faith of Jainism. The pillars are also carved with dancing girl and the king and the queen.

Paintings in the roof of the Ardhamantapam are the mural paintings with Samavasarana theme. The mural exhibits a water tank or khatika-bhumi which is shown with the tank made of tiles filled with lotus flowers and surrounded by bhavyas ("the faithful"), elephants, fishes, one fish shown as jumping out of water, pillars with figurines of Pandya king Srimara Srivallabha (9th century AD) and his queen offering reverence to Ilam Gautaman, an acharya of Madurai who created these paintings. While cleaning the paintings, one more layer of Samavasarana themed painting was revealed in the ceiling of the Garbha-griha, but in a carpet-design.

The study done by an artist on the depictions of the roof painting panel reveals: 3 birds, a man in loin cloth plucking flowers and the man is shown with a lily on right hand and lotuses on left hand, an elephant and fishes swimming,

bird's eye on the top left corner. Though several damaged made due to vandalism, remaining Frescoes have been preserved on the top parts of columns and ceilings inside the temple. Many of them are typical of the 9th century Pandyan period and include detailed pictures of elephants, buffaloes, fish, geese, Jains gathering lotuses from a pond and dancing girls. These frescoes are considered to be some of the best frescoes of medieval India next to frescoes of Ajanta Caves and Bagh Caves. Not so well planned is the arrangement of panels of the Sithanavasal cave temple; the idea of an ensemble has not been adopted but arranged in a haphazard way.

Painting of the Sithanavasal Caves were analyzed to establish the technique and the material used to make the. Analyzing a painting of a lotus pond in the ardhmandapam, it has been inferred that they are made with Fresco-Sacco, techniques made over rough stone using rough plaster of 2.5 millimeters (0.098 in) thickness made of lime mortar and sand with minor impurities, applying 0.5 millimeters (0.020 in) thick lime wash of fine lime water when the rough lime plaster is still rough. The pigments used are composed of white made from lime, black made from wood charcoal or lamp black, yellow from yellow ochre, red from red ochre, blue from ultramarine/lapis lazuli, and green from Terrevertex. Pigments of permanent mineral colors (not vegetable colors as reported on the display plaque at the site by ASI) were applied over dry plaster surfaces without any adhesive grove; the process involved a chemical reaction of lime water which absorbed oxygen in the air and getting converted by a carbonization process into insoluble calcium carbonate, which enabled the pigments to adhere to the surface. At the initiative of Pudukkottai State, during 1937-39, the paintings were cleaned, and then given a preservative coating. Also, the damaged portions of the plastering were injected with cementing material and the paintings were also retouched.

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# The Indus (Sindhu) Valley Civilization

Dr. C. NIRMALA DEVI

Assistant Professor,  
Sarah Tucker College,  
Trinelveli.

*For a long time, it was believed that Indians are stay at home people and our civilization was only of recent origin. But the excavation at Harappa and Mohenjo-daro, which led to the discovery of Indus Valley civilization, has set all these doubts at naught. It has now been established beyond all doubts that India possessed one of the advanced civilisation at a time when the English people were still living in the jungle age. This unique and important civilization of the pre-historic times in India was for the first time discovered by Daya Ram Sahni and R.D. Banerjee in 1921 and 1922. Though this civilization is termed as Indus civilization it covered even area beyond the Indus Valley. It extended from the upper Sutlej to the Gulf of Camba in the South and from Makran coast of the Arabian Sea in the west to the Jamuna-Ganges country in the east. Thus the Indus civilization was the largest of early civilisations. Until 1922, the history of Indian culture started with the Vedic culture. But the excavations of the ruins at Mohenjodaro (The City of the Dead) in Larkana district of Sindh (Pakistan) in 1922-23 under the guidance of Mr. Rakhaldas Banerjee of the Indian archaeological department, and a little later the excavations of the ruins at Harappa in Montgomery district of West Punjab (Pakistan) under the guidance of Sir John Marshall has pushed back the history of Indian culture to nearly 3,000 B.C. The excavations have proved the existence of a proud civilization in this region.*

**Keywords:** Chief Centres, Race, Date and Indus Valley Civilization.

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### *The Indus Valley Civilization*

#### **Cultural Melting Pot**

The Indus Valley Civilization is one of the oldest civilizations of the world and ranks with such great ancient civilizations like the civilizations of Mesopotamia, Egypt, China, Greece, etc. Till the beginning of the present century nothing was known about this civilization and it was commonly held that the Indians were essentially stay at home people. However, the excavations carried by Daya Ram Sahni and R.D. Banerjee in 1921-1922 at Harappa in Montgomery district of Punjab and Mohenjodaro in district Larkana of Sindh (both in Pakistan) established it beyond doubt that an advanced civilization flourished in India in the early part of the 3rd millennium. Further excavations were carried out by M.S. Vats and K.N. Dikshit and they made further investigations about the Indus Valley Civilization. In the subsequent years further excavations were carried out at various other sites which confirmed that the Indus Valley Civilization or Harappa culture was not confined to the provinces of west Punjab, Sindh, Baluchistan, Gujarat, Rajasthan and western parts of Uttar Pradesh, but covered a much wider area. The area of Indus Valley Civilization extended from Jammu in the north to Narmada estuary in the south and from Makran coast of Baluchistan in the west to Meerut in the north-east. This covers an area of approximately 1,299,600 square kilometers, which shows that it more extensive than the ancient Egyptian or Mesopotamian civilizations.

#### **Chief Centres of Indus Valley Civilization**

Indus Valley civilization developed at two centre-Harappa and Mohenjodaro. Harappa is situated in the Montgomery district (now in Pakistan) which is about 180 kilometres from Lahore. This site was larger than Mohenjodaro and from the point of view of culture it gives us more source material to draw from. Another main centre of Indus Valley civilization was Mohenjodaro which is situated in the Larkana district of Sindh. Mohenjodaro literally means the 'Mound of the Dead'. The distance between the two significant towns of Harappa culture is about 650 kilometres.

In 1922 when Dr. R.D. Banerjee started excavations at Mohenjodaro in the Sindh province, he found some ruins there. In the same way, at Harappa, in Montgomery district, some archaeological remains were found by D.R. Sahani. The excavation was started at both the places under the supervision of Sir John Marshall, who was then also the in-charge of Archaeology Department. After excavation it has been estimated that the town might have been built and rebuilt nine times as proved by the discovery of nine strata.

### Other Centres

Apart from Harappa and Mohenjo-Daro, the remains of Indus Valley civilization have been discovered at various other sites: Chandu Daro, Amri, Lohun-jo-Daro, Naal and Rupar. Jhukar and Kelat are towns planned in a very systematic and scientific way. A visitor to the ruins will be struck to see how the town was planned. The roads were very wide and they intersected one another at right angles like the modern ones to form crossings. On both sides of roads, the houses were built with all facilities including ventilation, drainage and soak pits. All the houses were not of the same size but the smallest of them contained two rooms. There were some double-storeyed houses. The staircases were built in all the houses.

### Race of the Indus Valley People

It is not known for certain as to which race the people of Indus Valley Civilization belonged. In fact, scholars have expressed divergent views about their race on the basis of the human skulls and skeletons found here. According to some scholars the people of Indus Valley civilisation belonged to the Aryan race. However, this has been rejected by Marshall who asserts that the Indus civilization was quite different from the civilizations of early Vedic period. Golden Childe is of the opinion that the people of Indus Valley belonged to the Sumerian race. However, his view is also difficult to accept because he does not offer any convincing arguments in support of his contention. Dr. R.D. Banerjee is of the opinion that the people of Indus Valley civilization were Dravidians. But if we take into account the funeral customs of the people of Indus Valley, it would be difficult to accept Banerjee's view. Thus, we find that there is no unanimity amongst scholars regarding the race of the Indus Valley people. Most commonly accepted view is that they belonged to various races and their culture represented a synthesis of the Aryan and non-Aryan cultures.

### Date of the Indus Valley Civilization

The Indus Valley civilization combines the features of the neolithic and copper age. The excavation at Mohenjo-daro have brought to light seven different layers of buildings, which have assigned to three different periods viz., early, intermediate and late. The early layers lie submerged under sub-soil water. After due considerations the scholars have assigned 500 years to every age, and come to the conclusion that this civilisation must be having an early beginning because it must have taken the people quite a long time to develop such an urban life. Another, criteria adopted by the scholars in determining the

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age of the Indus civilisation is discovery of seals in Mesopotamia, which are dated back to 2500 B.C. On the basis of these seals and other available material the scholars have suggested that the upper most layer belong to the period 2300-2200 B.C. and the lower layers must have belonged to earlier period. Therefore, the period which is roughly assigned to the Indus civilization ranges between 2500 B.C. to 500 B.C.<sup>4</sup>

### Town Planning

Dr. A.D. Pusalker has pointed out “A visitor to the ruins of Mohenjo-daro is struck by the remarkable skill in town planning and sanitation displayed by the ancients, and as an English writer has observed, feels himself surrounded by ruins of some present-day working town in Lancashire.” The city was built after very careful planning, as is clear from the streets which though vary in width yet intersect at right angles. These streets thus divide the city into square or rectangular blocks, which are further intersected by narrow lanes. The city had an elaborate drainage system, consisting of horizontal and vertical drains, street drains, soakpits. etc.

The architecture of Mohenjo-daro appears to be more utilitarian than artistic and beautiful. Burnt bricks were used in building walls, pavements, bath rooms, drains, etc. For foundations sun-baked bricks were used. Foundations were carried to sufficient depth. Buildings were generally erected on a high platform to provide against floods which most probably was a common occurrence.

Dr.Pusalkeer has in those days divided unearthed buildings into three classes.

1. Dwelling houses or residential buildings.
2. Larger buildings.
3. Public baths.

The size of the dwelling houses differs from one another. The smallest to dwelling houses contained minimum two rooms while the larger ones could be ranked even in the category of palaces. The houses were quite commodious. Each house contained well-sized rooms, a well and the drains which were connected with the main street drain. Vertical drain pipes suggest that bath rooms were connected with the main street drain. Vertical drainpipes suggest that bath rooms were constructed in upper storeys also. Generally, the houses used to be of double storey as the stairways are found in almost all the houses. The roofs generally used to be flat but made of wood.

In addition to dwelling houses there existed a few spacious and large buildings. Some of them had large pillared halls about 80 ft. square. Such spacious buildings are supposed to be temples, municipal or assembly halls.

### The Great Bath

“The most imposing structure in the city is the Great Bath. It consists of a large quadrangle in the centre with galleries and rooms on all sides, in some of which there were arrangements for hot water bath. In the centre of the quadrangle has a large swimming enclosure. 9.449 m long, 227.010 m wide and about 82.438 m deep. It has a flight of steps at either end and is fed by a well, situated in one of the adjoining rooms. The water is discharged by a large drain with a corbelled roof more than six feet in height. The Great Bath is 180,54,864 long and 108,32,918 wide. Its outer walls are about 8 feet thick. The solidarity of the construction is amply borne out by the fact that it has successfully withstood the ravages of five thousand years.”

The careful town planning, adequate water supply, and efficient drainage system presuppose an advanced state of civil authority. Lamp posts at intervals indicate the existence of street lighting. There was also watch and ward system for different quarters. On the whole the ruins of the city reveal “on this site, a large, populous and flourishing town, whose inhabitants freely enjoyed, to a degree unknown elsewhere in the ancient world, not only the sanitary conveniences but also the luxuries and comforts of a highly developed municipal life.”<sup>5</sup>

### Social Life

From the various articles found in the remains of Mohenjodaro and Harappa, we can draw a picture of the social life of Indus Valley people. They were perhaps divided into four classes, viz., learned persons, warriors, businessmen and working class or labourers.<sup>6</sup>

### Food and Drinks

The Indus Valley people were both vegetables and non-vegetarian. Wheat, barley, rice and milk must have been the important items of food. They also used fruit and vegetables. Date was their favourite fruit. They were great fish-eating people. Besides, beef, mutton, poultry, flesh of the ‘gharial’,

### *The Indus Valley Civilization*

turtle and tortoise was also commonly taken by them. This has been proved by the discovery of half-burnt bones, found in houses, lanes and streets.

### Domestication of Animals

The Indus Valley people domesticated various types of animals. Most common among them were the buffalo, sheep, goat, camel, cow, etc. They worshipped the humped bull, which has been proved by the discovery of various seals on which it has been frequently represented. Bones of horses have also been found in the upper-most strata. They were also acquainted with some wild animals such as lion, rhinoceros, tiger, monkey, bear, etc. Clay models of toys indicate that smaller animals like mongoose, squirrel, parrot, peacock, cat, etc. were also known to them.<sup>7</sup>

### Dress and Ornaments

The discovery of large number of spindles of various sizes indicate that threads, both of cotton and woolen must have been spun in those days. One male figure on a statue shows that generally two garments were worn an under-garment resembling the modern 'Dhoti' and a shawl covering the left shoulder and passing below the right shoulder. The female dress was more or less like that of the male.

The ornaments were worn by men and women both rich and poor. Necklaces, fillets, armlets, finger-rings were worn by both the sexes, while girdles, ear-rings and anklets by women alone. These ornaments were of various designs and were made of gold, silver, copper, ivory precious stones, bones and shells etc.

### Amusements

The Indus Valley people were alive to the importance of play and pass-time and they found time for amusements. They preferred in-door hobbies to out-door amusements. They were very fond of dance and music. The discovery of a large number of dice of various kinds indicates that dicing was a popular game. Hunting fishing, keeping pet-birds and witnessing bull-fighting were some jungles, great fertile plains, high plateaus, dry deserts, lowcoastal plains, vast rivers, and the highest, most rugged mountains in the world. Because of the variety of Indian geography, languages, races, and people, it will be easier to understand Indian history if you do not think of India as a country like Egypt or Greece, but as a continent like Europe.<sup>8</sup>

### Economic Life

From the objects unearthed it becomes apparent that the city of Mohenjo-daro was a prosperous one. The people were certainly well acquainted with agriculture. All types of agricultural implements such as sickles etc. have been discovered. Of the agricultural products we may particularly refer to wheat, barley, vegetables, cotton etc. It appears that agriculture was their mainstay. The land of the Indus valley was quite productive and had sufficient rainfall also. Irrigation was also one of their occupations. The animals were also domesticated for economic purposes.

### Industry

Mohenjo-daro was a great industrial centre. Different industries were practised, important among them being weaving. From the discovery of many spindles and spinning wheels in the houses in the Indus Valley, it is evident that spinning of cotton and wool was very common. Besides spinning and weaving, Indus Valley people also practised dyeing.

### Trade and Commerce

The city of Mohenjo-daro was a trading centre. It maintained both internal and external trade. Internally the trade was carried on by land routes for which the bullock-carts were commonly used. That Mohenjo-daro maintained trade relations with southern India, central India and north-western India is proved by the common use of precious and semi-precious stones and of bronze and copper. These materials or objects are not to be found in Sindh today.

### Weights and Measures

A large number of weights have been discovered from Mohenjo-daro and Harappa. These weights vary in size. Some are very heavy, and could be lifted only with the help of a rope while others were of a very small size to be used by jewellers. Cubical weights appear to be in common use. It appears that a strict control was exercised on the maintenance of proper standards of weight. Ordinary pebbles were used as weights by the poor. A bronze bar with suspended copper pans was used as a scale. It so appears that most probably decimal system was known to the Indus Valley people and that was

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their own invention. The measures of Mohenjo-daro and Harappa indicate that besides cubic, footage system was also in vogue.

#### Religious Beliefs

Though neither any temple nor any shrine has been unearthed at Mohenjodaro and Harappa yet a large number of statues and terra-cotta figurines suggest that the Indus Valley people were idol-worshippers.

#### Cult of Mother Goddess

The chief deity of Indus Valley people was Mother Goddess whose worship was an important part of their religious life. A number of statues have been unearthed; one is a semi-nude female figure wearing a girdle or band round her loins with fan-shaped dress. According to Sir John Marshall, these figurines represent the Mahadevi of the valley people.

#### Worship of Lord Shiva

Lord Shiva was very popular among the male gods of Indus Valley people and he was worshipped by all and sundry. The seal which was discovered at Harappa shows a three-faced deity sitting with crossed legs on a throne, wearing a horned dress surrounded by several animals, like elephant, tiger, buffalo etc.

#### Worship of Water

The great Bath discovered at Mohenjodaro indicates that water also played an important role in the religious rituals of Indus Valley people. Worship of Trees and Birds Trees of peepal and neem appear to have been worshipped by the Indus Valley people as shown in a seal found during the excavation. Besides this, duck was regarded to be a sacred bird.

#### Worship of the Sun and Fire

The representation of Swastika and wheel on certain seals shows that the Indus Valley people also worshipped the Sun god. Moreover, indications are also found about their worshipping the god of Fire too.

Thus, it is obvious that Hindu religion of today owes a lot to Indus Valley culture. Lord Shiva was as popular a god for the Indus Valley people as

is today. The worship of peepal tree and tulsi plant is still a part of Hindu religion.

### Causes for the destruction of Indus Valley Culture

In the absence of any written material or historical evidence scholars have made various speculations regarding the causes for the decline or destruction of Indus Valley civilisation. Some of the causes advanced by the scholars are as follows:

- Firstly, some scholars contend that due to decrease in rainfall, South might have become desert and people might have migrated to some other place.
- Secondly, certain scholars believe that the earthquake or cyclone might have been responsible for the decadence of Indus Valley culture.
- Thirdly, it is argued that the great wealth of the people of the Valley attracted wild tribes from the hills, who might have brought about the destruction of the Indus Valley civilisation. Certain skeletons have been unearthed which provide testimony to this view.
- Fourthly, archaeologists have attributed the decline of Indus Valley civilisation to the progressive decay of the land due to over cultivation, neglect or destruction of the irrigation facilities and the continuous exploitation of land and firewood for brick manufacture.
- Finally, scholars believe that the decline of Indus Valley culture might have taken place due to the change of course by Indus river. As a result of this change the fertile Indus Valley was converted into a tract of sand and people were forced to leave the place.

However, all these views are mere conjectures and nothing can be said for certain about the causes of the decline of Indus Valley civilisation.

### Contribution of the Indus Valley Civilization

The Indus Valley civilization had made very rich contribution to the modern Hindu culture. In fact, many of the features found in the Indus Valley civilization have been adopted by the Hinduism. Siva as a deity is as popular with the people today as it was during the time of the Indus Valley civilisation. Similarly, the cult of Linga and Yoni is also prevalent throughout the country and was taken from the Indus Valley people. The worship of trees and plants is also in vogue in many parts of the country. Certain plants like Tulsi and Pipal are worshipped. The animal worship which was popular with the Indus Valley people is also found at present. Certain sacred animals, cows and bulls

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are worshipped even today. Certain animals and birds still regarded as the vehicles or vahana of certain deities. Therefore, we can conclude that there is an organic relationship between the ancient culture of the Indus Valley and Hinduism of today. The religions of the Indus Valley people were the lineal progenitor of Hinduism.

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## Social and Cultural Treasures in Villupuram District – A Study

Dr. R. ELAMARAN

*Assistant Professor in History,  
T. K. Govt Arts College, Vriddhachalam.*

*Villupuram is the village panchayat located in Viluppuram taluk and six km away from Viluppuram town. The social transformation in rural society begins only when the land reforms are drastic enough. Villupuram, due to its fertility and deliberate location, became a bone of contention of fortune among various dynasties in the ancient and the medieval period, and the British in the contemporary period. The people of Villupuram belongs to various communities and they engaged in agriculture, and business. Besides agriculture, small scale industries like mat-making, brush making, weaving, embroidery, carpentry and smithy are carried on by the people. The peculiar feature of society in the Villupuram was the practice of joint family system. Marriage, customs, rituals and ceremonies differed from caste to caste and community to community in Villupuram. The status of women is one of the important measurements for the nation's advancement. Castes and sub-castes had not only proliferated and entrenched themselves but were found together in combination and shaped the nature of society. Hinduism, Islam and Christianity are the three major religions in Villupuram. The Hindus constituted the major population in Villupuram. The Abhiramesvarar temple at Villupuram is one of the famous South Indian temples. The Muslims formed a second major community of Villupuram and the growth of the Muslim population in the district was the direct consequence of the frequent Muslim incursions. In 1606, the mission of Madura was established by Father Robert De Nobili and the Christians carried on their work at Trichinopoly, Tanjore, Madura and subsequently at Villupuram. Villupuram is fast growing Panchayat, Industrial and Commercial Centre with huge population living in the village.*

**Keywords:** Villupuram, Transformation, Communities and Agriculture.

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Villupuram, due to its fertility and deliberate location, became a bone of contention of fortune among various dynasties in the ancient and the medieval period, and the British in the contemporary period. According to Census 2011 information the location code or village code of Villupuram village is 632918. The people of Villupuram belong to different religions. As per 2009 stats, Villupuram is the gram panchayat and the total geographical area of the village is 601.12 hectares and it has a total population of 4,837 peoples.<sup>1</sup> There are about 1,108 houses in the village. Villupuram is the nearest town to Villupuram. Villupuram has a favourable agro – climatic condition, which is suitable for growing a number of crops.

### Historical Background

Villupuram was a part of South Arcot district till 1993. In ancient times, South Arcot was ruled by the Cholas, Pallavas again Cholas and then Pandyas. From records that this area became a cockpit of rivalries between the Pallavas, Cholas, Pandyas and Vijayanagar rulers. However, the respective rulers envied one with the other and attempted to introduce various welfare measures including religious benefaction. It was dominated by the Delhi Sultanate in the year 1334. By 1378, the region came under the reign of Vijayanagara Empire and the Nayaks were appointed as the rulers of the region. In 1646, South Arcot came under the Bijapur Sultans who ruled the region till 1676. It was then conquered by the Marathas.<sup>2</sup> In 1677, Shivaji, the great Maratha King captured Gingee with the help of Golkonda forces. In 1698, the Mughal Emperor Aurangazeb took over Gingee and established his rule over South Arcot. During the Mughal regime, both English and the French acquired settlements in South Arcot. The entire district was turned into a battlefield due to Anglo-French rivalry. The period between 1767 and 1790 witnessed repeated attack and invasion by Hyder Ali and his son Tippu Sultan. Complete autonomy over the region was given to the British by the Nawab of the Carnatic in 1801.<sup>3</sup> It remained under the British authority until 1947 when India became independent.

### Caste

The people of Villupuram belongs to various communities. In Villupuram the major communities are the Vanniyar, the Adi Dravidars, the Brahmins, the Yadavas, the Irullas, the Kammalas, Arunthathiyar and the Kattunayakans. Caste is the main feature of an individual, which identifies the status of particular individual in both social and occupational. Villupuram district has recorded the highest Scheduled Caste population (31.54%) among

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the district. Daily income is important variable, which is determined style and standard of an individual and family. The Brahmins though they constituted a small percentage of the population, occupied a unique position in the society of Villupuram. They were the repositories of Vedic knowledge, and served as priests, prohibits and astrologers. They were primarily divided into two well-known religious sects, the Saivites and the Vaishnavites. Their ancestors were immigrants from the north who were induced to settle down permanently through liberal grants of fertile lands exempted from taxation.

### Depressed Classes

The Paraiyar, Kattunayakars, Pallar, Irular and Puller were the low caste. The former two were field workers while the latter were other labourers. They were denied any right in the society and the things touched by them were considered polluted and they lived in suburbs. A Parayar was forbidden to cross a Brahmin locality and if he entered the house either accidentally or intentionally, he was murdered or punished severely. It was considered a infectivity, if the person of the low caste prepared the food and the polluted person lost his caste and the remedy consisted of large purification ceremonies.<sup>4</sup> Large number of Telugus immigrated and settled down in the eastern part of Villupuram. The influx of Telugus into Villupuram led to the absorption of various Telugu customs and manners by the Tamils. The spread of the influence of Vijayanagar led to the migration of several Telugu and Kanarese communities. The Irullas and Kattunayakans were other communities which migrated into Villupuram and rose to prominence. The tribes are yet to fully benefit out of the various development schemes, programmes and projects. The government has launched Tribal sub-plan through 21 sectoral departments. The tribes have not made use of the various benefits available under the sub-plan. As a result, they occupy the last position in Human Development Index.

### Occupation

In Villupuram most of the people are educated and they have some kind of work or the other or self-employment for their daily bread. Agriculture is the important occupation of the people of Villupuram. But, the people of Villupuram also engaged in agriculture, and business. Besides agriculture, small scale industries like mat-making, brush making, weaving, embroidery, carpentry and smithy are carried on by the people. Language forms one of the important elements of the people's cultural life. Tamil is spoken by the people of Villupuram. Female worker participation and their participation in non-agricultural sector is very low in Villupuram which pulls down the village to

last place in the ranking. Ante natal coverage in the village is very low compared to other areas. Women involvement in the non-agriculture activities is also very poor in Villupuram which is the main reason for the poor performance of these blocks in the equality ranking. The per capita income of the village in 2018-19 was Rs.27577 which increased to Rs.35295/- in 2019-20 recording an increase of 21.86 percent.<sup>5</sup> However, the per capita income of the village is much less than the district per capita income. Villupuram is predominantly agriculture based and a vast majority of the farmers are marginal and small farmers. Industrial activities are very minimum in the village; thus, unemployment remains to be a major problem in the village. As a result, the per capita income of the village remains low when compared to the district average.

### Family Pattern

The peculiar feature of society in the Villupuram was the practice of joint family system. Family was the smallest unit of the social fabric and it functioned as an established institution. The family was well integrated, homogeneous and stable. Since the entire family shared the pleasures and pains, mental instability of the members was reduced. The father exercised vital authority over the family members, and women occupied a subordinate position. They were hospitable, went to the temples, participated in domestic functions and treated the husband with respect. The practice of the Muslims keeping their women in concealment as per the religion stressed female' modesty the income of all the persons of the family were added to the general fund of the family and expenditure was met. The command of the elders was unquestionable in the family. A clear system of inheritance and succession were widely prevalent among the Hindus. The eldest son retained the personal effects of his father and with the consent of his brothers retained his house, but the value was deducted from the share in the property. Among the Kallars and Maravars, lineages were traced through the male members and, the properties of the deceased naturally went to the sons. The western ideas of family and family life had very little impact on the traditional concept of the Hindus. Western education, ideals, customs and manners did not create an enduring impression on the people and as a result they remained true to their heritage and culture.

### Home

Villupuram consisted of blocks of houses and the houses of the Brahmins stood in one block arranged in double rows facing one another. The

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Sudra houses formed a compact block. The castes which were large in number had their own distinct quarters. The Vanniyars and AdiDravidars inhabited the same region. The half- polluting castes like the Irullas and Kattunayakans lived outside the main villages whereas the Paraiyas lived in the still remote places.<sup>6</sup>

#### Food

The staple food of the rich people was rice while ragi, cambu (bulrush millet) and cholam (maize) of the poor classes. The workers consumed boiled grain and drank the water in which the grain was boiled. Coconut and gingelly oil were used for cooking. The rural Brahmins preferred a cold supper at night and earned a reputation for frugal habits. They were forbidden to take meat or liquor. On the contrary the agricultural labourers and artisans took Kanji or cold rice water in the mornings.

#### Dress Pattern

The people in the villages wore simple garments. The common man wore a piece of cloth wrapped around his middle and another around his head. The Vanniyar male wore a lower cloth and upper cloth, turban and handkerchief but a Irulla tied a coarse cloth around his body and a cloth around the woolly curly hair. The Tottiens tied a piece of cloth around their body and a coloured handkerchief around his head. The dress of a woman consisted of a saree of eight yards and they decorated themselves with variety of ornaments, made of precious metals, stones and glass which they used at all times.

#### Marriage Practices

Marriage, customs, rituals and ceremonies differed from caste to caste and community to community in Villupuram and they also observed certain marriage taboos. The ceremony presented an integrated compound of vedic rituals, tribal customs, rites and formalities.<sup>7</sup> Though Kalavuvali or love marriage was theoretically and aesthetically present, they were not given the liberty to select their partners even among their own caste. Inter caste marriage was never accepted and if any person resorted to it, he was expelled from the community.

### Condition of Women

The status of women is one of the important measurements for the nation's advancement. Ideologically woman was considered a completely inferior species to the male having no significance, no personality; socially she was kept in a state of utter subjugation to demand any right, suppressed and oppressed. She was branded as basically lacking the ethical fiber. The well-being of women and health of children are the index of the progress of the society in Villupuram. The women and children together constitute the 75% of the population of the village. The progress of Villupuram largely depends upon the progress of women and well-being of the children. Realising this, the government formulated certain policies as an opposition party and succeeded in implementing them while in power. The custom of elderly men marrying small girls left many women widows in their early youth. The thali (mangala sutra) was taken away from her neck, her hair was cut off and she was not permitted to re-marry by most of her caste people. The people avoided the presence of widows in domestic functions and considered seeing her face a bad omen. Certain sections of the people induced widows to commit sati. (Suicide on the funeral pyre of husband). Hindu widowhood changed radically the course of life of a woman. The Brahmin widows had to shave the head, wear white clothes and were prohibited to wear ornaments. The non-Brahmins believed that the superiority of caste depended upon the strictness with which it enforced the above isolating observances of puritan widowhood. The widows of Villupuram were shut mercilessly within a huge mud fort and men outside the fort were not permitted to enter into the fort. The women were given little rice, herbs or roots and they were not given fresh clothes nor water was supplied for bath. The widow was expected to devote herself to severe austerity, which would enable her to meet the partner in heaven without delay. Since all the basic comforts were denied, the widow never lived for more than six months. Women artistes who were experts in the art of Bharatha Natyam, and instrumental music were employed in temples, which maintained thousands of females called devadasis.<sup>8</sup> Endowments were given by the rulers. Soon they developed into a hereditary caste and possessed peculiar social, religious customs and rites. The devadasi system became a ground for the non-Indian evangelists of other creeds against Hinduism and secure converts.

### Social Set -up

Castes and sub-castes had not only proliferated and entrenched themselves but were found together in combination and shaped the nature of society. Between these two extremes, the great multitude of castes increased in their different degrees, each one preoccupied to hold its rank and to preserve its privileges from usurpation. The social concept worked towards the

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suppression of human aspirations, rights and interests and restricted the scope of the human association. All observers have been struck by the fact that specialized elements of Hindu society were not only super imposed but also commonly opposed and that the force which animated the whole system of the Hindu world was a force of repulsion which kept the various bodies distinct and drove each one to retire within itself. There was co-operation not only in production but also in marketing. The arable lands yielded all the grain required by a primarily vegetarian society in Villupuram. The cattle which grazed on the pasture lands provided milk, hide, meat and manure. The villagers accumulated the fuel from the common waste. Gardens were raised at the backyards of the house. One's possession were not usually disturbed as long as he paid the state demand. The peasants were given the eternal right to till and own the lands. Unfortunately, these rights were infringed at regular intervals at Koliyanur and Villupuram. Poverty is multi-dimensional and has inter-locked issues. It is a sum of all deprivations. Poor health results in poor economy which impacts on school attendance and all aspects of living standard.

### Religion

Hindu, Muslim and Christian are the three important religious groups found in Villupuram. The Hindus constituted the major population in Villupuram. Temples were erected in isolated spots, woods, highways, in the middle of tanks, on the borders of rivers and other large reservoirs, besides on the summits of steep rocks, mountains and hills.<sup>9</sup>

### Superstitious Practices

The people of Villupuram believed in superstitions whether they were learned or ignorant. They believed in various omens, when a bell rings, an ass brays, dog twitches its ears or a horse neigh. These signs were a step to achieve success. There would be danger or ill luck if one saw a widow when starting a journey, or an owl screeched, and if the bees built a nest in the house. The demonstration of the tail of a star was measured evil. It was considered bad to keep the cow which-calves on the Sunday and a buffalo which calves on a Friday.

### Hindus

The Hindus, worshipped a large number of divinities of various metaphors. They were noted for their grandeur and distinguished by huge

pyramid statues of stones, of baked earth and granite which represented the objects of popular worship. Every caste or Hindu family had its own private Temple. The petty deities were worshipped in Villupuram had an acknowledged place in the Hindu mythology and it seemed probable that they did not originally belong to the Hindu system, but were the objects of worship of the aboriginal tribes and adopted by the Brahminical immigrants from the north. The people offered sacrifices in these temples for protection against evils.<sup>10</sup> The residents also erected monuments in memory of self-devoted victims, including women who died as virgins. The people looked upon Brahma as the first god. The orthodox gods of the Hindus were Siva, Vishnu and a hierarchy of lesser gods, who formed the Hindu pantheon. In Villupuram there are four Hindu temples dedicated to Lord Siva, Amman and Vinayaga. Sri Muthambikai Amman temple, Thirumal Thuyar Theertha Pillaya rKoil and Sri Abirameshvarar temple are most popular temples in Villupuram.

### Abhiramesvarar Temple

The Abhiramesvarar temple at Villupuram is one of the famous South Indian temples. Nothing is known about the history of the temple prior to the Pallava period. The Bhakti movement gained importance with the advent of the Devaram saints. The Sthalapurana of Villupuram says that the worship of Abhiramesvarar in Villupuram is equal to the worship of Lord Siva in Panchabhutasthalas. It also adds that Sage Bhringi Muni stayed and worshipped the Lord of this temple. It further states that the Saints Thirugnanasambandar, Thirunavukkarasar and Sundarar have sung hymns in praise of the presiding deity of the temple.<sup>11</sup> Apart from the Nayanmars, the famous twin poets have composed 'Kalambagam' in praise of the Lord Abhiramesvarar. The name of the presiding deity of the temple is referred to in the inscriptions as Paramaswami, Mahadevar, AlagiyaNayanar, Aludiyar and Alvar. A unique feature of this temple is that Muthambigai, the consort of the presiding deity, invariably found on the left side of Lord Siva in all other temples, in the same premises, is situated as an independent temple in front of the Abhiramesvarar temple facing West. Besides, the people also worshipped unorthodox gods, minor deities and evil spirits. Karuppan, Ayyanar, Draupathi and Muneeswaran were some of the popular village deities. Lord Vigneswara was worshipped at all ceremonies. The people have their own guardian deity known as Uramma, whose benevolence was sought for the welfare of the village community. However, inferior deities like Pidari, Marudappan, Saitan and Bhadrakalli received significant attention. Animals like bull, monkey, kite, and plants like Darba, Arasu or fig tree and Tulasi were also worshipped.

## Islam

The Muslims formed a major community of Villupuram and the growth of the Muslim population in the state was the direct consequence of the frequent Muslim incursions. The assumption of power by the Nawabs of the Carnatic and their struggle with the local rulers led to Muslim settlements.<sup>12</sup> The original emigrants must have grown numerically by intermingling freely with the native population. The Islamic inroad was the outcome of political needs and economic opportunities. The Muslims belonged to the widespread class which spoke Tamil and was generally designated by the comprehensive term Lebbai, which was reserved for priests or men of learning. The merchants were known as Ravuttar. Though Tamil was the common language, there was an inner circle, some of whom were learned in Arabic.

The Muslims wore a peculiar Fez made of coloured grass. On the occasion of birth and marriages, they followed certain Hindu customs. The celebration connected with taboos, and wooden frames in which offerings of sandal dedicated to saints were carried in procession were an imitation of Hindu rituals. Numerous mosques and educational institutions for Muslims were also established. The Muslims went on pilgrimage to the tomb of the saintly sahibs at various places and took procession in the month of April. The chief characteristic of the Muslim population was the perfect communal amity they had built with the Christians and Hindus. Communal conflicts were very few in Villupuram. The Muslims showed a special amity to the Hindu caste of Tottier, Pallar, Kammalar and rendered mutual assistance in times of trouble which can be attributed to tradition that Ibrahim Nabi, a Muslim saint were brought up in the house of the Kammalar. Umar ShaAuvilya Majid, Mosque for Nidhaye Islam and Masjid-eyIlahi are important mosques in Villupuram.

## Christianity

In 1592, the Jesuits founded the Madura Mission and made vigorous attempts to propagate Catholicism. This had great impact on the Brahmins, Vanniyars, Paravas and Depressed Classes. In 1606, the mission of Madura was established by Father Robert De Nobili and the Christians carried on their work at Trichinopoly, Tanjore, Madura and subsequently at Villupuram. The Vanniyars embraced Christianity during the period of Father John De Britto in 1683. In 1742, the Paravas obtained the services of the famous divine scholar and poet Father Beschi of the Madura Mission. However, they could not achieve much due to the troubles inside the Church and growing influence of Protestantism. The Danish Lutherans in 1706 and the Society for the Promotion of Christian Knowledge in 1767 founded the Protestant Mission.<sup>13</sup> Schwartz mentioned in his diary that as early as 1771, one of his Trichinopoly converts was engaged in preaching the people of Villupuram. The depressed Classes, the most neglected folk among the Hindus, accepted Christianity in large

numbers. The higher caste looked upon conversion as tantamount to their degradation to the lowest social status. These people disliked missionary activities, and their honoured customs, culture, and traditions were barriers and obstacles to the spread of Christianity.

There was common hatred and religious conflicts in the land. Some of the converts retained Hindu rituals and caste system even after conversion. The spread of Christianity was thus gradual and it extended over a number of years of devoted and hard work. The divisions of the society on the basis of professions caused communal hatred and restrictions kept the society divided and there was a tendency to consider large sections of the people as socially inferior. Viewed from an aesthetic stand point, which usually determined the standards of culture and colonization of societies, they connected a young vigour and durability of social structure. Internal dissensions invited external intervention in the country. The British deliberately kept their hands off from distressing the social institutions because they were anxious to maintain political security.

In the absence of freedom to take a profession which was considered noble, the people were less motivated to be innovative which retarded economic development among the downtrodden and developed an inferiority complex and the ensuing hatred made the society the most iniquitous and backward among the world communities. The social welfare administration would make proper shape and development of the society. It leads social, political, economic, cultural and public welfare developments where a richer contented life could be possible for all the citizens. The social action resulting from social policies normally lead to the enterprise of a welfare state; the welfare state is one in which, social security and social services are birth right of every citizen. Normally speaking the social services are democratically organized to meet the essential needs of the whole community and in which, the whole community participates as a matter of course.

### Poverty and Inequality

The government has initiated and implemented several schemes and programmes to eradicate poverty. The causes of poverty are many and they are inter-related. The abolition of poverty requires a multi-pronged approach. The measures initiated towards removing poverty are of many types. Some are income and employment oriented; some are production oriented; and some are welfare oriented. Public distribution System is the lifeline for the poor households. It provides safety net for the poor. Each village has PDS outlet which ensures supply of essential goods to the poor households in rural and

urban areas. Each household is provided with Family cards to receive the assistance for which it qualifies.

## Education

Education is the most important factors of any person. Only education helps people to fight against social inequality, poverty and fulfills other necessities of person. Job is significant variables, which plays an important role in uplifting of their social life. Education provides a very solid foundation for the overall development of the nation. One cannot imagine development without education. Education is inseparable from development. Education has been declared as a right to the children up to the age of 14. The efforts initiated by the State and Central Governments have completely changed the educational scenario in the country. The literacy rate for the district as a whole as per 2011 census is 71.9. It has the second lowest literacy rate among the district next to Ariyalur (71.3). The literacy rate of Villupuram district is also less than the State literacy rate 80.1.<sup>15</sup> However, gender-wise analysis shows a considerable difference in the literacy rate. It shows that the male literacy rate was 80.5 per cent, whereas, the female literacy rate was only 63 per cent. Free Education to all the Scheduled Tribe students is provided exempting them from payment of Tuition fees, Special Fees and Exam Fees. Hostel facilities are also provided for Tribal students who are studying in other schools.

## Poor Access to Basic Education

The development of educational facilities is very low in the district and is severely constrained by the low availability of infrastructure. The lack of access to good basic education makes skill training very challenging since the students are not familiar with basic concepts and are often unable to absorb the skill training imparted to them.

## Primary Education

All the children irrespective of the gender should be in schools as per the policy of the government. No one should be denied the opportunity of schooling. In other words, it is the duty of the parents, teacher's local bodies and government departments concerned to ensure that the children are enrolled in schools. The district has been selected for the implementation of poverty reduction programme (PudhuVazhvu). The programme is being implemented in 5 blocks covering 196 villages including Villupuram.<sup>16</sup> The programme has specific activities for differently abled which include the distribution of National ID cards to all the differently abled, distribution of

financial assistance to start livelihood projects, promotion of SHGs among the differently able and distribution of aids and appliances.

## Health and Nutrition

The gap in health care services in the tribal areas vis-à-vis the rest of the area is significant. The private sector in health care services would perhaps never find it economically viable to invest in Tribal areas as investments would rarely meet the commercial objectives of private sector. However, Government of Tamil Nadu provide health services within the reach of everyone in the community. The enjoyment of the highest attainable standard of health is one of the fundamental rights of every human being. Health and capability to live longer are integrated human development factors. Health status is inclined by the range of personal, social, economic, and environmental factors, known as determinants of health. Demographic profile, health and nutritional status are the prominent deciding factors of human development.<sup>17</sup> These factors are closely related to each other. Factors taken into account to sketch the demographic profile of Villupuram is population, sex ratio, density of population, proportion of SC and ST population to total population, population in the age bracket of 0-6 years, child sex ratio, infant mortality rate, maternal mortality rate and still birth rate. The factors associated with the health status are institutional delivery, HIV positive cases, positive TB or Leprosy cases, provision of IFA tablets, Immunization, etc. The indicator for assessing the nutritional status is the malnourishment rate of children under six and above category.

## Female infanticide

No female infanticide is reported in Villupuram. Though there are no reported cases, apart from the girl children fall under IMR and U5MR, un-reported foeticides and infanticides were found to be prevalent, since the sex ratio reveals gender disparity. To save any female child from being killed due to traditional prejudices against a female child and the entrenched son preference, Tamil Nadu has a special scheme called the Cradle Baby Scheme, for female children found abandoned are brought up by the government with special care under this scheme. There is however, need for increasing awareness on the importance of girl child.

### Nutritional Status

If under-nutrition occurs during either pregnancy or before the age of two years, it may result in permanent problems with physical and mental development. Extreme malnutrition known as starvation, may have symptoms that include: a short height, thin body, very poor energy levels, and swollen legs and abdomen, frequent affliction to infections and cold. Reasons for malnutrition among children may be explained thus: The parents who are daily wage earners are not aware of nutritious food needs of their children. Feeding children available food particularly rice, for three times a day makes the child weak and deprived of required nutrients.<sup>18</sup> This coupled with insanitary living conditions, open defecation and inaccessibility to safe drinking water, emaciates the children further. Anaemia affects the functioning of every organ and the health system. It makes children dull and they start losing energy and do not remember what they studied in their class rooms. Frequent sickness depletes their strength and makes them chronically ill. Tamil Nadu schools provide Nutritious Mid Day Meal Scheme for children up to 10th standard in all Government and Government Aided Schools. Nutritious meal is served with vegetables, egg and dhal for children.

### Tribal Welfare Board

The Government of Tamil Nadu have constituted the Tribal Welfare Board under the Chairmanship of Minister for AdiDravidar in 2018 to seek over all development of the tribes. For the past 3 financial years sum of Rs.3.00 crores have been sanctioned. So far, Rs.31.32 lakhs have been spent for the benefit of 809 members. The application received from the members of this board are being processed for sanction of funds. In Villupuram district the remote and inaccessible tribal areas have been identified where the tribal population is located in large numbers. The tribal people are provided outreach medical services through mobile van by medical and para-medical personnel in their areas.<sup>19</sup> They were provided comprehensive maternal and child health care, treatment of minor ailments and referred to the higher institutions wherever needed. Effective management of sickle-cell anemia and stay of antenatal tribal mothers from remote and inaccessible areas in the selected four Primary Health Centres are carried out. Further Bed Grants are also provided to the tribal people for inpatient admission in private hospitals. The Tribal people are also provided with tribal counselors for better guidance for medical treatment in the Government medical institutions.

## Government Schemes

Janani Suraksha Yojana is one of the flag ships programmes under Reproductive Child Health (RCH II) which aims to reduce the maternal and infant mortality by focusing on increasing institutional deliveries. The scheme has been extended to urban areas also. An amount of Rs.700/- in rural and Rs.600/- in urban areas is paid to “Below Poverty Line” (BPL) mothers delivering in institutions for the first two deliveries. Dr. Muthulakshmi Reddy Maternity Benefit Scheme was launched on 15.6.2006 with a view to provide financial assistance to the pregnant women living below poverty line. Under this scheme, assistance of Rs.3,000/- is given to the pregnant mother three months prior to the expected date of delivery and Rs.3000/- after delivery. 25% of the total funds earmarked for this scheme are exclusively reserved for SC and ST pregnant women. This benefit is restricted for two deliveries only. A special programme of providing nutritious diet to postnatal mothers, sterilization cases and all patients coming for scan and sugar test at Primary Health Centres has been launched from 15.09.2008. The Scheduled Tribe girls are trained in health basics and First Aid and who act as link person between the Tribal and Health Sub-centres. The Government is providing Rs.1000/- p.m as assistance to the pregnant women of poor Scheduled Tribes for six months. Further a sum of Rs.3000/- given to the woman for abortion or miscarriage. 20 Counseling has been done to encourage institutional deliveries. Also, a scheme known as Jana Shree Bima Yojana (Insurance scheme) is implemented considering the high death rate among the Particularly Vulnerable Tribal Groups (PTGs). So far, 32424 lives have been covered under this scheme

## Free House Site Pattas

Free House Site Pattas are distributed to the homeless STs beneficiaries. The land for this purpose is acquired through private negotiation and also under the Tamil Nadu Acquisition of Land for Harijan Welfare Schemes Act, 1978 (Tamil Nadu Act 31 of 1978). The distribution of House site pattas is done through revenue department of this Government. As per the Land Administration Department, there is no separate resettlement and rehabilitation policy for Tamil Nadu. The requisitioning body like Neyveli Lignite Corporation, Tamil Nadu Road Sector Project, and SIPCOT etc. are following their own rehabilitation policy for the project affected families. For acquiring lands for the house sites to SC and ST, a separate Act No.31/78 (Tamil Nadu Acquisition of Land for Harijan welfare schemes Act, 1978) is being followed. No separate resettlement and rehabilitation policy is being adopted, since the Government in their G.O. No.363, Revenue Department, and dated 28.4.1995 have ordered not to acquire lands belonging to SC and STs in this State. Further the lands acquired from other than SC and ST and owner

for providing house site pattas to landless SC and ST who are below poverty line, through private negotiation and under Land Acquisition Act 31/1978 and the sufficient compensation is paid to the land owner for acquiring their land.<sup>21</sup>

## Migration

Migration of the rural population, especially that of agricultural labourers takes place mainly due to the poor condition of the agricultural sector. Thus, it becomes paramount to improve the condition of the agricultural sector, as still it forms the basis rural development. The people rated first in order of low development of non-farm sector as reasons for persistence of poverty in the village, crop failure and drought the second, low wage rate and seasonal employment the third, lack of substitute employment the fourth and poor presentation of land reforms the last. The sex wise analysis reveal that lack of alternative employment is a major reason for persistence of poverty in the villages and female respondents state it as stat it as low development of non-farm sectors. The crop failure and incidence of drought is a major problem in Villupuram and Villupuram. The educated people state that persistence of poverty in their village is due to occurrence of low wage rate coupled with seasonal employment and also crop failure in consequence of drought.

The caste wise analysis reveal that scheduled caste people are mainly wage labourers that is why they life more on prevalence of low wage rate couple with crop failure and drought in persistence of poverty in their village. The sex wise analysis reveals that male people state that crop failure and drought as main reason of persistence of poverty in their village. The people suggesting self-employment generation through poverty alleviation programme in the first order, the second, practicing multiple cropping and dry land farming development of activity diversification through women self-help groups the third, creation of having assured irrigation, watershed development along with crop diversification the fourth and promotion of non-farm service through rural industrialization to eradicate poverty the last. In general creation of irrigational infrastructure and employment generation are the common view among the people of dry villager. There is no migration from those who belong to the forward community, since all migrants belong to the non- forward communities. Moreover, the highest share of migrants come from the socially marginalised segment of SC and ST communities, followed by MBC and BC communities. The greater dependence on open well irrigation in Villupuram severally cripples the extent of cultivation and also the cropping pattern. Thus, the adoption of advanced irrigational methods like drip irrigation and sprinkler irrigation should be encouraged among the farmers and also, necessary institutional credit and subsidy facilities should be extended for the same. The

small and marginal farmers should be encouraged to come out of the practice of cultivating only the crops like paddy, jowar, bajra and groundnut. Instead, they should be educated and encouraged to cultivate high value crops like horticultural and floricultural crops and for this purpose, agricultural extension services should be reinvigorated and made more effective and efficient.

### Immigrants and Existential Commitments

There had been 'fractional segmentations' during the Eighteenth century. Factions as groups which are conflicting parts of a whole and disruptive of that whole but not necessary to the structure in the sense that new lineage conflict is, and which are not permanent, came into existence when circumstances are favourable to their appearances. The self-help groups in Villupuram contributed greatly in bringing about social awareness among people. Several social reforms were initiated through their organizations, Diocesan schools and institutions, dispensaries and social service centers which have made a significant contribution to the upliftment of the population particular in Villupuram and others in general. The self-help groups wanted to provide proper education to illiterate the people in the society.<sup>22</sup>

### Conclusion

The development goal of 'well-being' or 'quality life' can be achieved only when all sections of the community have free access to social security scheme. The Government which positioned as a welfare State should protect the interests of the isolated, powerless, deprived and marginalized sections of the society. The government duly has recognized its role and has launched specific social protection schemes to safeguard the interests of various groups. The schemes have, by and large, reached the needy. The government has also created the required structure, institutions and processes to ensure that the schemes benefit the targeted group. Villupuram has performed reasonably well in the field of social security and social protection. Villupuram is fast growing Panchayat, Industrial and Commercial Centre with huge population living in the village. It is being a transitional body between rural and urban cites and this acts as a buffer zone to keep the population moving from rural areas to cities. In this effort the department has very effectively used all the available resources, funds and grants that have been provided under various schemes by Government, besides adding State Financial resources wherever needed, and funds and financial resources are ploughed into the developmental efforts of Villupuram for better delivery of core amenities.

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# Origin and Working of Kanyakumari District Fishermen Sangam

S. Mary Judit

*Ph. D Research Scholar,*

*Department of History,*

*Manonmaniam Sundaranar University,*

*Tirunelveli*

Dr. R. Ramasubramanian

*Assistant Professor, Department of History,*

*Manonmaniam Sundaranar*

*University, Tirunelveli*

*The aim of this paper is to describe the origin and working of Kanyakumari District Fishermen Sangam Federation. Kanyakumari District is located at the southern tip of India. Local fishermen of the area followed a joint family system. Under the system the head of the family was in charge of the fishing and trading activities. Even if youngsters were to be freed from merchants, they are unable to sell fish freely if the head is indebted. Slowly, KSSS-FSP relieved the fishermen from the clutches of money lenders and started sangams with these freed family heads. Once the benefits of the sangams were made known, several new sangams were formed. There are no restrictions on the minimum number of fishermen required to start a sangam. The number of members per sangam ranged from 12 to 241. During the early days its growth was very slow but it accelerated since 1980. When the number of fishermen sangams increased then, the Kanyakumari District Fishermen's Sangam Federation (KDKSF) was formally established in 1983 as an apex body to coordinate the functioning of all the sangams in Kanyakumari District. Hence, this article focused the origin and working of Kanyakumari District Fishermen Sangam Federation.*

**Keywords:** Fishermen Sangam, Kanyakumari, Mukkuva and Parava Castes.

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Every year, the peak fishing season starts from June and lasts upto October. During this period most of the export species are landed. The peak season is followed by the lean season extending from October to May. Absence of alternative occupation makes the Kanyakumari fishermen to migrate to the east coast of Tamil Nadu and Kerala for fishing during the lean season. Traditionally, during the lean season, fishermen take loans from indigenous money lenders at a very high rate of interest and thus are often bound to money lenders. The indebted fishermen are forced to sell their catch to the money lenders at low prices. They are also compelled to pay a commission fee ranging from 5-10 percent of the value of the catch and many a time cheated by the middlemen in price fixing and weighing. In general, when the catches are good, fishermen are able to pay back interest and a part of the capital.

But during lean seasons they are unable to pay even the interest amount. Consequently, the fishermen become indebted to the money lenders for life. The Government in order to help the fishermen, formed several "Self-help groups" in the form of fishing co-operatives during 1960s. The primary objectives of these co-operatives were to organize fishermen for collective bargaining and to raise sufficient fund from the Government and banks. But, funds from Government and banks are not sufficient to meet the actual requirements. So, the fishermen are forced to depend on money lenders as a primary source of credit.

A majority of the 1,40,000 fishermen in Kanyakumari District hail from the socially most backward Mukkuva and Parava castes and are Christians of Latin Catholic and Roman Catholic denomination. As KSSS is an organization of the Catholic Church, it has been undertaking social development programmes among the fishermen community of Kanyakumari District from 1950 onwards. It mainly aims at educating fishermen about the evils of borrowing from money lenders and the merits of collective bargaining. Nearly 23 years after the formation of KSSS the first independent Fishermen's Sangam Project (KSSS-FSP) was started under the guidance and supervision of Rev. Fr. J. James Tomber in 1973.<sup>36</sup> In the beginning a group of fishermen from Melamanakudy, Enayam and Kurumpanai villages formed three separate groups. They were registered under the Societies Act to sell fish collectively and to raise fund from local banks. Initially, membership of KSSS-FSP was limited to those fishermen youth who were not indebted to the middlemen and

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were free to sell their fish to anyone. However, the FSP soon plunged into difficulties because of certain social customs like joint family system.

Local fishermen of the area followed a joint family system. Under the system the head of the family was in charge of the fishing and trading activities. Even if youngsters were to be freed from merchants, they are unable to sell fish freely if the head is indebted. Slowly, KSSS-FSP relieved the fishermen from the clutches of money lenders and started *sangams* with these freed family heads. Once the benefits *of the sangams* were made known, several new *sangams* were formed. There are no restrictions on the minimum number of fishermen required to start a *sangam*. The number of members per *sangam* ranged from 12 to 241. During the early days its growth was very slow but it accelerated since 1980. When the number of fishermen *sangams* increased then, the Kanyakumari District Fishermen's *Sangam* Federation (KDKSF) was formally established in 1983 as an apex body to coordinate the functioning of all the *sangams* in Kanyakumari District.

#### Organizational set up and working of Sangams

Membership to *sangam* is open to all fishermen but subjected to certain minor conditions. Possession of catamarans and gear, capability of paying Rs.500/- as share capital and no outstanding loans as well as actual involvement in fishing formed some of the conditions. Share croppers and women vendors, despite their involvement in fishing activities are considered ineligible to become members. Each *sangam* functions as an autonomous body with an elected president, secretary and a governing body. The main function of a *sangam* is to fix price of different types of fishes by tender or auction. The catch is handed over to the merchants as the auctioneer fixes the price and the fishermen are then given a slip containing details of the catch by the *sangam* auctioneers. Here also on production of this slip fishermen will get the value of their catch from *sangam* office with a reduction of three percent value of the catch for compulsory savings and two percent as service charge respectively.

## Objectives and Programmes of Fishermen Sangam Federation

The objectives of the Fishermen Sangam Federation underscore help to the sea shore and Inland fishermen to achieve many sided developments. Along with the objectives the *Sangam's* have certain programmes.

They are to discuss issues like non - formal indebtedness, improvement of their industry and state co-operation to their efforts. The *sangam* proved helpful in monitoring the movement of the migratory fishermen and supporting their interest in the far off places. The *sangams* succeeded in liberating the fishermen from the clutches of the money lenders and enabled them to sell their catch by themselves and raise their income with the elimination of middlemen. It could enable the fishermen to get access to credit facilities from banks for the purchase of craft and gear. It is interesting to see that Community Development Organizers regularly monitored these *sangams*. These organizations play a crucial role in the motivation, management and day-today administration of the sangams.

### Drying and preservation

The Federation helps the fishermen to sell their catch at a competitive price and the buyers with the availability of good fish in bulk. Similarly, direct auction by the *sangam* salesman results in fetching higher prices for the catch, especially for the export varieties. For the furtherance of their benefit, the federation initiated the Anchovy Drying project in selected villages. This project popularized the idea of solar rack drying of anchovy as against conventional sand drying. Solar dried anchovy fetches more than double the price of sand dried ones.

### Credit Programmes, Saving schemes and Risk funds

Obtaining institutional credit has been a major problem faced by the fishermen. They were unable to take loans from banks as they could not furnish collateral security. Thus, the only source of finance for them was the local money lenders. This adverse situation ended with the establishment of the above said *sangams*. The KDFSF could organize credits for the *sangam* members at very low interest rates for buying craft and gear. The federation

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directly advanced the credit to the members at the very low interest rate of 6%. At certain times it organized credit facilities through the nationalized banks too. These arrangements helped to channelise credit to the needy effectively. However, the Fishermen community lacked the concept of savings for the future and so faced victimization by "debt traps". Against such odds, the *sangams* initiated a savings culture among its members and taught them about compulsory saving schemes and private saving schemes. The impact of the *sangams* in this regard is reflected in the high level of savings among the members. So, under the Risk fund scheme a fixed amount is collected from the members for helping fishermen who are permanently disabled or aged. This scheme also helps to develop a source of brotherhood among the *sangam* members.

#### Coastal Peace and Development

While fishing, the fishermen are always fighting against the roaring sea and wind and so the spirit of agitation is inherently found in their blood. Hence a base is needed to maintain coastal peace. Towards this objective, the Kottar Diocese formed a Coastal Peace and Development Committee in 1995. For convenience and for the peaceful administration the sea shore villages under the Kottar Diocese are divided into five regions of viz, Kanyakumari, Rajakamangalam, Muttom, Colachel and Enayam. A five-member regional committee is formed through the parishes headed by a parish priest to solve the problems among the fishermen.

#### The role of Peace and development committee

Peace and Development Committee plays a vital role in solving the problems and maintaining peace in the life of the coastal fisher folk of the District. Some of its achievements in the recent past are the following 1) A settlement was made regarding the problem between Pallamand Annai Nager. 2) When a person died during the clash between Kodimunai and Vaniyakudi the fishing problems between the two villages were settled amicably. 3) The fishing problems between Enayam and Enayamputhenthurai were solved peacefully. 4) It put an end to the clash between Puthenthurai and Kesavanputhenthurai. 5) During the clash at Vaniyakudy in 1999 a compromise

was reached with the leadership of Colachel D.S.P. 6) It put an end to the clash between Chinnavilai and Manavalakurichi. 7) When there was a communal clash at Kottilpadu on 24.12.1999 a peace talk was conducted successfully. Thus, the problems faced by the fishermen related to their work are solved successfully by the coastal Peace Development Committee. In this regard the achievements of *Vinmeensangam* stands one step ahead of the others.

### VinmeenSangam

*VinmeenSangam* is a pioneering *sangam* for the integral development of the interior fisher folk. For the first time ever in the history of the Diocese of Kottar, the KSSS organized the interior fisher folk into a *sangam* called "*Vinmeen*" (star) *sangam* at Marthandam. The result is very much encouraging. Seeing the impact of the *sangam* on the interior fisher folk of Marthandam, the KSSS has come forward to organize the interior fisher folks of other parts of the District and animate them towards an integrated sustainable growth. This effort is very much welcomed by the people and encouraged by the Bishop. Its objectives like the liberation of fish vendors from the clutches of money lenders and the uplift of the socio, economic, politico-cultural and educational conditions of the coastal fisher folk are worth mentioning.

Regular meetings and training programmes for the members of the *sangam* to instill in them a sense of dignity, self-respect, critical thinking and sociopolitical awareness have triggered positive trends in the *sangam*. Its various schemes like small savings and insurance for the benefit of the fisher folk have elevated it to the status of a modal *sangam* for guidance and expertise.

### Association of Deep Sea Going Artisanal fishermen

The Association of Deep Sea going Artisanal Fishermen was formed in the year 1992 exclusively to promote the fishing activities of shark fishermen of Thoothoor region of Kanyakumari District. Using small mechanized boats, they do long lining for shark and gillnetting for other species in the deep-sea. As they sail all over India's west coast, they are confronted with many problems. The AD SGAF is involved in providing support for pursuing their livelihood.

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Registration of boats with appropriate authorities, providing training in handling of navigational and safety equipments, savings, credit etc. are some of its regular activities. It is also involved in advocacy work from time to time to protect the rights of its members. A risk fund scheme is also initiated at the initial stage for covering the loss of boats. ADSGAF played a vital role in the revocation of the ban on shark fishing which has given it a good image in the community. It was formed as a separate trade union to be affiliated to National Fish Workers Forum to take up struggles on their behalf. Conservation of shark is a new programme of ADSGAF. It is an associate member of SIFFS, which is the most prominent federation of co-operatives in South India.

#### Conclusion

The foregoing research article reveals the origin and working of Kanyakumari District Fishermen Sangam Federation from 1983 to till date. In the beginning, co-operatives were to organize fishermen for collective bargaining and to raise sufficient fund from the Government and banks. But, funds from Government and banks are not sufficient to meet the actual requirements. So, the fishermen are forced to depend on money lenders as a primary source of credit. Hence, the Fishermen Sangam Federation underscore help to the sea shore and Inland fishermen to achieve many sided developments in Kanyakumari District. Now a days, these Fishermen Sangam playing significant role to uplift the fishermen society. Fishermen Sangam conducted various programmes like motivation, management and day-today administration of the fishermen life.

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