



Tamil Nadu Rural Transformation Project Villupuram District.



DISTRICT DIAGNOSTIC REPORT

VILLUPURAM DISTRICT DIAGNOSTIC REPORT



FOREWORD

The Tamil Nadu Rural Transformation Project (TNRTP) with its mandate of promoting rural enterprises, creating accesses to finance and creation of opportunities for job and employment will be one of its significant and a revolutionary initiative of Government of Tamil Nadu assisted by the World Bank for demonstrating sustainable rural enterprise opportunity for Domestic, National and Global marketing by building upon Self Help Groups members and their families.

As it is always said, “Knowledge is Wealth”, This TNRTP project through its enterprise ecosystem and inclusive strategic planning platform will strengthen both the existing rural enterprises and the promotion of potential new enterprises by building on partnership and convergence with various departments and players for leveraging, scalability and sustainability of the rural enterprise in creating meaningful job employment in farm, allied farm and non-farm sectors at the villages.

I place my appreciation to TNRTP team for this commendable documentation of the Villupuram District Diagnostic Report across various departments which is a robust effort for identifying, prioritising and selecting sectors, sub sectors and commodities for promoting rural enterprise along with capacitating and nurturing rural youths and entrepreneurs. I am sure that these valuable data will serve and contribute as tool for planning and identifying potential commodities and its value chain to both TNRTP as well as other departments as a District Diagnostic Report in promoting sustainable rural enterprises.

District Collector / Chairperson
Tamil Nadu Rural Transformation Project
Villupuram District.

VILLUPURAM DISTRICT DIAGNOSTIC REPORT

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GLOSSARY:

CIKS	Centre for Indigenous Knowledge Systems
CLG	Common Livelihood Group
FPO	Farmer Producer Organisation
ICAR	Indian Council of Agricultural Research
KVK	Krishi Vigyan Kendra
MKSP	Mahila Kisan Sashathikaran Pariyojana
MSME	Micro Small and Medium Enterprises
NABARD	National Bank for Agriculture and Rural Development
NABFIN	NABARD Financial services
NAF	National Agro Foundation
NTFP	Non-Timber Forest Produce
PMKSY	Pradhan Mantri Krishi Sinchayi Yojana
POPIs	Producer Organisation Promoting Institutions
SHG	Self Help Group
SFAC	Small Farmers Agribusiness Consortium
VPRC	Village Poverty Reduction Committee
TNAU	Tamil Nadu Agricultural University
TNSRLM	Tamil Nadu State Rural Livelihood Mission
DDU-GKY	Deen Dayal Upadhaya Gramin Kousalya Yojana
PACCSB	Primary Agricultural Cooperative Credit Society Bank
MGNRGS	Mahatma Gandhi National Rural Guaranty Scheme

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Summary:

Tamil Nadu Rural Transformation Project (TNRTP) implemented to leverage the strategies and investments made in the projects Pudhu Vaazhvu Project to harness the institutional and knowledge capital for promoting inclusive economic development and growth for a transformative agenda in rural Tamil Nadu. This is envisaged through enterprise business promotion, value chain development, and skilling for youth for employment generation in the proposed 120 blocks from 26 districts of Tamil Nadu.

The District Diagnostic Study is done to study and prioritize the commodities which focused on farm, off farm and non-farm sectors and based on their potentiality in Villupuram District. Further to the secondary data collected, template using criteria like number of producer's involved, comparative advantage etc. was created to finalize the commodity under farm and non-farm sector.

1.0 Objectives of the District Diagnostic Study

The objective of the diagnostic study is:

- (1) To assess the socio-economic challenges and opportunities for the identification of major sector and sub-sector in constraints commodities or enterprise promotion to inclusive growth at the district level.*
- (2) To identify and prioritize current potential commodities specific sector/sub-sector for next level analytics through value chain approach promotion.*

The study broadly analyses the indicators, such as social profile, rural profile, urbanization trends and labour mobility and the economic indicators; a sectorial analysis – agriculture, allied, non-farm including manufacturing and service sectors; the current status of existing

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industries and the growth trends; the potential economic growth centres within the districts and perceived gaps in the existing ecosystem for promoting and nurturing sustainable MSEs; sector-wise and block-wise presence and growth trends of MSE; existing and potential value chains in the sectors; and key private/public sector players currently operating in the district. The study tries to understand the factors contributing to rural economy through employment generation and high value economic activities thus resulting in increase in the household income.

Methodology

Deep evaluation of secondary data collected from Various line departments, SHGs, Farm and Non-farm sector-based Associations, Resource Institutions, NABARD, Lead Bank and in the process the officials belonging to various departments were also consulted. Interactions were also held with the District and block units of TNSRLM. Site visits were made to the resource institutions, FPOs, traders, weaving clusters and villages in the district. Focus Group discussion with the community was held to validate the secondary data.

Blocks for Villupuram District under TNRTP:

Following are the blocks identified for Villupuram & Kallakurichi District in phase I and phase II respectively.

Phase I: Table 1: Blocks of Villupuram District – TNRTP

Name of the block	No. of Panchayats	Total No of Panchayat
Kanai	51	207
Koliyanur	43	
Mugaiyur	63	
Vikravandi	50	

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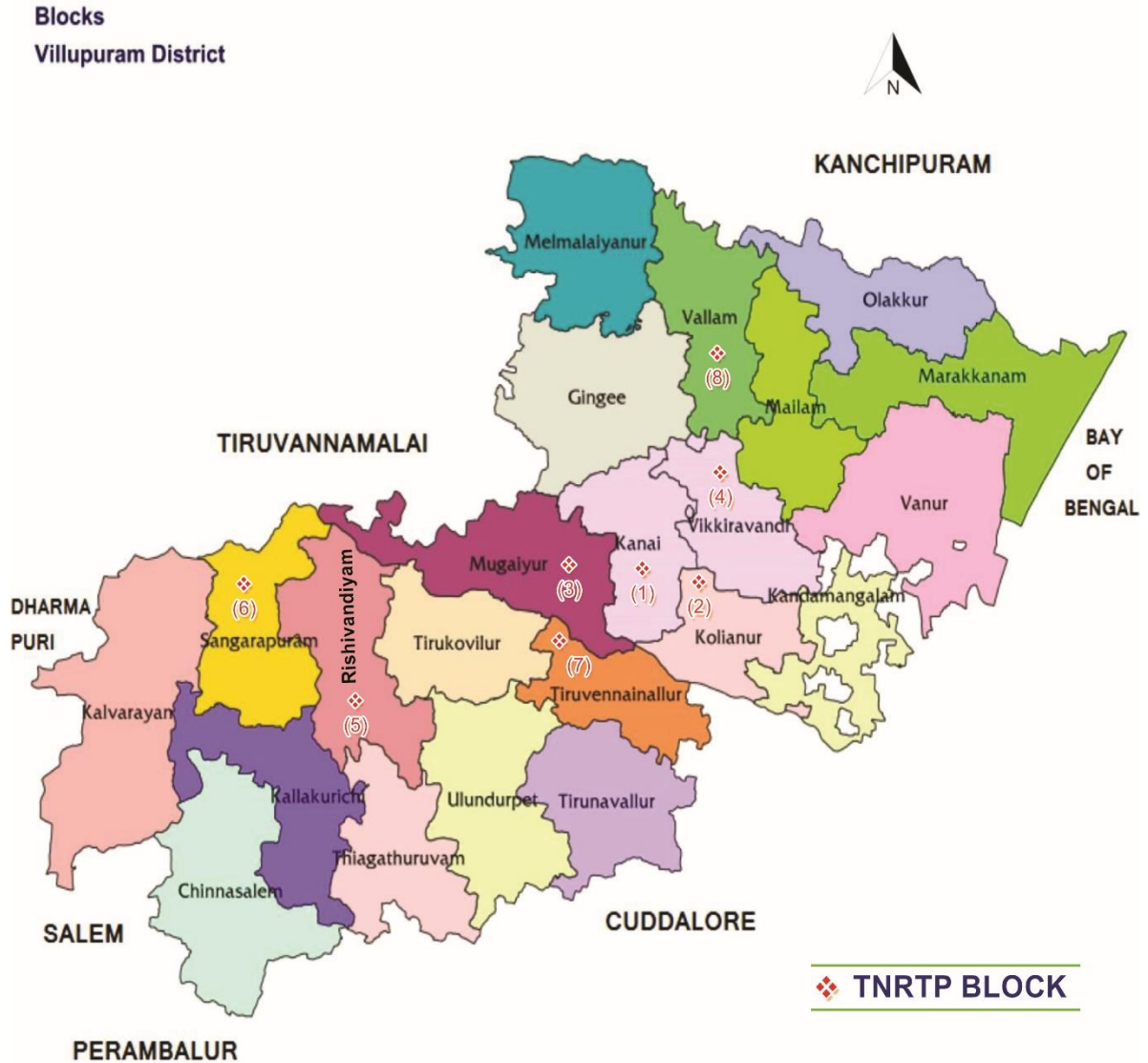
Phase II:

Table 2: Blocks of Villupuram District - TNRTP

Name of the block	No of Panchayat	Total No of Panchayat
Rishivandiyam	53	212
Sankarapuram	44	
T.V.Nallur	49	
Vallam	66	

2.0 Villupuram – An Introduction:

(Figure 1 – Villupuram district map blockwise)



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Villupuram is the 23rd district of Tamil Nadu. It is the second largest district in Tamil Nadu with an area of 7194 sq.km. The district is administratively divided into 4 revenue divisions, 15 administrative taluks, 56 revenue firkas and 1490 revenue villages. There are three municipalities, 15 town panchayats, 22 panchayat unions, and 1099 village panchayats. The district consists of 11 assembly and three parliamentary constituencies.

Villupuram district was formed on 30th September 1993 by bifurcating the erstwhile composite South Arcot district. The residual part of the district was named as Cuddalore district. The district lies between 110° 38' 25" and 120° 20'44" N (Latitude), 78° 15' 00" and 79° 42'55" E (Longitude). The district is located on agro climatic zone of north east zone, the northern part of Tamil Nadu and is close to the State capital, Chennai.

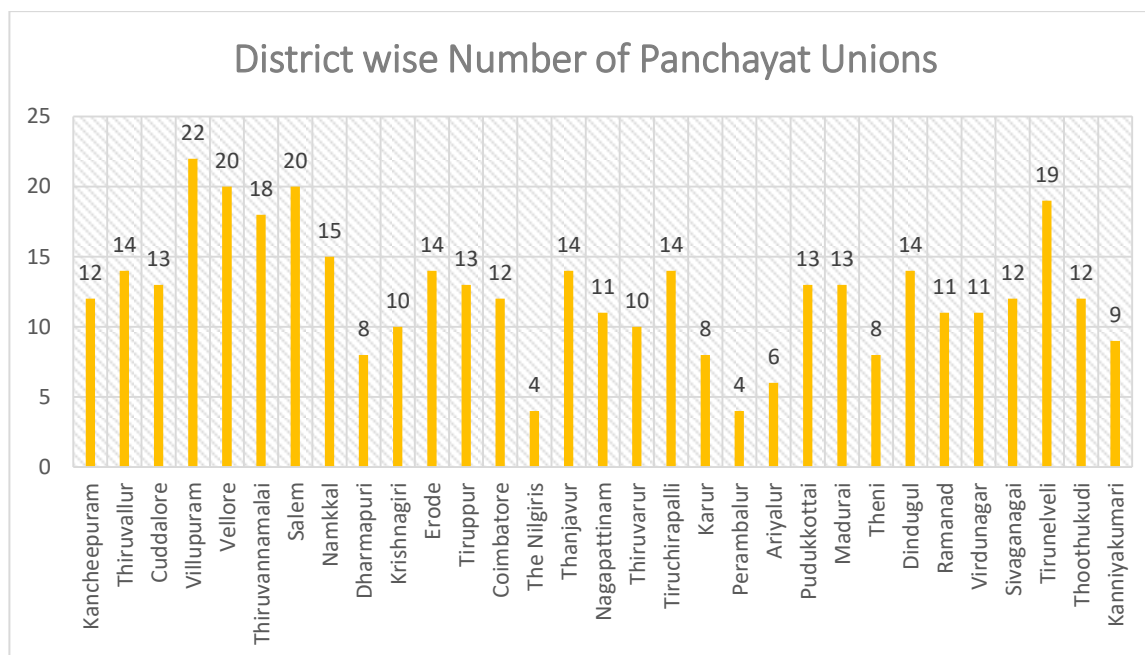
The greater part of the district is covered by the metamorphic rocks belonging to Gneissic formations. The district has also three types of sedimentary rocks belonging to different geological periods. The Kalrayan hills on the north represent a continuous range of hills covered with some thorny forests and vegetation. Barring the Gingee and Kalrayan hills, the entire district is characterised by plains. Major area of the plains is utilized for agricultural purpose.

On the east, the Bay of Bengal coastline extends to about 32 kms in Marakkanam and Vanur blocks (1072 costal area of Tamil Nadu). The northern part of the coast has sandy beach. The extreme south part of this coast is covered by swamps and mangrove forest. The ground slope is gentle towards the coast (32° - 35° angle). The valley fill near Villupuram is thick, which forms the main ground water discharge zone. More of well and bore well irrigation is used for crop cultivation purpose.

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District wise block, number of village panchayats and rural area (in sq.km.) in Tamil Nadu:

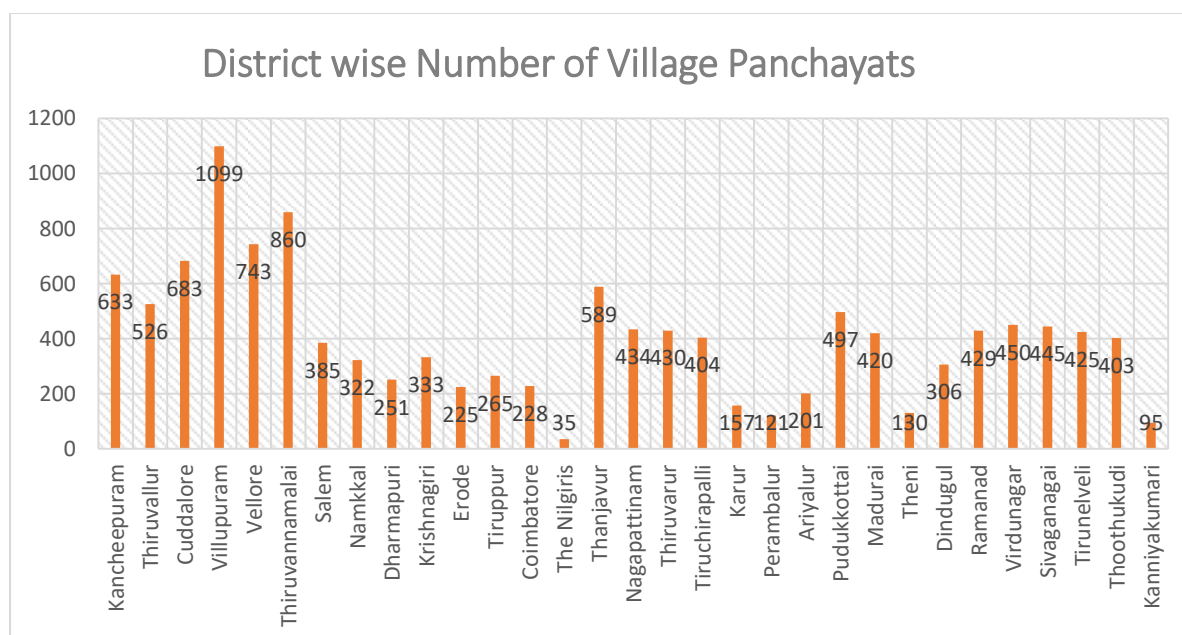
(Figure 2 – District wise Number of Panchayat Unions)



(Source: Data from Rural Development & Panchayat Raj, 2019-19)

When compared to other districts of Tamil Nadu, the number of panchayat unions at Villupuram district is the highest. Villupuram District comprises of 22 blocks.

(Figure 3 – District wise Number of Village Panchayats)

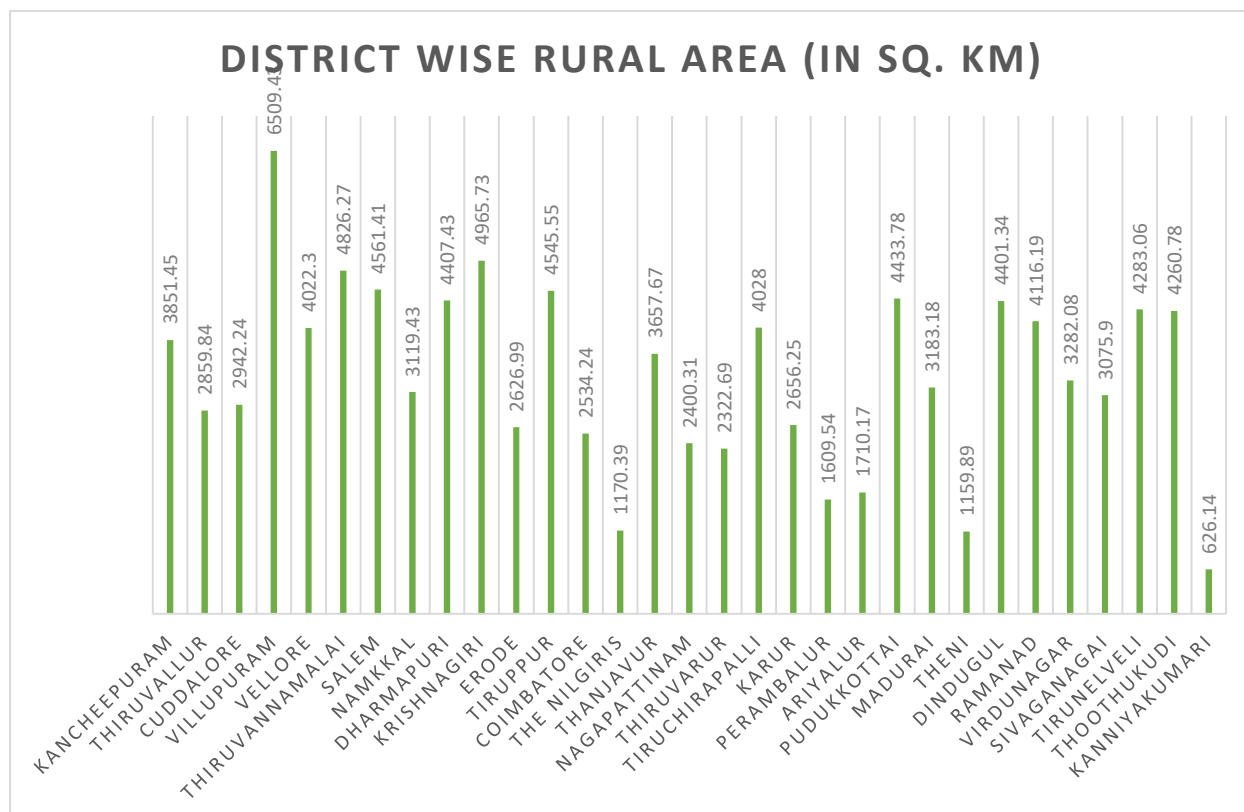


(Source: Data from Rural Development & Panchayat Raj, 2019-19)

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When compared to other districts of Tamil Nadu, the number of village panchayats at Villupuram district is the highest. Villupuram District comprises of 1099 village panchayats.

(Figure 4 – District wise Rural Area)



(Source: Data from Rural Development & Panchayat Raj, 2019-19)

When compared to other districts of Tamil Nadu, the rural area in sq.km at Villupuram district is the highest. Villupuram District has a rural area of about 6509.43 sq.km

3.0 Socio Demographic profile of Villupuram:

3.1 (A) Population:

The population growth is significant in the whole district. According to the 1991 census the district population is 27.56 lakhs, but it has increased to 29.60 lakhs in 2001. Further it increased to 34 lakhs in 2011 census. As far as sex ratio is concerned, during 1991, it ranged about 967

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but it is worthy to note that it is increased to 985 in 2001 and in 990 in 2011. It also finds that 380 people live in per square kilo meters in 1991 and 412 people in 2001.

Table 3 : Decadal growth of Population in Villupuram District

India/ State/ District	Population		% decadal variation of population	Density	
	2001	2011	2011	2001	2011
Villupuram	2960373	3463284	16.8	412	482
Tamil Nadu	62405679	72138958	15.6	480	555
India	10286110328	1210193422	17.6	325	382

(Source: Census data 2001 & 2011)

3.1 (B) Decadal growth of Population:

Total Population of the district was 2960373 in 2001 and 3458873 in 2011. The decadal Population growth (2001-2011) of the district was 16.8 which were higher than decadal growth of the State (15.6 percent) block wise analysis indicated that population had declined in Vanur block while in other blocks, it had increased. The density of population per Sq.km has increased from 412 in 2001 to 481 in 2011. Of the 22 blocks, **Kandamangalam block** with the **highest density** of population because the block is nearby Union Territory of Puducherry (720 per sq.km) occupies the top position and Kalrayan Hills (98 per sq. km) the least in 2011 due to scattered settlements in the hill ranges. The percentage of SC population has increased from **27.39 in 2001 to 29.37** in 2011. Kalrayan hills has the highest proportion of ST population (80%).

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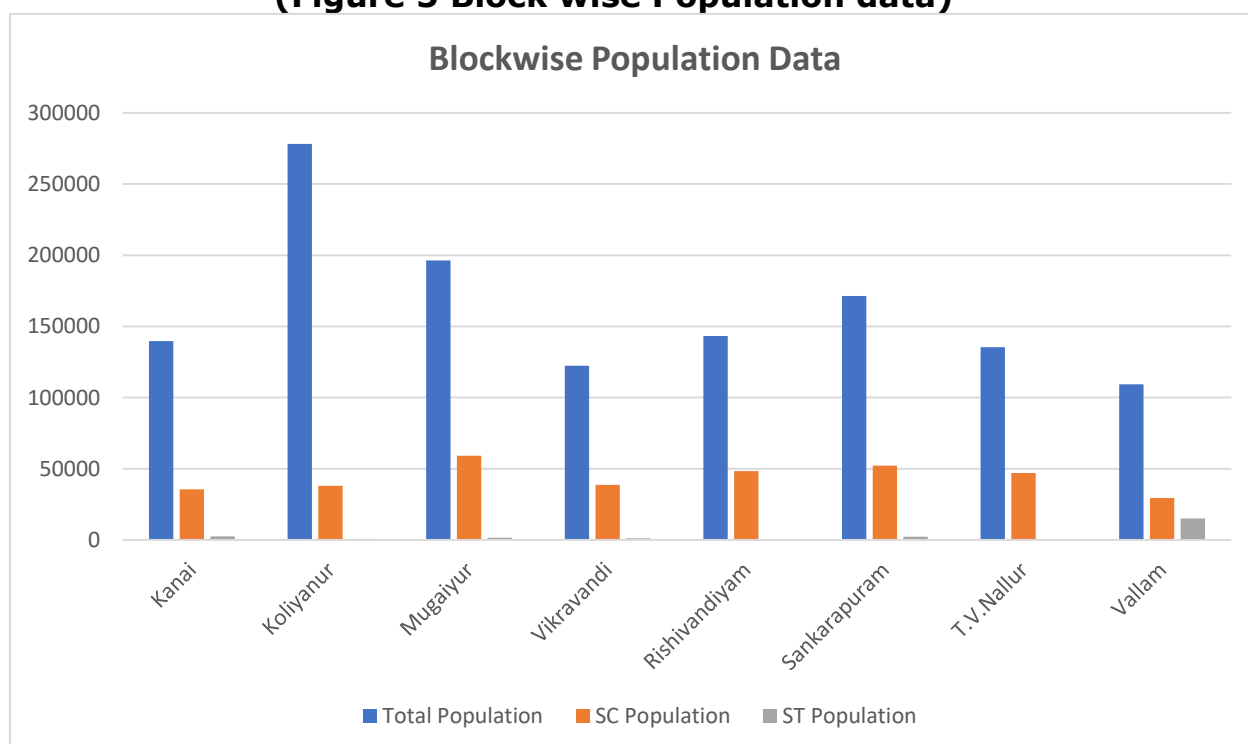
Blockwise population of TNRTP Blocks:

Table 4: Block wise population of TNRTP Blocks

S. No	Name of the Block	Total Population	SC Population	% of SC	ST Population	% of ST
1	Kanai	139738	35458	25.37	2465	1.76
2	Koliyanur	278099	37947	13.65	764	0.27
3	Mugaiyur	196414	59149	30.11	1533	0.78
4	Vikravandi	122462	38809	31.69	1169	0.95
5	Rishivandiyam	143242	48368	33.77	423	0.29
6	Sankarapuram	171374	52213	30.47	2201	1.28
7	T.V.Nallur	135304	47113	34.82	277	0.20
8	Vallam	109270	29588	27.08	15095	13.8

(Source: Census data 2011)

(Figure 5 Block wise Population data)



(Source: Census data 2011)

In the selected blocks of TNRTP at Villupuram District, the total population was observed to be highest at **Koliyanur** block. The total

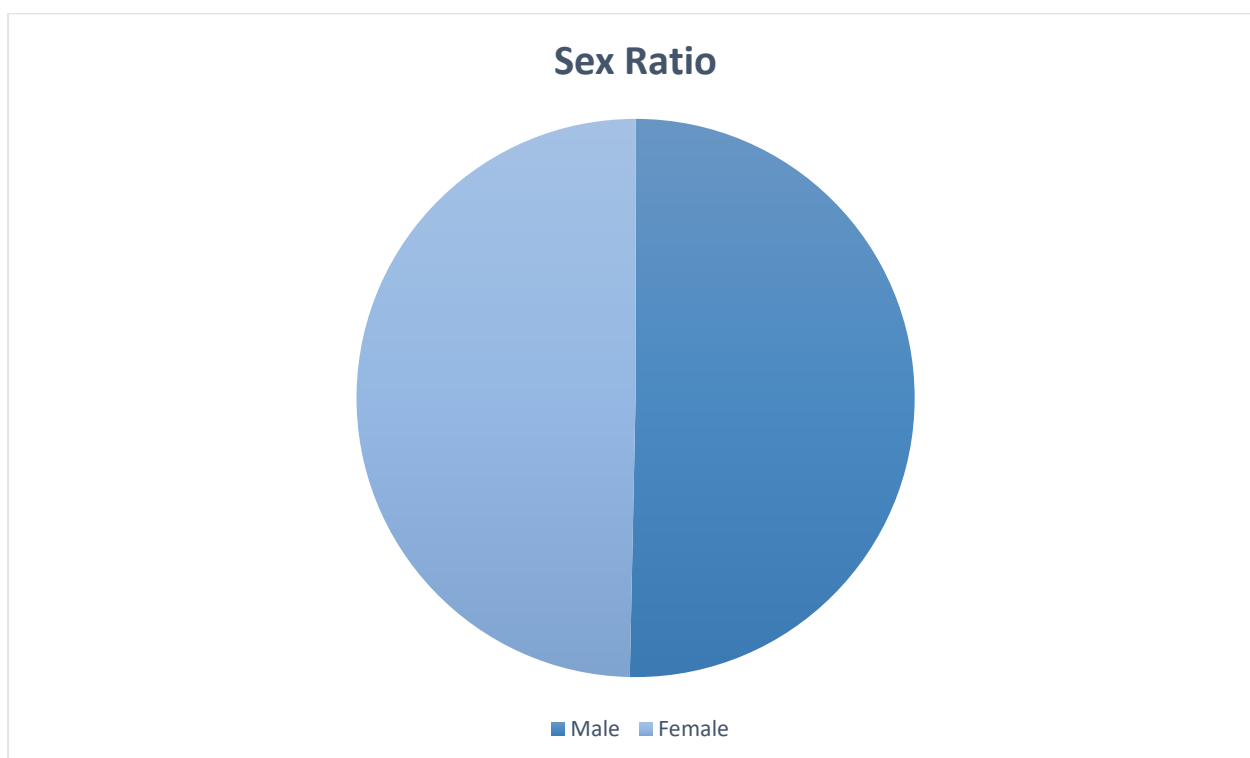
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number of SC population was found be highest at **Mugaiyur** block and total number of ST population was found to be highest at **Vallam** block.

3.2 Sex ratio:

Sex ratio is **990** which is higher than all India average (940) but less than State average (995). The child sex ratio is quite low with 938 though there has been remarkable improvement over a period. Incidents of female infanticides were less in the district and therefore the ratio of men and women were almost equal which is significant when compared to other districts.

(Figure 6 : Sex Ratio of Villupuram District)



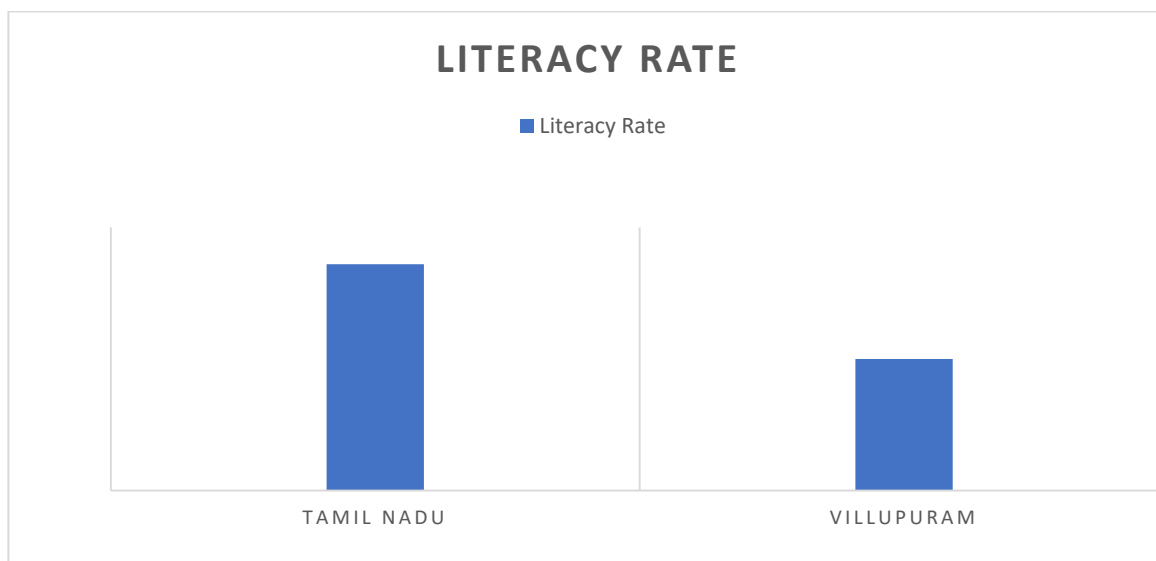
(Source: Census data 2011)

3.3 Literacy:

The overall literacy rate of the district is **71.81%** compared to State average of 80.1%

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(Figure 7 Literacy rate of Villupuram District)



(Source: Census data, 2011)

Literacy rate among the female is low (62.99%) while compared to the male literacy rate of 80.63 percent. Female literacy is absolutely low in Kalrayan hills (44.44%) block. Villupuram district is surrounded by major industries which attracts many labourers sometimes even provokes them to forego school education. Incidents of early marriage and inhibition to adopt to school education to urban area from rural areas are reasons for low literacy rate and low female literacy rate.

3.4 SC / ST Population:

According to Villupuram District Statistical Handbook 2016-17, Villupuram district has recorded the first highest Scheduled Caste population (31.54%) among the districts of Tamil Nadu and has also recorded the 3rd highest Scheduled Tribe population (2.16%) among the districts.

The percentage of SC population has increased from 27.39 in 2001 to 31.54 in 2011 which is higher than the state percentage of 20.01% and 1.10% respectively. The percentage of SC population in the identified blocks of our project are as follows: Mugaiyur –30.11% Koliyanur– 31.22% Vikravandi – 31.69% Kanai–25.37%, Rshivandiyam–33.76%, Sankarapuram–27.95%, T.V.Nallur – 34.82% Vallam– 27.07%.

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3.5 Women Self Help Group details:

The following are the details of the Self-Help Group in Villupuram District, block wise:

Table 5 : Women Self-Help Group of Villupuram District:

Sl. No.	Block Name	Total Members	Total SHGs by TNSRLM	Active Women SHGs
1	Chinnasalem	12396	1001	900
2	Gingee	13232	944	801
3	Kallakurichi	8389	555	403
4	Kalrayan Hills	4363	445	398
5	Kanai	14293	1135	1002
6	Kandamangalam	14644	1191	902
7	Koliyanur	14295	969	803
8	Mailam	7566	526	400
9	Melmalayanur	9275	718	205
10	Markkanam	13268	886	705
11	Mugaiyur	17247	1056	903
12	Olakkur	8442	587	505
13	Rshivandiyam	12636	916	802
14	Sankarapuram	11514	1218	902
15	Thiyagadurgam	8055	685	505
16	Tirukoilur	8347	519	409
17	Tirunavalur	8184	573	305
18	T.V. Nallur	11196	836	703
19	Ulundurpet	12403	948	650
20	Vallam	8063	618	403
21	Vanur	18554	1210	951
22	Vikkravandi	13982	889	705
Total		250344	18425	14262

(Source: TNSRLM Office 2018-19, Villupuram)

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It was observed that **14262** Women SHGs out of the 18425 Women SHG were active in the district.

Apart from Women SHG initiated by TNSRLM, there are 8223 women SHG supported by Non-Government Organisations like Reward Society, Kalvi Kendra, Real, Mahima, BWDA, PDC, Shanthi Nilayam and SMT.

3.6 Occupation Profile:

The workforce population of the district has recorded a decadal increase by 1.4 per cent. The total workforce of the district is 17.03 lakh, of which around 58 percentages are male workers and the rest are female workers. Main workers constitute almost three fourth of the workers (72 per cent) and one-fourth (28%) are marginal workers. Non-workers have recorded a slight decrease of 0.42 percentages. Variations could be observed across the blocks. The total workforce of the district is 17 lakhs (2011). The workforce accounts for 49.24 percentage of the total population. The district has higher proportion of workforce population compared to the State average (45.58%).

Agricultural labourers constitute 48.86% of the total work force. Other workers constitute 27.19 per cent and Cultivators account for 21.70 per cent. Agricultural labourers predominant the workforce. Majority of the workers are in the unorganized sector.

The proportion of male workforce is 58.4 percentages while female workforce is 39.9 per cent. **However, the percentage of female workforce is high in Kalrayan hills (56%) could be due to involvement of women in forest related works.**

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Table 6 : Occupation details of Villupuram District:

Workers:	
Main Workers (Regular)	36%
Marginal Workers (Seasonal)	13%
Non-Workers (No work)	51%
Categories of Workers:	
Cultivators	21.70%
Agriculture Labourers	48.86%
Household Industry	2.25%
Other Workers	27.19%

(Source : Villupuram district statistical handbook 2016 -17)

From the above table it is clear that major workforce are agriculture labourers which clearly notes that there is a great human resource potential for agriculture enterprise.

3.7 Community Based Organisations:

Community Based Organizations (CBOs) such as Village Poverty Reduction Committees (VPRCs) and Panchayat Level Federations (PLFs) and SC/ST were promoted to provide services to poor. These CBOs leverages financial support from banks and provide support to the members for the livelihood activities. There is a significant number of NGOs promoted SHGs federation is functioning in the district and they do support functions and monitor the SHGs financial performance.

The statuses of CBOs in the district are:

- 18425 SHGs
- 1108 VPRCs
- 1108 PLFs
- 19 FPCs
- 165 MKSP producer groups

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Majority of the community-based organizations in Villupuram district focus on poverty reduction and development and a few organizations recently emerged like Farmers Producer Organizations (FPOs), commodity groups are functioning with the focus on enterprise development.

3.7 (A) Farmer Producer Organisations (FPOs):

There are 19 FPOs promoted by Agri Dept, NABARD and Resource Institutions. Most of the FPOs are working on sugarcane, paddy, pulses and few of them have installed value added units.

1) Eriyur Manimutha Farmers Producer Company Ltd., at Eriyur

Eriyur Manimutha Farmers Producer Company Ltd., at Chinnasalem of Villupuram District has been doing well in the district for the last four years with around 1000 farmers and with a share capital of 10 lakhs. The Eriyur Manimutha Farmer Producer Company in partnership with SPIC Ltd., has been conducting free soil test and free training to farmers. Eriyur Manimutha Farmer Producer Company has been instrumental in setting up Mega Agri-Business Consortium and POPI is NAF at the state level along with 14 other FPOs in the state.

2) Nallavur Farmer Producer Company Limited (NAFPCL)

Nallavur Farmer Producer Company Limited was started in Feb 2015 facilitated by M.S.Swaminathan Research Foundation, Kootaripattu, Mailam Block in Villupuram District with support of NABARD. NAFPCL is working in 12 panchayats of 2 blocks in Villupuram district. There are 54 farmer Producer groups consisting of 932 farmers as shareholders of which 784 (84%) are women and 148 men. NAFPCL focuses on water augmentation, promoting pulse crops, providing continue capacity building for small and marginal farmers, introducing improved technology, ensuring fair trade and equity and equality. NAFPCL has

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reached 1000 members as shareholders and established value addition center with grant support of Rs 1000000 from Agri Engineering department. NAFPC has established Agriculture Service center to provide quality inputs to the members of NAFPC and Purchased 3 acres land worth of Rs.30 lakhs

Table 7. Number of Farmer Producer Company at Villupuram District:

Details of Farmers Producer company in Villupuram District (2018-19)						
S. No	Name of FPC	Blocks	POPI	No. of Member-ships	Total Amount share money (Rs)	Name of commodity
1	EriyurManimutha Farmers Producer Company Ltd.,	Chinnasalam	TNSFAC/NAF	1000	100000	Maize,fertilizer shop, seed production,
2	Rajadesinghu Farmer Producer Company Ltd.,	Gingee	TNSFAC/NAF	1000	100000	Black gram and gingelly
3	M/s. Marutham Collective Farming FPC, K.P. Complex, Eriyanur, TindivanamPondy Main Road, Tindivanam, Villupuram – 604 001.	Tindivanam	TNSFAC/NAF	1000	1000	Vegetable
4	Melmalayanur CFFPCL, No. 61/1F, Chetpet Road, Valathi, Villupuram - 604 208.	Melmalayanoor	Private	1000	500000	Black gram and Groundnut
5	Sankarapuram CFFPCL, Elayankanni X Road, Mickelpuram (PO), Moongilturaioattu, Sankarapuram, Villupuram - 605 702.	Sankarapuram	Private	850	450000	Maize and Paddy
6	Sarvodaya Milk Producers Federation	Gingee	Private	350	250000	Milk, Ice cream, Milk Powder
7	Chinnasalem Gramin Milk Producers Federation	Chinnasalem	Private	455	350000	Milk
8	Bharat Multi Products Producer Company Limited	Villupuram	Private	500	500000	Agricultural and Animal husbandry activity
9	Universal Producer Company Limited	Sankarapuram	Private	100	100000	Agricultural and Animal husbandry activity
10	Gingee Farmers Producer Company Limited	Gingee	Private	500	500000	Agriculture and allied activities

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11	Kallakurichi Farmers Clubs Agriculture Producer Company Limited	Kallakurichi	Private	1000	1000000	Agricultural and animal husbandry activity
12	Kurunji Sugarcane Farmers Producer Company Limited	Kallakurichi	Private	500	500000	Growing of crops, market gardening and Horticulture
13	Nallavur Farmer Producer Company Limited	Maiyalam	NABARD	1000	1000000	paddy, onion, groundnut and black gram
14	Marakanam Watermelon Producer Company Limited	Marakanam	NABARD	1000	1000000	Agricultural and animal husbandry activity
15	Olakkur Farmers Producer Company Limited	Thindivanam	NABARD	10000	740000	vegetable
16	Ulundurpet Farmers Producer Company Limited	Ulundurpet	NABARD	510	338000	Black gram, paddy and maize
17	Melmalaiyanur Farmer Milk Producer Company Limited	Melmaaiyanoor	HIH/NABARD	683	413000	Milk
18	Tindivanam Farmer Milk Producer Company Limited	Thindivanam	HIH/NABARD	436	172000	Milk
19	Uranithangal Farmer Milk Producer Company Limited	Gingee	HIH/NABARD	609	117000	Milk

(Source : Data from NABARD and Market Committee Office - Villupuram, 2019)

There are 19 farmer producer company in Villupuram district, NABARD is promoting 7 FPC, small farmers agri business consortium (SFAC) 3 FPC and 9 FPC in private. 70% of FPC share person and share money are successful, they are working in Agriculture, Horticulture and Animal husbandry and other allotted activities.

3.7 (B) MKSP Programme at Villupuram District:

Mahila Kisan Sashathikaran Pariyojana (MKSP) programme was implemented at Villupuram District through TNSRLM with an objective to uplift women engaged in farming activities through capacity building, Farmer Field School (FFS) and Front-Line Demonstration (FLD) in Agriculture, Horticulture & Veterinary activities promoted by 3 NGO Promoting like Kalvi Kendra, Reward Society & Palmera at 122 Panchayat Villages of 8 Blocks in Villupuram District.

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Table 8 : MKSP Programme details at Villupuram District:

S. No	Block Name	No of Producer Group	No of Beneficiaries	Commodity	Marketing Source
1	Vikravandi	53	2885	Paddy, Vegetables, Greens, Pulses, Flowers	Paddy & Black gram – Inter mediators& Nearby Regulated markets, Vegetables - Nearby local markets, "Muttathur Village"- Specific for Amaranthas Production sales through Merchants
2	Gingee	23	1115	Black gram, Paddy	
3	Vanur	23	1650	Paddy, Groundnut, Black gram, Millets, Vegetables and Flowers	
4	Marakkanam	18	1350	Paddy, Black gram, Sugarcane	
5	Koliyanur	31	1900	Paddy, Groundnut, Black gram, Millets, Vegetables and Flowers	
6	Tiruvannainallur	26	1900	Paddy, Flowers, Black gram, Guava	

(Source : Data from TNSRLM Office - Villupuram, 2019)

In Villupuram, MKSP project is successfully running in 6 blocks among which 3 are TNRTP blocks where capacity-based training and enhancing production technologies in relevant agriculture crops, Horticulture crops and Milch animal rearing are given.

4.0 Geographical features:

4.1 Topography:

Barring the Gingee and Kalrayan hills, the entire district is characterised by plains. Major area of the plains are utilized for agricultural purpose. The Kalrayan hills on the north represent a continuous range of hills covered with some thorny forests and vegetation. On the east, the Bay of Bengal coastline extends to about 32 kms in Marakkanam and Vanur blocks. The northern part of the coast has sandy beach. The extreme south part of this coast is covered by swamps and mangrove forest.

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The ground slope is 30° to 32° angle and gentle towards the coast. The valley fill near Villupuram is thick, which forms the main ground water discharge zone. Lineaments are restricted to parts of Kallakurichi and Sankarapuram areas and productive fractures are noticed in select pockets. The crystalline sedimentary contact fault is having sympathetic fractures in hard rocks but mostly they are dry fractures.

4.2 Climate and Rainfall:

The climate in the Villupuram district is mostly humid and hot. The district is characterized by semi-arid tropical climate. The temperature is moderate. The climate during summer season is very hot and the temperature can go up to 40 °C. The winter climate during the season is moderate with temperature ranging between 30 °C and 35 °C. The average temperature varies from 30°C to 41°C. The humidity is high in the order of 80 per cent. The wind speed is high in the months of July and August and it ranges from 7.4 to 12.6 km/hr. The district, on an average receives a rainfall of 4.96 mm (0.4 per cent) during the winter season, 139.56 mm (11.32 per cent) during the summer season, 410.54 mm (33.31 percent) during the south west monsoon season and 677.54 mm (54.96 per cent) during the north east monsoon season. The district receives the maximum rainfall during the north east monsoon season.

The average rainfall of the district is 1060.3 mm. The rainfall is heavier in the coastal area compared to interior areas. About 93.82% of the normal rainfall is received during the Northeast and South west monsoon seasons. Normally the district does not get heavy rainfall with the exception of Marakkanam and Vanur blocks. While in Kandamangalam and Kolianur blocks, the rainfall is moderate, it is scanty in Kallakurichi and Sankarapuram Blocks.

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Annual Rainfall of Villupuram District for last three years:

Table 9 : Rainfall details of Villupuram District in mm

Year	SW Monsoon	NE Monsoon	Winter	Summer	Total
2014-15	420.1	413.9	3.0	155.7	992.7
2015-16	288.6	918.1	0.2	88.7	1295.6
2016-17	234.86	122.96	140.64	47.28	545.74

(Source : Villupuram district statistical handbook 2016 -17)

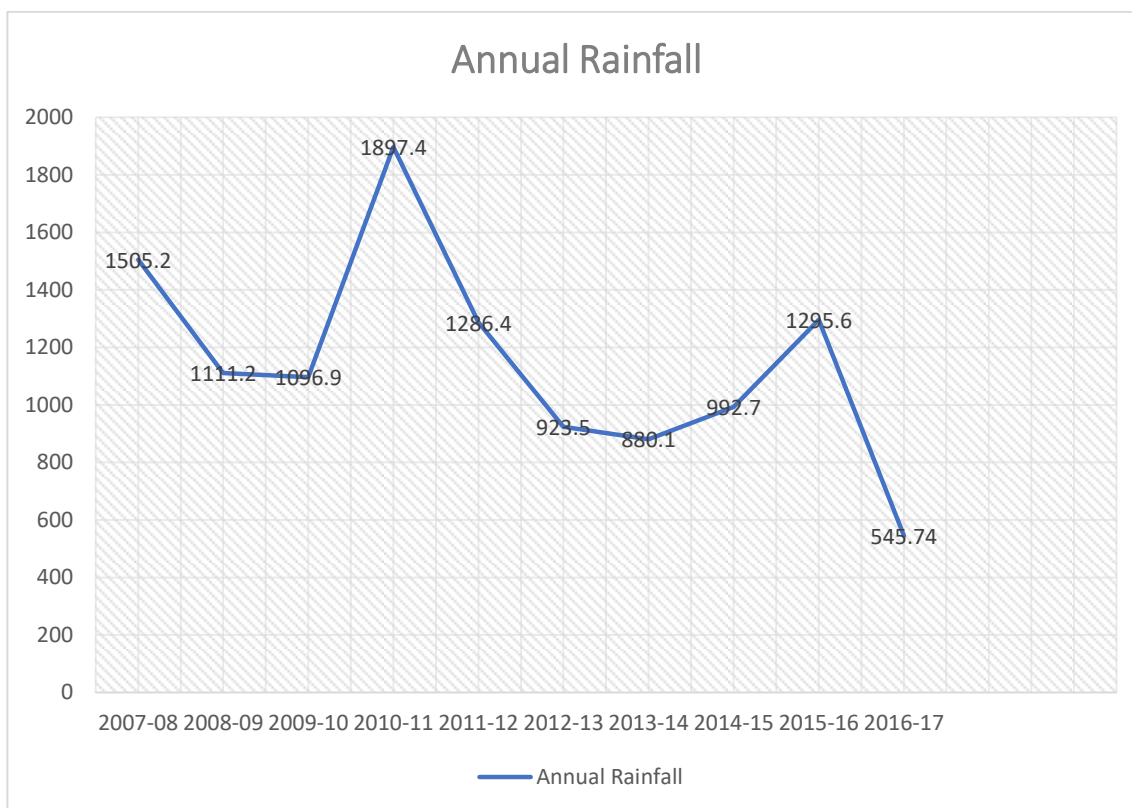
Table 10 : Rainfall trend of Villupuram District (in mm)

Sl. No	Year	South West Monsoon		North East Monsoon		Winter Season		Hot Weather Season		Total		% Deviation in mm (+ or - or =) from Normal
		Actual	Normal	Actual	Normal	Actual	Normal	Actual	Normal	Actual	Normal	
1	2005-06	326.1	433.0	888.2	484.8	5.9	34.5	114.6	77.1	1334.8	1029.4	+29.7
2	2006-07	352.3	433.0	599.3	484.8	4.8	34.5	44.0	77.1	1000.4	1029.4	-2.8
3	2007-08	374.4	433.0	776.9	484.8	121.9	34.5	232.0	77.1	1505.2	1029.4	+46.2
4	2008-09	292.5	433.0	771.4	484.8	3.0	34.5	44.3	77.1	1111.2	1029.4	+7.9
5	2009-10	352.1	433.0	659.2	484.8	11.4	34.5	79.2	77.1	1096.9	1029.4	+6.6
6	2010-11	492.7	406.1	1189.8	832.0	117.00	60	97.9	60.1	1897.4	1378.1	+37.7
7	2011-12	647.7	408.3	624.9	499.1	7.3	28.2	6.5	76.0	1286.4	1011.6	+27.2
8	2012-13	363.9	408.3	520.7	499.1	5.9	28.2	33.0	76.0	923.5	1011.6	-8.7
9	2013-14	403.3	408.3	347.6	499.1	14	28.2	115.2	76	880.1	1011.6	-13
10	2014-15	420.1	408.3	413.9	499.1	3.0	28.2	155.7	76.0	992.7	1011.6	-1.9
11	2015-16	288.6	408.3	918.1	499.1	0.2	28.2	88.7	76.0	1295.6	1011.6	+28
12	2016-17	234.86	408.3	122.96	499.1	140.64	28.2	47.28	76.0	545.74	1011.6	-46.05

(Source: District Statistical Handbook, 2016-17)

VILLUPURAM DISTRICT DIAGNOSTIC REPORT

Figure 8 : Rainfall trend of Villupuram District (10 years)



(Source: District Statistical Handbook, 2016-17)

Figure 8 represents the rainfall trend of Villupuram district. From the graph it is clear that the rainfall pattern in the district will enhance the production of rain fed crops like groundnut, black gram and millets.

In the year 2016 -17, there was a very low rainfall (446 mm); southwest monsoon was higher when compared to northeast monsoon. There is a dip in the rainfall, which is observed from the graph, which may be because of prevailing climatic change. Changing climatic conditions will have its direct impact on rain fed crops, whenever there is high rainfall in the district productivity of rain fed crops like Cumbu, thenai, groundnut, paddy and black gram will increase and whenever there is less rainfall productivity of rain fed crops will substantially decrease.

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4.3 Land Use pattern of the District:

Table 11 : Land use pattern of Villupuram District:

Sl. No.	Classification	Area (in Hectares)	Percentage
1	Forest	71,697	9.92
2	Barren and Uncultivable uses	56,651	7.84
3	Land put to Non-Agricultural uses	1,36,115	18.84
4	Cultivable Waste	9,578	1.32
5	Permanent Pastures and Other Grazing Land	4,170	0.57
6	Land Under Miscellaneous Tree Crops and Groves not included in Net Area Sown	6,216	0.86
7	Current Fallows	1,13,794	15.75
8	Other Fallow Land	15,642	2.16
9	Net Area Sown	3,08,341	42.69
10	Geographical Area According to Village Papers	7,22,203	
11	Total Cropped Area	3,85,230	
12	Area sown more than once	76,889	

(Source: Villupuram district statistical handbook 2016 -17)

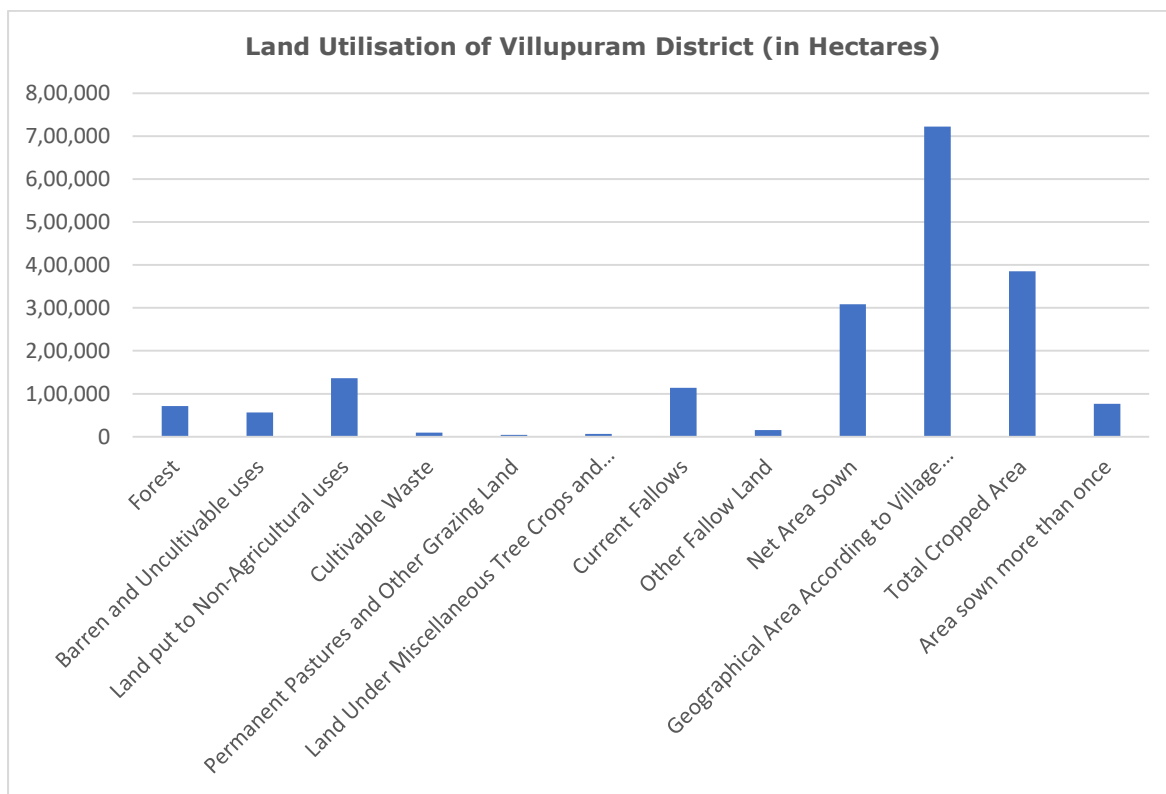
The total geographic area of Villupuram District is 7,22,203 hectares. The total gross cropped area is 3,85,230 and the net area sown 3,08,341 in 2016-17. Further it was observed that forest area was 10% of the total geographical area.

The net area sown is 3,08,341 which constitutes to 42.7% of the total geographic area. The total area sown more than once is 76,889 hectares. Barren and uncultivable land area (like mountains, desert and hills) occupies the 56651 hectares which is the highest among the other districts of Tamil Nadu against the state average of about 488460 hectares.

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The below graph represents the land utilisation of Villupuram District:

(Figure 9 : Land utilisation pattern of Villupuram district)



(Source: District Statistical Handbook – Villupuram district, 2016-17)

On investigating the total geographic area, the net sown area and total cropped area occupies almost 50%.

4.4 Soil:

Table 12 : Soil type in Villupuram District

Sl.No.	Type of Soil	Places in District
1.	Red Loam	Ulundurpet, Vanur
2.	Lateritic Soil	Kalrayan hills
3.	Black Soil	Kallakurichi, Chinnasalem
4.	Sandy Coastal Alluvium	Marakkanam
5.	Red Sandy Soil	Kanai, Thiruvennainallur

(Source : Villupuram district statistical handbook 2016 -17)

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The predominant soil type is Red Loam which is found in Ulundurpet and Vanur block. Black soil was also found in Kallakurichi and Chinnasalem Taluk but predominantly in Rishivandiyam block. The soil in the district is mostly forest soils and red soil. Alluvial soils are found in eastern side bordering coast. Black soils are confined to low ground in select pockets in Vanur taluk.

4.5 Water Resources:

4.5.1 Rivers:

The major rivers flowing through the district are as follows:

- Gadilam River flows through Thirukovilur Taluk. Malattar River joins Gadilam before flowing into the Bay of Bengal.
- Pennar River flows through Thirukoilur and Villupuram Taluks
- Sankaraparani rises in Gingee Taluk and flows through Villupuram Taluk.
- Gomukhi of main tributary of Manimuktha River joins into Vellar River in Cuddalore District.
- Thenpennai River across Thirukoilur and Thirunavalur joins at Cuddalore District.

The rivers are only seasonal, mostly carrying flood waters and none of them are perennial. These rivers cannot be used for irrigation purpose to the expected level because of low precipitation.

4.5.2 Reservoirs:

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

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5.0. Ground water details:

Block wise details of groundwater potential of Villupuram District are as follows:

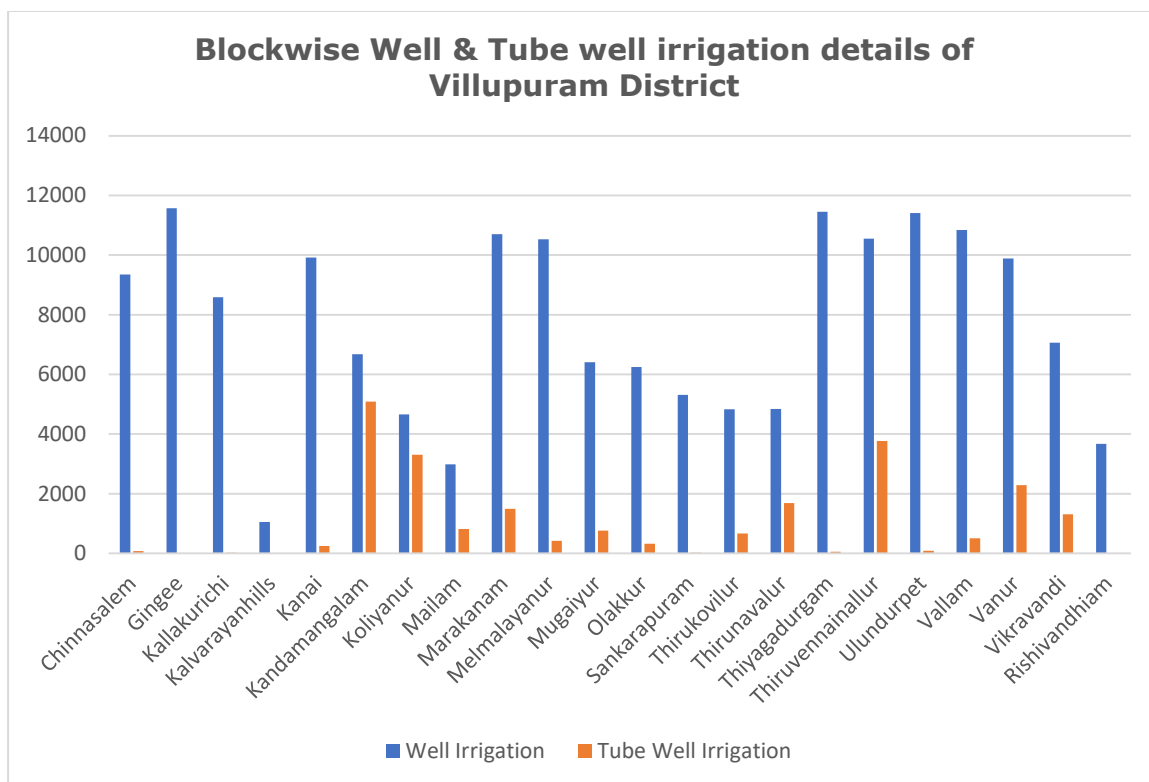
Table 13 : Groundwater details of Villupuram District

Sl. No.	Name of the Block	Wells used for irrigation purpose only	Tube Wells	Wells used for Domestic Purpose only	Reservoirs	Tanks (Nos.)
1.	Chinnasalem	9344	76	1418	-	94
2.	Gingee	11572	-	2488	-	132
3.	Kallakurichi	8587	25	900	1	123
4.	Kalvarayanhills	1049	-	208	-	-
5.	Kanai	9912	244	2201	-	86
6.	Kandamangalam	6674	5085	2039	-	62
7.	Koliyanur	4662	3309	2444	-	55
8.	Mailam	2982	823	652	1	94
9.	Marakanam	10698	1493	2916	-	150
10.	Melmalayanur	10532	424	1240	-	85
11.	Mugaiyur	6407	768	880	-	100
12.	Olakkur	6247	324	2010	-	116
13.	Sankarapuram	5319	24	1421	1	101
14.	Thirukovilur	4827	663	1165	-	60
15.	Thirunavalur	4837	1691	2026	-	58
16.	Thiyagadurgam	11450	55	2889	-	54
17.	Thiruvennainallur	10554	3768	3606	-	135
18.	Ulundurpet	11409	91	2787	-	81
19.	Vallam	10841	505	2042	-	119
20.	Vanur	9886	2292	2125	-	82
21.	Vikravandi	7064	1308	2663	-	170
22.	Rishivandhiam	3669	13	1606	-	129
Total =		168522	22981	41726	3	2085

(Source : Villupuram district statistical handbook 2016 -17)

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Figure 10 Block wise well and tube well irrigation details of Villupuram District



Well irrigation (opens well, tube well and bore well) is the principal source of irrigation in Tamil Nadu, which ranges about 16.4 lakhs hectares (61.3%). Of which Villupuram is the first district with 1,93,807 hectares irrigated by well-irrigation (50%).

Irrigation intensity (Ratio of gross area irrigated to net area irrigated) is around 1.24% in Tamil Nadu of which Villupuram ranks second with an average of 1.50%

Source of ground water is high in blocks neighbouring to rivers. Some of the blocks with high ground water source are Gingee, Marakkanam, Melmalayanur, Thiyagadurgam, Thiruvannainallur, Ulundurpet and Vallam. Some of the blocks with poor groundwater source are Kalrayan hills, Mailam, Mugaiyur and Kallakurichi. Villupuram is water starved district. The erratic and deficit rainfall over the last few years have brought down the water table.

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6.0 District Infrastructure:

- The district is interlaced with a network of roads with a total length of 8916 kilometres linking almost all habitations in the district. Around 48 percentages are mud roads; 41 percentage BT roads.
- The district has a record of providing electricity to all the habitations in the district. 1.21 lakh huts have been given electricity connection under single lamp scheme.
- In the District as a whole, 15939 land line connections, 65 telephone exchanges and 299 PCOs are there.
- Mobile tower is the exact indicator for the use of mobile phones by the people. There are 211 mobile phone towers in the district.
- The finance institution related infrastructure includes a District Central Co-operative Bank with 340 primary level member agricultural cooperative credit societies with a total membership base of 630336 members and 63 commercial banks with a membership base of 103944 representing all 22 blocks in the district, in addition to the co-operative banking institutions and societies.
- TNRTP Blocks of Villupuram district are surrounded by number of commercial and private banks and they also provide support to financial assistants to the farmers in sector and sub sector of enterprises.

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Table 14 : Banks details in TNRTP Blocks of Villupuram districts

Sl. No.	Name of the Block	Bank Names
1	Rshivandiyam	Indian Bank (5), IOB (1), State Bank (1), CUB (1), PGP (2), BOB (1) PACCS (7)
2	Kanai	Indian Bank (2), Canara Bank (1)
3	Koliyanur	Indian Bank (2), SBI (1), CUB (1), PACCS (8)
4	Mugaiyur	SBI (1), Indian Bank (1), Pallavan Bank (1), CUB (1), Lakshmi Villas Bank (1)
5	Vallam	PACCS (12) BOB (2), CUB (1), Indian Bank (4), ICICI (2), SBI (2), PGB (1)
6	Thiruvonnainallur	BOB (2), PACCS (9), CUB (1), Indian Bank (2), ICICI (1), SBI (1), PGB (2)
7	Vikravandi	PACCS (13), Indian Bank (1) ICICI (1), CUB (2)
8	Sankarapuram	KVB (1), BOB (1), ICICI (1) PACCS (8)

7.0 Farm and Allied Sectors:

7.1 Land Holding Pattern of the farmers:

There are five categories of land holdings. They are marginal (below 1 ha), small (1-2 ha), semi-medium (2-4 ha), medium (4-10 ha), large (10ha and above). Majority of the farmers (90 percentages) have less than one hectare occupied in Villupuram District.

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Table 15 : Landholding pattern of farmers in Villupuram district

Size Class of holdings (Hectares)	Numbers					Area				
	SC	ST	Others	Ins	Total	SC	ST	Others	Ins	Total
Below 0.5	64683	3165	300659	223	368730	15145.66	924.7	74975.91	47.23	91093.5
0.5 - 1.0	18656	2453	109458	106	130673	12937.39	1840.50	77175.32	75.6	92028.81
1.0 - 2.0	8398	2629	69353	87	80467	11247.82	3626.43	95693.44	126.61	110694.3
2.0-3.0	1744	825	18803	58	21430	4108.26	1944.32	44903.06	140.11	51095.75
3.0-4.0	444	299	6695	32	7470	1489.605	1019.52	22925.84	112.5	25547.465
4.0-5.0	139	119	2905	16	3179	617.70	518.23	12884.94	73.13	14094
5.0-7.5	114	63	2191	14	2382	668.20	367.45	12989.95	82.3	14107.9
7.5-10.0	34	8	701	18	761	288.20	64.59	6004.80	159.36	6516.95
10.0-20.0	18	19	353	12	402	212.94	218.68	4589.13	167.25	5188
20& above	0	0	33	16	49	0	0	1205.41	1193.95	2399.36
Total	94230	9580	511151	582	615543	46716.78	10524.42	353347.8	2178.04	412766.035

(Villupuram district statistical handbook 2016 -17)

The above statistics indicate the fact that marginal farmers are 499403 in number i.e. holding less than 0.5 hectares and this scenario continues as the number of farmers gradually decrease with the operational holdings from marginal to small (1.0 to 2.0 hectares) and thereafter drastically reduced to very small number of farmers holding large area (10 and 20 hectares). SC and ST farmers are small and

VILLUPURAM DISTRICT DIAGNOSTIC REPORT

marginal land holders in Villupuram District and the area with cultivable land area is also high.

Figure 11 Land holding pattern of SC/ST farmers:

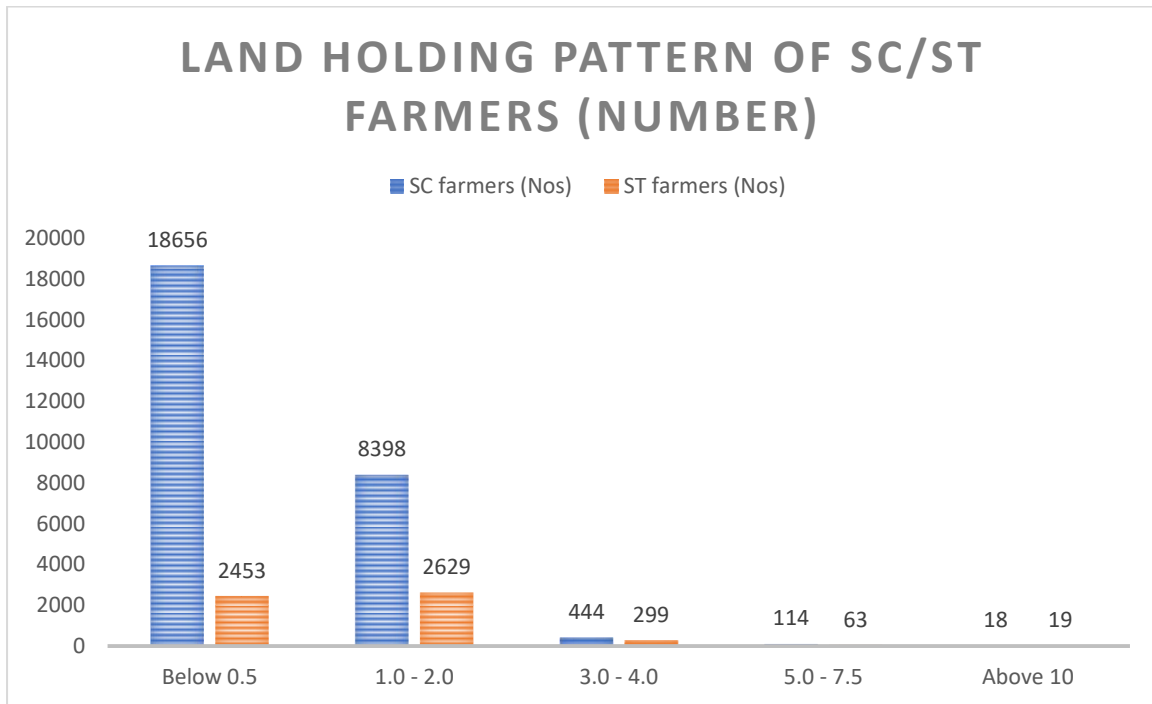
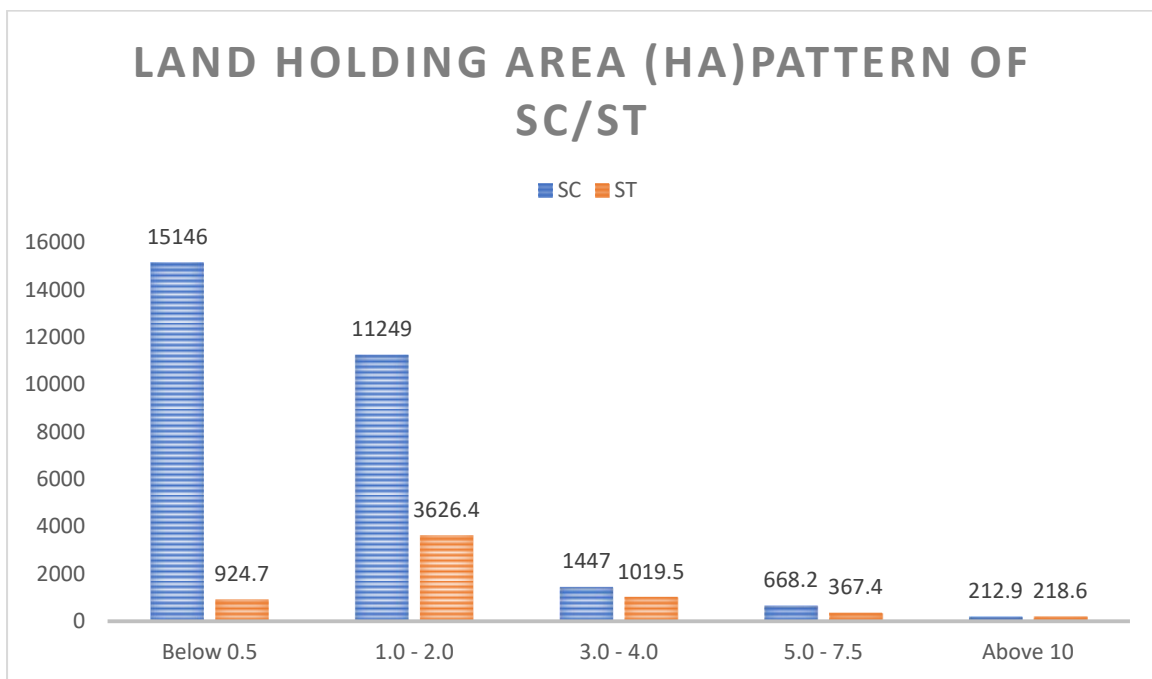


Figure 12 Land holding area pattern of SC/ST farmers:



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The above graph indicates that the SC/ST farmers and cultivation area in the landholding size pattern below 0.5 to 2.0 – 3.0 is higher in Villupuram district compared to other landholding size.

7.2 Irrigation:

As the rivers in the district are not perennial, the major sources of irrigation are tube wells and open dug wells. The net irrigated area in the district is 2.00 lakhs hectares which forms 27.7 per cent of the total area of 104 the district and 49.85 per cent of the net cultivated area of 3.60 lakhs hectares. River irrigation account for less than 5 per cent of the total irrigated area and the district is largely dependent on ground water and tanks. Out of the 2.48 lakh hectare meters of utilizable water recharge around 2.05 lakh hectare meters have already been utilized leaving a balance of 0.43 lakh 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.

7.3 Cropping Pattern and Major Crops at District level:

Important crops grown in the district are paddy, black gram, groundnut, cumbu, maize, kora or 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. **In terms of area, paddy occupies is 40% total cultivable area of the district which is**

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second highest in Tamil Nadu (2016-17). Sugarcane is the most important cash crop in the district. Seven sugar mills are located at Mundiampakkam, Semmedu, Periasevalai, Kachirapalayam, Thirukovilur, Moongilthuraipattu and Kalayanallur.

7.3.1 (a) Cropping Pattern:

Table 16 : Cropping pattern of both irrigation and rainfed crops:

S No	Season	Cropping Pattern
1	Kuruvai (June to September)	Rice - Pulses
2		Rice - Millet
3		Rice - Cotton
4		Gingelly - Pulses
5		Groundnut - Pulses
6		Cumbu – Pulses - Gingelly
7		Turmeric – Small onion - Pulses
8	Samba (September to December)	Rice – Rice - Pulses
9		Rice – Millet
10		Maize - Pulses
11		Sugarcane + Black gram + Groundnut
12		Cotton - Pulses
13		Groundnut - Pulses

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Crop wise Seasonal Calendar for Villupuram District

Crop production Sowing / Harvest Seasonal Calendar (2018-19)

S.No	Name of the commodity	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	Paddy	Sowing			Harvest		Sowing		Harvest	Sowing			Harvest
2	Maize								Sowing				Harvest
3	Thinai							Sowing					Harvest
4	Pearlmillet							Sowing					Harvest
5	Black gram		Harvest	Sowing		Harvest						Sowing	
6	Groundnut	Sowing			Harvest				Sowing				Harvest
7	Sesamum	Sowing			Harvest				Sowing				Harvest
9	Sugarcane				Harvest		Sowing						
10	Watermelon	Sowing			Harvest								Sowing
11	Small Onion	Sowing			Harvest				Sowing				Harvest
12	Karunai		Harvest			Sowing							
13	Indigo Dye				Harvest						Sowing		
14	Coleus		Harvest			Sowing							

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The sequence of cropping season from Kuruvai season (June to September), Samba (September to December). The main cropping pattern in the district is as follows:

7.3.2 Area, Production, Yield of crops:

Table 17 : Crop wise production, Area and Yield data:

S. No	Name of the Crop	Total Area Covered (in Hectares)	Production (tonnes)	Yield (Kg/hectare)	% of Area (ha)
1	Paddy	170443	796608	4674	40
2	Cumbu	15834	40490	2557	
3	Maize	32736	196692	6008	8.6
4	Thenai	468	995	1138	
5	Varaku	1088	1412	1998	
6	Black gram	61681	62493	1013	14
7	Turmeric	2252	5040	2238	
8	Sugarcane	88786	10598908	119000	21
9	Guava	409	835	2042	
10	Watermelon	1399	52462	15000	
11	Cashew	5103	2409	472	
12	Tapioca	12705	328328	25842	15.21
13	Yam	217	27125	25	
14	Small Onion	106	1084	10227	
15	Other Vegetables	600	12000	12500	
16	Groundnut	45487	148526	3265	11
17	Gingelly	8580	6285	732	15.4
18	Indigo dye	14	84	2000	
19	Coleus	819	81900	62500	

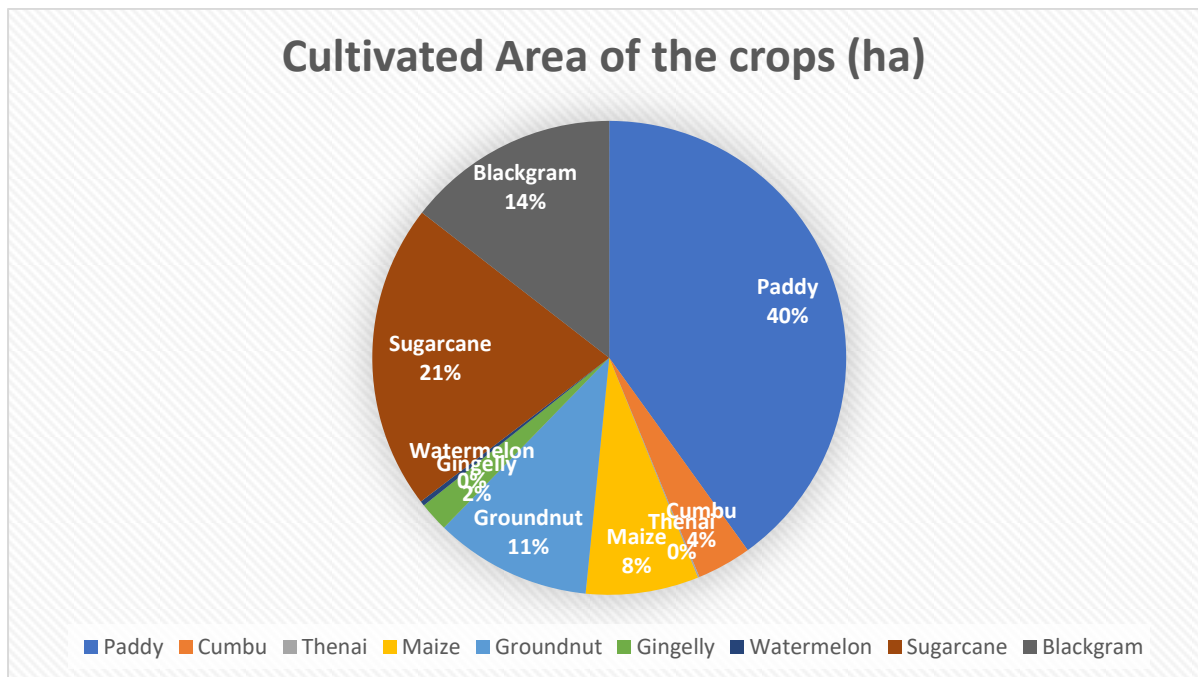
(Source: Season and Crop Report Tamil Nadu 2013-14)

Based on the Season and Crop Report of 2013-14, the major crops in the district considering the area of cultivation, production and yield are

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Groundnut, Blackgram, Cumbu, Thenai and Gingelly (excluding Paddy and Sugarcane). Paddy and sugarcane are the major crop in Villupuram District, but both these crops require more water. Groundnut, blackgram, cumbu, thenai and vegetables stand as prioritised crop.

Figure 13 : Cultivated area of crops in Villupuram District 2013-14



From the above graph it is inferred that, in terms cultivated area paddy occupies 40% of the total cultivated area in the district, sugarcane occupies 21%, black gram occupies 14% and groundnut occupies 11%.

Major crop Area (ha) to State:

Table 18 : Major crops cultivation (ha) and ranking of Villupuram district:

Crop	State	Villupuram	Percentage to State	Ranking
Groundnut	336621	45487	13.51	2
Cumbu	54412	15834	29.10	1
Black Gram	36512	61681	16.89	1
Gingelly	55691	8580	15.40	1
Maize	380429	32736	8.60	4

(Source : Season and Crop Report Tamil Nadu 2013-14)

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The district contributes significantly to the State's area of production in Cumbu, Black gram, gingelly. Groundnut and maize are also seen to be cultivated in priority at major areas of the district which comprises of 13.51% and 8.60% of the state's total production respectively.

7.3.3 Production of major crops in comparison to State (MT):

Table 19 : Major crops to State Production (MT) (13-14)

Crop	State	Villupuram	Percentage
Groundnut	915884	148526	16.21
Cumbu	117436	40490	34.47
Black Gram	310658	62493	20.11
Gingelly	33708	6285	18.64
Maize	2245216	196692	8.76

(Source: Season and Crop Report Tamil Nadu 2013-14)

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 District occupies second place in the State. Other crops like Cumbu, Black gram and gingelly occupy first place in the state, which is a remarkable contribution by the district. Maize occupies fourth place in the State.

7.3.4 Crop Productivity or yield of major crop:

Table 20 : Yield of Major Crops in Villupuram District

Crop	State	Villupuram
Groundnut	2721	3262
Cumbu	2158	2557
Black Gram	851	1013
Gingelly	596	732
Maize	5902	6008

(Source: Season and Crop Report Tamil Nadu 2013-14)

The district significantly contributes to the state's yield on Groundnut, Cumbu, Blackgram, Gingelly and Maize. In terms of yield,

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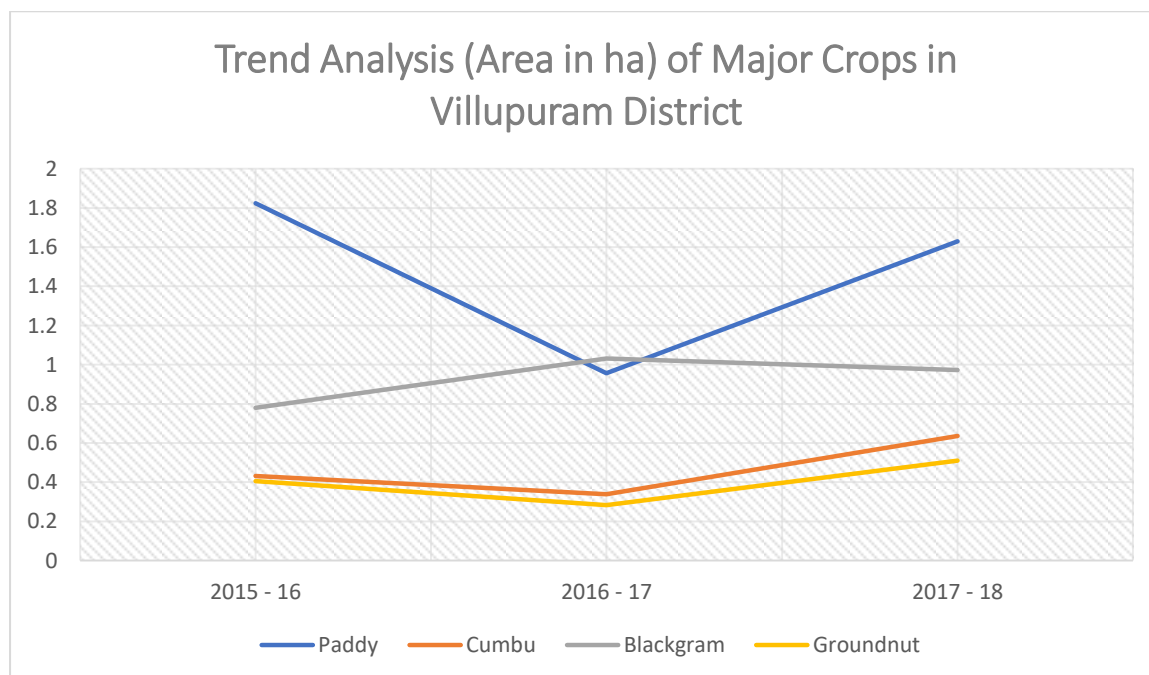
Groundnut occupies second place in the State. Other crops like Cumbu, Black gram and gingelly occupy first place in the state, which is a remarkable contribution by the district. Maize occupies fourth place in the State's total yield.

Table 21 : Trend of last three-year major crop cultivation, production and yield

Sl. No.	Crop	2015-16			2016-17			2017-18		
		Area (L.Ha.)	Prodn. (L.MT)	Yield (Kg/Ha)	Area (L.Ha.)	Prodn. (L.MT)	Yield (Kg/Ha)	Area (L.Ha.)	Prodn. (L.MT)	Yield (Kg/Ha)
1	Paddy	1.823	7.733	4242	0.956	3.542	3707	1.63	7.443	4418
2	Cumbu	0.431	2.217	2408	0.339	1.874	1752	0.635	2.870	2527
3	Blackgram	0.779	0.672	888	1.032	0.552	509	0.973	0.824	119
4	Groundnut	0.406	1.058	2966	0.282	0.534	1715	0.51	1.338	2425

(Source: Data from Office of Joint Director of Agriculture, Villupuram)

(Figure 14 : Trend of last three-year major crop cultivation, production and yield)



In Villupuram district, area of cultivation of paddy occupies more area compared to other crops. Other crops like Groundnut, Black gram and Cumbu exhibit a crop trend as above.

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Table 22 : Major crops seed production (ha) in Villupuram district:

S.No	Block Name	Cumbu	Ragi	Blackgram	Groundnut	Sesame	Thenai	Paddy	Grand Total
1	Chinnaselam	0	0	29.76	14.78	31.78	1.01	181.91	305.24
2	Gingee	0	0	18.02	6.07	5.67	0	19.78	49.54
3	Kallakurichi	0	0	25.3	5.06	9.92	1.01	391.15	432.44
4	Kanai	1.01	0	43.24	9.11	2.63	0	85.67	141.66
5	Kandamangalam	0	0	41.9	18.14	3.04	0	51.32	114.40
6	Koliyanur	0	0.32	62.15	15.34	0.4	0	85.43	163.64
7	Mailam	0	0	69.84	13.82	7.09	0	43.28	134.03
8	Marakanam	0	0	42.23	24.88	3.04	0	34.35	104.50
9	Melmalaiyanur	0	0	17.61	23.74	1.01	0	10.12	52.48
10	Mugaiyur	1.62	0	29.15	5.26	29.15	0	11.34	76.52
11	Olakur	0	0	43.93	26.52	4.05	0	35.75	110.25
12	Rshivandiyam	5.87	0	39.47	14.17	10.12	0	3.85	73.48
13	Sankarapuram	0	0.81	30.49	14.37	6.68	1.01	130.42	183.78
14	Thirukovilur	1.01	1.21	31.46	6.48	7.89	0	12.27	60.32
15	Thirunavalur	0	0	62.96	7.29	10.93	1.01	61.44	143.63
16	Thiruvennainallur	2.02	1.01	52.63	7.49	1.82	0	60.73	125.70
17	Thiyagadurugam	0	0	34.66	9.28	56.88	0	34.73	135.55
18	Ulundurpet	0	0	69.38	12.86	11.13	2.02	23.68	119.07
19	ValliMalai	0	0	0	0	0	0	7.04	7.04
20	Vallum	0	0	43.72	20.35	4.05	0	25.41	93.53
21	Vanur	0	0	43.12	24.92	4.05	0	14.58	86.67
22	Vikravandi	0	0	44.82	5.06	2.02	0	6.26	58.16
	Total	11.53	3.35	875.84	284.99	213.35	6.06	1330.51	2771.6

(Source: Office of Asst. Director of Seed Certification – Villupuram district, 2019)

From the above data it can be inferred that Paddy cultivation is more in seed cultivation in the blocks like Kallakuruchi, Koliyanur, Kanai, Tiruvennainallur and Thirunavalur which are nearer to river water, bore well and alluvial soil. Cumbu, blackgram, groundnut and sesame are lesser when compared to paddy in term of seed production.

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 districts. Therefore, there is a good opportunity for setting up a seed production unit in the future.

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7.3.5 Horticulture Crops:

Table 23 : Horticulture crop in area (ha) to State:

Horticulture Crop	State	Villupuram	Rank
Turmeric	31968	2252	4
Guava	7730	409	4
Watermelon	4373	1391	1
Cashew	92138	5103	4
Tapioca	83526	12705	4
Yam	419	217	1
Kovakai	451	34	3
Total vegetable production	194439	13839	4
Coleus	4419	819	3

(Source: Season and Crop Report – Tamil Nadu, 2013 – 14)

Apart from agriculture crops, Villupuram District also contributes to the State's share on horticulture crops significantly. Villupuram district occupies fourth place in the State 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 State.

7.3.6 Other Crops cultivation area (ha):

Table 24 : Non-food crop of Villupuram District:

Crop	State	Villupuram	Rank
Non-food crop (Casuarina + Eucalyptus)	42557+23404	20179+2384	1
Indigo dye	2508	14	4
Palm oil	2416	477	1
Mulberry	3441	17	3

(Source: Season and Crop Report – Tamil Nadu, 2013 – 14)

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Villupuram district occupies first place in the State in cultivation area of non-food crops like Casuarina, Eucalyptus. Medicinal and dye crop like Indigo occupies fourth place in the State.

7.4 Block wise cropping area distribution:

Table 25 : Block wise major and minor crops in Villupuram District

Block	Major Crop	Minor Crop
Vikravandi	Paddy, Groundnut, Vegetables, Sugarcane, Tuberos	Thenai, Millet, Black gram, Cotton
Thiruvannainallur	Paddy, Groundnut, Black gram, Millet, Sugarcane	Vegetables and flowers
Mugaiyur	Paddy, Sugarcane, Groundnut, Cumbu and watermelon	Sunflower, Beetle leaves, Coleus, Vegetables, Mulberry
Kanai	Sugarcane, Paddy, Cumbu, Groundnut, Black gram	Sunflower, Castor, Thenai, Red gram
Kolliyanur	Paddy, Sugarcane, Banana, Vegetables, Tapioca and Guava	Cotton, Flowers
Sankarapuram	Paddy, Sugarcane, Onion, Maize, gingelly, watermelon, Groundnut and Yam	Cotton, Castor, Thenai, Red gram, Turmeric
Rshivandiyam	Sugarcane, Paddy, Cumbu, Maize, Black gram and groundnut	Vegetables, Turmeric, Yam and flowers
Vallam	Paddy, Groundnut and black gram	Cumbu, Karamani, Vegetables and fruits

(Source: Data from Block Level Statistics Inspector, 2018)

Vikravandi:

Paddy (5600 ha), Thenai (600 ha), Groundnut (3500 ha), Sugarcane (6875 Ha), Guava (1750 ha), Vegetables (1050 ha), Flowers (350 ha), Oil farm (154 ha). Business opportunities are identified with millet, groundnut, guava and vegetables.

Thiruvannainallur:

Paddy (4250 ha), Groundnut (3850ha), Blackgram (1780 ha) Millets (850 ha). Business opportunities are identified with groundnut and black gram.

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Mugaiyur:

Paddy (10260 Ha), Black gram (7768 Ha), Sugarcane (4841 Ha), Cumbu (2355 Ha), Gingelly (1335 Ha), Maize (2666 Ha). Business opportunities are identified with black gram, millet, gingelly and maize

Kanai:

Paddy (4969 ha), Sugarcane (4115 ha), Groundnut (1626 ha), Cumbu (1261 ha), Gingelly (517 ha) and Black gram (662 ha). Business opportunities are identified with cumbu, groundnut, gingelly and black gram.

Koliyanur:

Paddy (8660 ha), Sugarcane (1958 ha), Vegetable (1648 ha), Guava (38 ha), Tapioca (156 ha). Business opportunities are identified with banana and tapioca.

Sankarapuram:

Paddy (4570 ha), Sugarcane (5238 ha), Groundnut (1500 ha), Tapioca (1050 ha), Yam (500 ha). Business opportunities are identified with groundnut, tapioca and yam.

Rshivandiyam:

Paddy (4564 ha), Sugarcane (2742 ha), Cumbu (4500 Ha), Maize (1000 ha), Black gram (1975 ha), Groundnut (625 ha). Business opportunities are identified with cumbu, maize and black gram.

Vallam:

Paddy (4012 ha), Black gram (2401 ha), Ground nut (2205 ha) and Indigo dye (140 ha) Business opportunities are identified with black gram, groundnut and indigo dye.

7.5 Prioritisation of Crops:

Paddy and Sugarcane are the major crops in Villupuram District in area of cultivation. Both these crops intake high water and hence both these crops are excluded from further interventions. **Therefore oilseed**

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(groundnut and gingelly), maize, Millets (Cumbu and Thenai), Blackgram, tapioca, Vegetables (Yam, Kovakai and onion), coleus and indigo dye.

7.6 Crop wise discussion:

Table 26 : Crop wise cultivation in hectares and ranking at State level:

S. No	Name of the Crop	Area in Hectares	Rank
1	Total food grain	4090.56	1
2	Total cereals	225353	1
3	Paddy	170447	2
4	Cumbu	15834	1
5	Thenai	468	1
6	Varaku	1088	2
7	Maize	32736	4
8	Total pulses	68572	2
9	Black gram	61681	1
10	Total edible oil seed	56389	3
11	Groundnut	45487	2
12	Gingelly	8580	1
13	Palm oil	477	1
14	Sugarcane	88786	1
15	Turmeric	2252	4
16	Guava	409	4
17	Watermelon	1391	1
18	Tapioca	12705	4
19	Yam	217	1
20	Small onion	1060	4
21	Kovakkai	34	4
22	Total vegetable production	13839	4
23	Indigo dye	140	4

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24	Coleus	819	3
25	Casuarina	20179	1
26	Eucalyptus	2384	1

(Source: Season and Crop Report – Tamil Nadu, 2013 – 14)

Table 26 clearly describes the potential for agriculture and horticulture crops at Villupuram District. The table furthermore represents the cultivation area of major crops in hectares and their respective rankings at State level.

8.0 Marketing and Storage Infrastructure:

Marketing of agriculture is done through various regulated markets, cooperative marketing societies, Uzhavar Sandhai (Fruits and Vegetables), Wholesale markets and Local Shandies. Apart from these weekly markets and daily markets also exists in the district. The details of markets are as described in table 27. There are 19 Regulated Markets functioning under the control of Villupuram Market Committee in Villupuram district, of which 13 markets are functioning in its own land and buildings. The first regulated market (RM) was opened during 1939 at Tindivanam and the last RM was opened during 1986 at Moongilthuraipattu. In Villupuram market committee 18 crops have been notified.

The annual transaction of agricultural produce ranges from 3.4 Lakh Mts to 4.61 Lakh Mts. The annual receipt of market fees ranges from Rs 2.64 crores to Rs 3.65 crores. The total value of the products transacted ranges from Rs. 226 crores to Rs. 324 crore per annum. Of the total production of paddy, 55 per cent is sold out through the RMs. 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. At times Cotton from Perambalur is sold in Villupuram Regulated market.

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Table 27 : Marketing infrastructure at Villupuram District

S. No	Type	Total Nos
1	Regulated markets	19
2	Uzhavar Sandhai	6
3	Cold storage godown	4
4	Wholesale market traders	1200
5	Cooperative marketing societies	105
6	Local shandies	29

(Source: Agri-Business report – Villupuram District, 2019)

In the Villupuram district, 19 regulatory market for buying and selling cereal and pulses crops, 6 uzhavar santhai for vegetable and fruits marketing to support small and medium farmers, 4 cold storage godown for perishable vegetables and fruits and all are promoting ny NABARD and Agricultural marketing sources.

8.1 Agriculture Marketing and 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 District has 19 regulated markets through which the farmers sell their agri products directly to the government. The number of regulated markets and quantity and value of commodities transacted in those markets are given in Table 28.

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Quantity and Value of Commodities Transacted in Regulated Markets of Villupuram District during 2016-17:

Table 28 : Value of commodities transacted at Villupuram District

No. of Regulated Markets	No. of Sub Regulated Markets	Name of the Commodity	Quantity arrivals (in M.T.)	Receipts (Rs.in Lakhs)
18	1	Paddy	301517	432.36
		Cumbu	19686	31.02
		Ragi	1644	3.17
		Groundnut	10720	67.33
		Gingelly	9036	47.37
		Blackgram	19472	97.39
		Greengram	804	2.57
		Cotton	5296	26.28
		Varagu	482	0.51
		Sunflower	572	1.92
		Maize	36076	53.32
		Thinai	1060	1.57
		Panipayir	4668	33.77
		Cowpea	106	0.15
		Turmeric	862	3.66
		Other crops	1753	2.88
		Total	413754	805.27

(Source: Handbook of Statistics – Villupuram District, 2013-14)

The average annual rice production in the district was 7.96 lakh tonnes. However, the transaction of paddy through regulated markets in the district was only 3.01 lakh tonnes. 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.

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9.0 Agribusiness Opportunities:

1) Rice:

Traditional varieties of Mapillai and Seraga samba has witnessed a huge potential for seed production purpose.

2) Millets (Cumbu and Thenai):

Foundation and certified seeds are available with the centre for excellence of millets in Villupuram Research Unit. There is a huge potential for seed production (labelled seeds) by entrepreneurs. There is a potential of earning of up to Rs. 15000/- per acre of millet seed production. The varieties are long duration (Irrigated) and short duration (Rain fed). There is a need to improve the infrastructure facilities such as thrashing floor and also processing facilities like grading machines. Processed Millet food such as aval, ready to cook, pop up, Flakes have huge potential in Market.

3) Pulses (Black gram and Red gram):

The prevailing soil type and climatic condition of Villupuram District is very apt for cultivation of pulses like black gram and red gram. Villupuram is the highest cultivator of Black gram, especially the variety Vamban1-5. Access to market committee and demand for pulses has influenced the cultivation.

4) Oil seed (Groundnut and Gingelly):

Ready availability of groundnut especially the varieties VRI 1,2/TMV 7 have high potential for value addition like burfi making and export to Bangalore and abroad. But the seed cost is very high in Groundnut therefore in need of low-cost input kiosks. At present Groundnut is also marketed through regulated markets, 10% goes to other districts, 90% is bought by traders. (10% sold as seed and 80% extracted for oil) Increasing customer base for purchasing readily made organic groundnut oil has influenced the cultivation of groundnut across the district through first quality seed from competent research institution.

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5) Vegetables:

Sankarapuram is an onion cluster which needs cold storage facility and logistics support to boost up marketing, nearby town and their demand for vegetables and increased number of shandies are reasons for cultivation of vegetables.

6) Flowers (Jasmine, Crosandra, Tuberos, Marygold):

At present flowers are transported from Vikravandi, Thiruvannainallur and Vallam to Villupuram and Tindivanam market and also to Chennai. Increasing trend of cultivating flowers due to increased market demand.

7) Fruits (Watermelon, Guava, Sapotta, Banana):

Watermelon, Guava, Sapotta and Banana are the main fruits cultivated in Villupuram district. Villupuram has the highest production area of Watermelon in the State when compared to other districts.

8) Medicinal Crop:

Coleus, Indigo, Eucalyptus are the important medicinal crops grown. Coleus is seemed to have been cultivated at 819 ha, which is the third highest in the State after Salem (1583 ha) and Thiruvannamalai (1220 ha).

10.0 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

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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.

11.0 Resource Institutions:

Table 29 : Resource Institute

S. No	Name of the Resource Institute	Location
1	Regional Oil seed research station by TNAU	Tindivanam
2	KVK (Krishi Vigyan Kendra) by TNAU	Tindivanam
3	KVK (Krishi Vigyan Kendra) by TANUVAS	Chinnasalem
4	Coconut cross breeding Centre	Marakkanam
5	Seed Production Farm	Vanur
6	Liquid Bio-fertilizer Laboratory	Villupuram
7	Bio-control Laboratory	Villupuram
8	Fertilizer Control Laboratory	Villupuram
9	Soil Testing Laboratory	Villupuram
10	Farmers Training Centre	Villupuram

12.0 Allied Sectors:

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

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12.1 Animal husbandry and Dairy development:

Large number of farmers in Villupuram district 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. 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.

12.1.1 Livestock Population

Table 30 : Livestock Population (Census Data 2011)

Classification	Numbers
Cattle	
1. Male	
i. Under one year	82592
ii.. 1 to 2.5 Years	82592
iii.. Over 2.5 years	82592
Total	2,47,776
2. Female	
i. Under one year	103708
ii.. 1 to 2.5 Years	106444
iii.. Over 2.5 years	253642
Total	463794
a. Milk (Litres per day)	244871
b. Dry	131834
c. Not calved even once.	87089
Cattle Total	711570
3.Sheep	258986
4. Buffalo	7424
5. Goats	341202
6. Pigs	14869
7. Donkeys	23
TOTAL LIVESTOCK	1383625
Poultry	

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1. Fowls	604768
2. Ducks	8950
Total Poultry	649718

(Source: Aavin Milk Society Limited – Villupuram District, 2016-17)

As per census data of 2011, milch animal population was 3,60,086, goat was found to be at 3,41,202 and sheep was found to be 2,58,986 in number, it is fairly good population of livestock in the district, which is primarily because of excess plain area, cultivation of fodders and availability of grazing land.

Table 31: Block wise Cattle Population:

Block Name	Cattle			
	Milch Animal	Buffalo	Sheep	Goat
Kallakurichi	31367	1349	5306	16940
Chinnasalem	57714	2727	5693	34130
Thiyagadurgam	25241	780	6427	12810
Sankarapuram	29434	492	6665	13872
Rishivanthiyam	29846	544	8079	10798
Kalvarayan hills	20422	550	1023	17547
Tirukoilur	35688	879	10621	12921
T.V Nallur	60654	1366	16020	21432
Ulunthurpet	41546	955	16864	22035
Mugaiyur	51142	318	27285	24595
Tirunavalur	31661	845	11954	20443
Vikkiravandi	26752	228	12945	12054
Kanai	29007	595	15710	19053
Kolliyanur	28071	1419	21662	4360
Kandamangalam	17449	63	20305	2323
Vanur	37281	1079	25214	10192
Gingee	51016	695	13624	25704
Melmalaiyanur	38670	223	18770	26706
Vallam	40230	95	10221	16098
Marakkanam	42189	855	15305	22719
Mailam	40300	175	18205	18776
Olakkur	31790	647	15838	17070
Total	797470	16879	303736	382578

(Source: Office of Joint Director – Veterinary, Villupuram district, 2017-18)

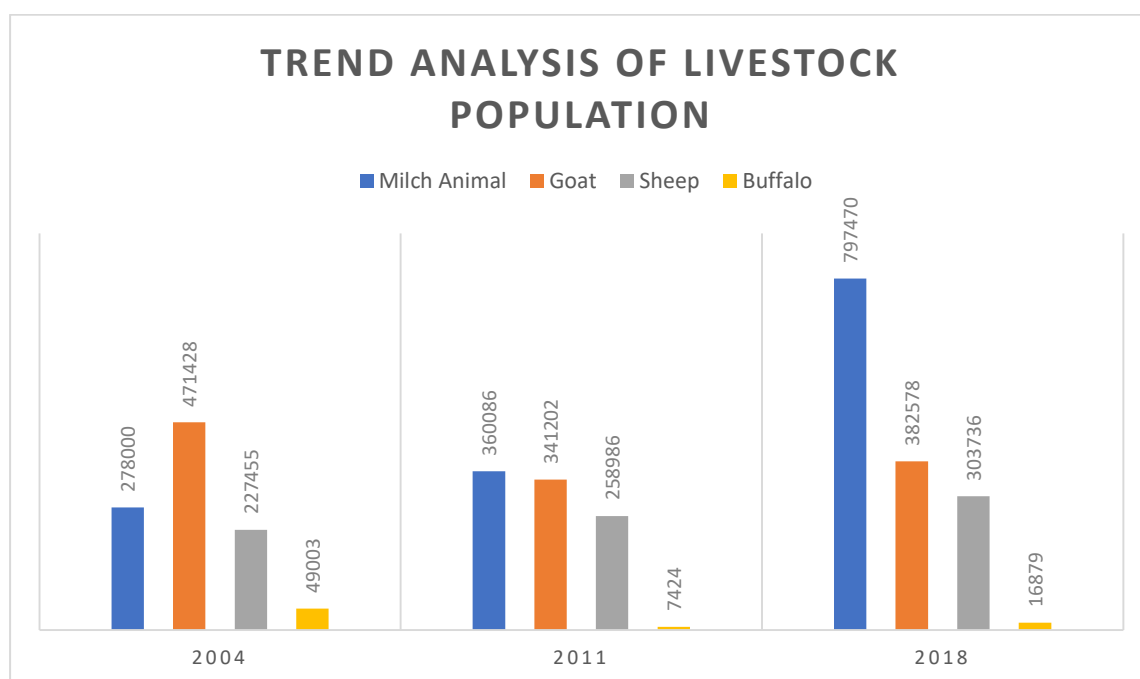
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Table 32 : Trend Analysis of Livestock Population

S. No	Name of the Livestock	2004	2011	2018
1	Milch animal	278000	360086	797470
2	Goat	471428	341202	382578
3	Sheep	227455	258986	303736
4	Buffalo	49003	7424	16879
5	Total	1025886	967698	1500663

(Source: Office of Joint Director – Veterinary, Villupuram district, 2017-18)

Figure 15 : Trend analysis of Livestock Population



(Source: Livestock Yearly Statistics Data 2004, 2011 & 2018)

When census data of 2018 is compared with census data of 2011 and 2004, it is observed that there is a steady increase in the population of milch animal since grazing area and fodder production is more and milk collection societies are more in number. Although there was a dip in the goat population in the year 2011 when compared to 2004, there is a

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increasing trend when compared to 2018. 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 district.

Athiyur Goat and Sheep Shandy is very famous in Rishivanthiyam and Sankarapuram Blocks and every week sales of Goat and sheep are approximately 3000 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.

12.2 Dairy Development:

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. The district holds about 536 milk societies at various blocks. Among the blocks, Ulundurpet block possess the highest number of 73 societies followed by which, Chinnasalem, Sankarapuram and Kallakuruchi block constitute above 40 milk societies.

Table 33 : Block wise functional milk society list in Villupuram

S.No	Block Name	No of Collection Centre	Litres per day
1	Kanai	32	11000
2	Kandamangalam	7	2700
3	Koliyanur	24	8600
4	Vikravandi	24	15700
5	Gingee	34	17400
6	Melmalayanur	2	2300
7	Vallam	19	4300
8	Vanur	27	10000
9	Marakkanam	9	4700
10	Mailam	20	12500
11	Olakkur	6	6800
12	Thirunavalur	25	6500

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13	Ulundurpet	73	40100
14	Mugaiyur	7	7100
15	Tirukoilur	19	9400
16	Thiruvennainallur	30	9700
17	Kallakuruchi	43	65006
18	Thiyagadurugam	21	14100
19	Kalrayan Hills	9	8200
20	Rshivandiyam	13	16300
21	Sankarapuram	44	41600
22	Chinnasalem	48	105279
	Total	536	419284

(Source: Aavin Milk Society Limited Villupuram, 2017-18)

When compared to census data of 2011 (244871 litre per day), the total milk production in the year 2018 (4119284 litre per day) was higher.

12.3 Poultry development:

Poultry rearing is one of the important activities of Animal Husbandry Sector in the district. The district produced 14,61,725 broiler and fowls 604768 (*Census 2016-17*).

12.4 Fisheries:

The total costal line of the district is 40.7 km. The inland freshwater area 45000 ha and brackish water area is 4772 ha and there are 19 marine fishing village.

12.4.1 Estimated marine fish production / inland fish production:

Table 34 : Fish production at Villupuram District

Sl.No	Block/Municipalities	Quantity (Tonne)	Value (Rs. In lakhs)
1	Inland fish Production	172	137.6
2	Marine fish Production	2282.4	1483.64

(Source: Villupuram District Statistical Handbook, 2016-17)

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In Villupuram district, marine fish production area is 83 km ,19 fishermen area covered in Marakkanam and Vanur blocks and in land fish products is sea bank, reverse and lakes in selected blocks.

12.4.2 No of families engaged in fishing:

Table 35 : Predominant Fish production blocks at Villupuram District

Sl.No.	Name of the Block	No. of Families engaged
1	Vanur	1414
2	Marakkanam	3705

(Source: Villupuram District Statistical Handbook, 2016-17)

12.5. 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. 1120 acres of land is under mulberry cultivation in Villupuram District. Training in Mulberry farming, Rearing Silkworms is done through a large network of Govt. Departmental Institutions of Sericulture such as Silk quality development farms, Govt. Sericulture training centre, Govt. Sericulture Farm, Base seedlings (grain age) development farms, Govt. Bivoltine grain age centres, govt. cocoon markets, silk reeling unit, silk twisting unit, technical support and service centre for rearing silkworm, with the above maintained facilities sericulture industry has good scope in this district.

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Table 36 : Block wise details of Sericulture Production in Villupuram District

Name of the Block	Area of Mulberry	Production of Cocoon
	In Acres	In Kgs
1. Chinnasalem	39.00	8,580
2. Kallakurichi	45.50	14,105
3. Kanai	102.25	27,795
4. Koliayanur	40.75	11,492
5. Marakkanam	15.50	4,221
6. Mugaiyur	90.75	23,051
7. Rshivandhiyam	8.00	2,488
8. Thiagadurgam	53.50	12,936
9. Thirunavalur	5.50	1,540
10. Ulundurpet	89.50	20,290
11. Vanur	33.75	7,830
12. Gingee	144.50	42,422
13. Kalrayan Hills	73.00	8,030
14. Kandamangalam	37.00	10,064
15. Mailam	25.50	5,919
16. Melmalaiyanur	103.75	25,300
17. Olakkur	33.80	10,206
18. Sankarapuram	42.50	13,900
19. Tirukoilur	18.75	5,156
20. Thiruvennainallur	46.50	12,323
21. Vallam	55.20	14,035
22. Vikravandi	16.00	4,428
Total	1,120.50	286,108

(Source: Office of Asst. Director – Sericulture, Villupuram District 2019).

In the 1120 acres of mulberry cultivation, 2,86,108 kg of cocoon is produced with a value of 7, 61, 24,000 rupees. Among the blocks, Gingee, Vallam and Melmalayanur blocks have contributed to the larger area

13.0 Industrial Scenario:

There is a good scope for industry in the Villupuram District. Traditional industries like weaving of lungi spreads over at Gingee, Kandamangalam, Kanai and Mugaiyur blocks of the district. Another traditional work of wood carving spreads over at Kallakurichi and Chinnasalem Blocks of the district. The main activity of this district (i.e.) Rice Mill

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is spread throughout the district and particularly at Kallakurichi, Sankarapuram, Vikravandi and Ulunderpet Blocks. The district 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. Export of fish, frozen fruits and vegetables are having good scope in the coastal area of Marakkanam Block of the district. 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 Viluppuram 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. The district provides enough scope for the development and growth of industries engaged in printing, Oil extraction and hall mark jewellery.

Other Industrial Sectors:

Villupuram district is developing in industrial sector. The Sugar industry is the major industry in the district. There are 7 sugar factories at Mundiampakkam, Periasevalai, Kacharapalliyam, Mungailthuraipattu. In the area of small-scale industries there are 67 Rice mills, 17 Sago factories 5 Rice bran oil extracting units and 8 Cotton Ginning Mills. Besides this mineral water, ceramics, automobile workshop are also running in the district. Work of wood carving spreads over at Kallakurichi and Chinna Salem Blocks of the district. Handloom in Villupuram district about 34 Handloom weavers co-operative societies are existing. Out of which only 26 societies are functioning, besides 2000 individual weavers are engaging in this sector and produce silk sarees in Siruvanthadu at Kandamangalam Block 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 lunghi spreads

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over at Gingee, Kandamangalam, Kanai and Mugaiyur blocks of the district.

Value of Minerals at Villupuram:

Table 37 : Minerals at Villupuram District:

Name of the Mineral	Quantity (cubic meter)	Value (in Rs.)
Black Granite	9826.807	36490393
Multi-Colour Granite	207.28	477000
Rough Stone	1018368	46173110
Red Earth	63000	1564750
Earth	80910	2210950
Pebble	10398	94330

(Source: District handbook – Villupuram, 2016-17)

Sedimentary rock and inosinate rock more available in Vanur, Vikravandi and Mailam Blocks and therefore, Granite, Multi-colour Granite, rough Stone related works are going on in these Blocks area.

Small Scale Group wise details of Industry in Villupuram District:

Table 38: Industry details group wise at Villupuram District

Name of the Industry	No. of Units
Food Industry	2,191
Cotton Textiles	91
Hosiery and Garments	1,618
Wood Products	195
Paper products and printing	462
Leather products	95
Rubber and Plastic products	119
Chemicals and Chemical products	107
Non – Metallic Mineral products	92

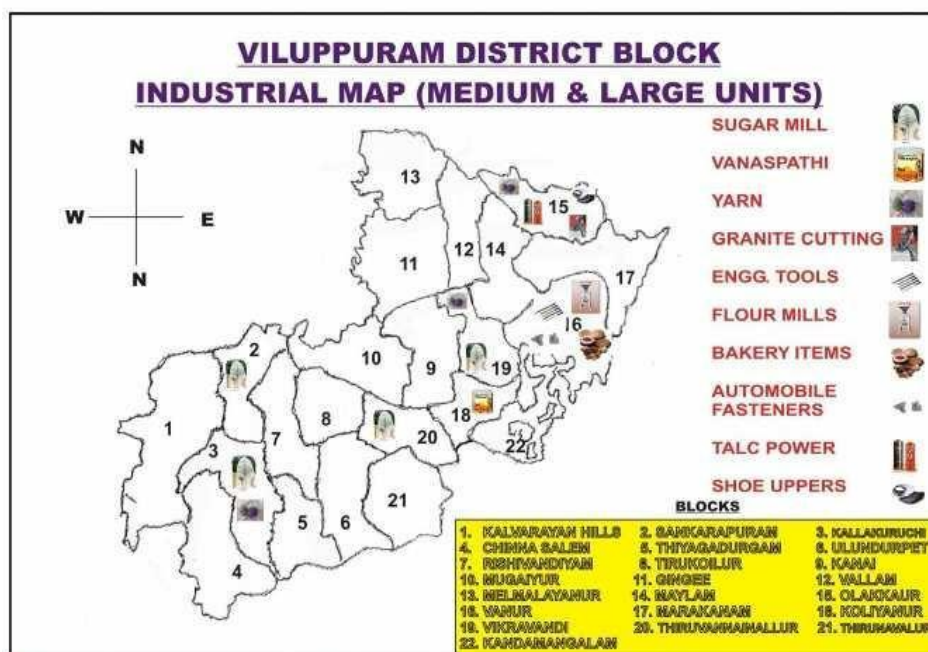
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Basic metal industry	1
Metal products	339
Machinery parts	572
Electrical Machinery and Apparatus	78
Transport Equipment and Parts	2
Miscellaneous Manufacturing Industries	104
Personal Services	96
Real Estate and Business Services	39
Repair Services	263
Services not classified	4
Total	6,468

(Source: District handbook – Villupuram, 2016-17)

The above table describes the current situation of small scale industries in Villupuram district, more memer of SC/ST wage labours and youths in Food Industry, Cotton Textile, Hosiery and Garments , Paper products and printing, Rubber and Plastic products, Repair Services, Machinery parts. Small scale industries are in the growing path.

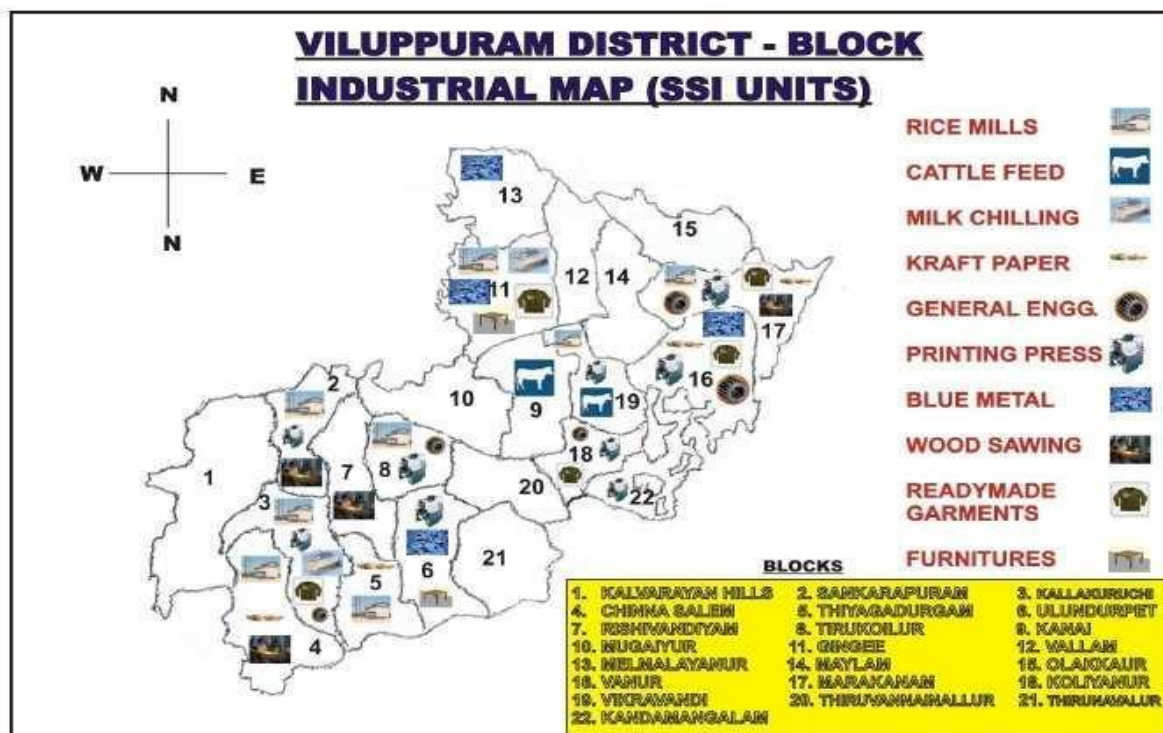
Figure 16 : Medium and large industrial units in Villupuram districts



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7 major sugar factories are located at Villupuram district. It should be noted that Villupuram District is the highest in sugarcane cultivating area and ranks first in Tamil Nadu. Blue metal and house making gravels units are more in Vanur, Mailam and Vikravandi Blocks.

Figure 17 : Small scale industrial units in Villupuram districts



Since Villupuram District ranks 2nd place in Tamil Nadu in the area cultivating and producing rice, small scale industrial units are mostly Rice mills. Paddy milling and grading units are located in the same district. Milk collection centre about 1000, chilling units for milk procurement from small and medium women farmers are also more in the district. Milch animals rearing are more than 3.5 lakhs in the district.

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District Industrial Centre (DIC) at Villupuram District – MSME

Units year 2018-19

Sl. No.	Name of Activity	No. of units	Investment on Machinery and Equipment (Value in lakhs)	Employment Nos.
1	Mining and quarrying	46	1591.00	350
2	Manufacture of Food Products & Beverages	525	8742.00	3096
3	Manufacture of Textiles	235	3822.00	918
4	Manufacture of Wearing Apparel	63	323.00	356
5	Manufacture of Leather and related products	9	73.00	103
6	Manufacturing of Wood, Products of Wood, Cork, Except Furniture manufacture of articles of straw & plaiting materials	115	782.00	424
7	Manufacturing of Paper and Paper Products	49	973.00	325
8	Printing and Reproduction of Recorded Media.	24	275.00	83
9	Manufacturing of Other Non-Metallic Mineral Products	69	988.00	529
10	Manufacturing of Basic Metals	30	175.00	128
11	Manufacture of Fabricated Metal Products, Except Machinery & Equipment	97	1156.00	460
12	Manufacture of computer, electronic and optical Products	11	138.00	84
13	Manufacture of electrical equipment's	25	177.00	92
14	Manufacturing of Machinery and equipment N.E.C	34	509.00	396
15	Manufacturing of Motor Vehicles, Trailers and semi trailers	19	171.00	86
16	Manufacturing of Other Transport Equipment	4	54.00	19
17	Manufacturing of Furniture	72	439.00	309
18	Repair and installation of machinery and equipment	43	259.00	148
19	Electricity, Gas Steam and air conditioning supply	8	94.00	42
20	Water supply : sew wrage, wast management and remediation activities	21	331.00	143
21	Construction	92	1468.00	1037
22	Transportation and storage	98	2166.00	455
23	Accommodation and Food service activates	154	1454.00	732
24	Information and communication	186	947.00	873
25	Financial and insurance activities	50	276.00	262
26	Professional scientific and technical activities	151	1025.00	580
27	Administrative and support activities	189	3250.00	1011
28	Warehousing and support activities for transportation	5	30.00	22

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29	Human health activities and social work activities	44	866.00	258
30	Arts entertainment and recreation	16	119.00	113
TOTAL :		2484	32673.00	13434

From the above table we can understand that manufacture of food products and beverages, manufacture of textiles has more number of units in the district. Manufacture of food products and beverages, textile industry, construction and administrative services have attracted more number of employment opportunities.

Tamil Nadu Adi Driavidar Housing and Development Corporation Limited (TAHDCO) in Villupuram District

Loan Details for Scheduled Caste (SC) - 2018-19			
Sl. No.	Name of the Scheme	No. of Beneficiary	Amount (in lakhs.)
1	Entrepreneur Development Programme	169	230.96
2	Self-Employment Programme for the Youth	46	74.14
3	Economic Assistant for SHG	1	2.5
Loan Details for Scheduled Tribe (ST) - 2018-19			
Sl. No.	Name of the Scheme	No. of Beneficiary	Amount (in lakhs.)
1	Entrepreneur Development Programme	17	39.55
2	Self-Employment Programme for the Youth	3	12.96

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 2,25,000 lakhs whichever is lower

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13.1 Micro Small and Medium Enterprises (MSME) Sector Block wise:

Table 39 : MSME sector with investment values

Sl. No	Type of Industry	No of Units	Investment (in Lakh)	Employment
1	Rice mill	21	1039.5	233
2	Modern Rice Mills	21	2858.63	151
3	Groundnut decorticating	42	47.25	124
4	Groundnut Oil	21	987.53	105
5	Sugarcane gur	21	393.75	106
6	Fruit Processing	42	415.8	420
7	Flour Mills	42	138.6	168
8	Cattle feed Plant	22	123.75	110
9	Fish Processing	50	131.25	550
10	Bakery	220	759	1760
11	Masala Making	151	1121.18	1661
12	Millet Products Making	110	148.5	550
	Total	763	8164.74	5938

(Source: District handbook – Villupuram, 2016-17)

There are about 12 types of 763 units of Micro small and medium enterprises in the district which provides employment to about 5938 employees with an investment of 8164.74 lakhs which are agro based.

13.2 Existing Cluster of Micro and Small business:

Table 40 provides the details of predominant micro and small business clusters that exist in Villupuram District, especially in the TNRTP blocks of Villupuram District.

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Table 40 : Existing Micro and Small units business Block Wise of TNRTP

Sl. No	Name of the Block	Cluster units (Numbers) and (No. of workers)
1	Thiruvannai Nallur	Textiles(15)(52),Utensil shop (21)(65), Mechanical shop (25)(58),Tailoring (98)(210),Juice shop (52)(125),Fish shop (21)(45), Meat Shop (35)(45), Laundry Shop (95)(198), Small provision shop (310)(415),Small Tiffin Centre(255)(358)
2	Vallam	Beauty Parlour (30)(60), Laundry (80)(80), Hotels (160)(480),Flour Shop(20)(42), Wood Shop (15)(45), Tailoring Shop(120)(180), Jauli Shop(5)(20)
3	Mugaiyur	Bakery (8)(26),Provision Shop (50)(60), Barber Shop (76)(86), Textiles(18)(180),welding(6)(28), Hollow block (2)(18),Cementry material Production(7)(32)
4	Koliyanur	Handicraft (5)(50),Tiffin Shop(211)(350), napkin(3)(25),Bag making(5)(25),Detergent (5)(26),Tailoring(64)(152), Photo Studio(62)(100),Saloon and Beauty Parlour (163)(250),Mineral water company (4)(48),Travels(13)(39), Provision Shop(83)(215),Rice Mills (7)(25)
5	Kanai	Small provisional shop (56)(112),Petti shop (105)(105), Saloon (20)(36),Laundry (6)(12), Welding shop (8)(16),Tailoring(60)(60),Red bricks factory (20)(65),Bakery(5)(12)
6	Vikravandi	Cooldrinks Company(1)(8), Pottery (4)(24), Sabana terracotta making company(1)(180), Hotel(150)(180),rice mill (2)(8),Oil Mill (2)(6), Detergent Powder (1)(80), Ice factory (2)(8), Potter

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		Toys(25)(100), Aricanut Plate Making (2)(100), Modern rice Mill (30)(300), Jauvly Shop (80)(400), Bakery (40)(200), Barber AC (20)(100), Barber (150)(150), Saw mill (40)(200), Engineering Grill work (80)(320), Milk product Factory (6)(30),
7	Sankarapuram	Handloom(22)(112), Power loom (2)(8), Provision shop (96)(122), Saloon shop (92)(116), Steel and Wood Furniture (85)(112), Xerox shop (55)(69), Black Sugar Production shop(10)(30), Oil Mills (5)(20), Mat weaving (2)(10), Photo Studio (8)(24), Rice mill (7)(65), Auto mobile Service centre (49)(68), Electrical home appliance (12)(24), Hollow block (7)(21), Offset Print (15)(32)
8	Rishivanthiyam	Wood Statue making unit (25)(50), Petti shop (450)(900), Vegetable Shop(160)(320), Two Wheeler mechanics (70)(140), Water pant (2)(50), Agarbathi making (1)(20), Oil mills (5)(50),

(Source: Block statistic officer – Villupuram, 2018-19)

Major Cluster of non-forming sector:

Oil Extraction Unit:

These clusters are spread along L.N.Patti Village of Sankarapuram. Around 2500 men and women engage along with the farmers in the locality to produce groundnut oil. 5 members are employed per unit, each member is paid around Rs.200 per day for 100 Kg groundnut extraction.

Mat Weaving:

These clusters are spread along Ramarajapuram Village of Sankarapuram Block. 11 employees work per unit and each employee is paid Rs.15 per mat and earn about Rs.300 per day.

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Pickle Making:

These clusters are spread along Anathur village of Vallam Block. Women around the locality are engaged in agro-based organic pickle making. 7 members work per unit and are paid around Rs.150 per day.

Hand loom weaving

The clusters are spread along Rishivanthiyama, Mugaiyur, Vikravandi, Kanai, Thiruvannainallur and Sankarapuram Blocks. There are 1650 units exist and 4707 families engaged in it.

13.3 Large Industry:

Villupuram district, which is the second largest district in Tamil Nadu provides employment nearly to 15,000 individuals in sugar industry, spinning mill, etc., These industries are dependent on the farm sector for raw materials. Some of the key established sugar factories are Rajashree Sugars Ltd., Mundiampakkam, Sankarapuram Sugar Factory.

Major Exportable Items:

Some of the major exportable items from Villupuram district to other parts of the country are as follows:

- Fish and prawns
- Sugar
- Ponni rice
- Herbal products
- Edible oil
- Handloom products like lungies and
- Silk sarees (Siruvanthadu silk)

13.4 Investments in Villupuram District in MSME:

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

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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.

Connectivity:

Villupuram district is well connected by bus road and Train. Villupuram District 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. Villupuram is also next to the State capital Chennai at a distance of 160 Kms. Union Territory Pondicherry is just 40 km from Villupuram. Tourists from other area of Tamil Nadu are well connected through the National Highway of the district. Hindustan Unilever production company is situated in Ariyur, Pondicherry where more than 3000 lorries per day passing through Villupuram blocks namely Vanur, Kolianur and Vikravandi. Those who Fly from and around Villupuram districts fly from Pondicherry to other places like Chennai, Trichy, Bangalore etc.,

13.5 Investment Opportunities:

The availability of Agricultural harvest of rice and groundnut, handloom products and unskilled/skilled labours give opportunity to invest in Agro & Food Processing and handloom sector. Rice, edible oil, fish, medicinal products and handloom products are major exportable items from the district.

(Source: Brief Industrial Profile of Villupuram district.2012-13 MSME REPORT, Govt. of Tamil Nadu. And Vision 2023 document)

13.6 Service Sectors:

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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 2014-15. Approximately 2.07 lakh people are employed in organized services. The medical infrastructure is quite lacklustre in Villupuram. There are 21 hospitals, 3 dispensaries, 80 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 the district. There are more than 6,100 kilometres of surfaced roads running through the district. A significant length of un-surfaced roads, about 2278 kilometres, also runs through the district. 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.

14.0 Tourism:

1. Kalrayan Hills:

Figure 18 : Kalrayan Hills



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The Kalvarayan Hills are a major range of hills situated in the Eastern Ghats of the southern Indian state of Tamil Nadu. Along with the Pachaimalai, Alavaimalai, Javadi, and Shevaroy hills, they separate the Kaveri River basin to the south from the Palar River basin to the north. The hills range in height from 2000 feet to 3000 feet and extend over an area of 1095 square kilometers.

Periyar Falls is located in the Villupuram district. They can be found at a distance of 15 kilometers from Kachirayapalayam. Periyar Falls are in close proximity with the Vellimalai village. The flow of water becomes less during the summer months and the cascade is usually flooded with the rains. Megam Falls are located at a distance of 5 kilometers from Kallakurichi. The waters of the cascade descend from a height of 500 meters, from the hilly range of the area.

2. Auroville

Figure 19 : Auroville



Auroville (City of Dawn) is an experimental township in Villupuram district with its territory mostly spread in the state of Tamil Nadu and with some parts in the Union Territory of Puducherry. It was founded in 1968

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by Mirra Alfassa (known as "the Mother") and designed by architect Roger Anger. As stated in Alfassa's first public message in 1965,

Auroville wants to be a universal town where men and women of all countries are able to live in peace and progressive harmony, above all creeds, all politics and all nationalities. The purpose of Auroville is to realize human unity.

3. Marakkanam-Beach

Figure 20 : Marakkanam Beach

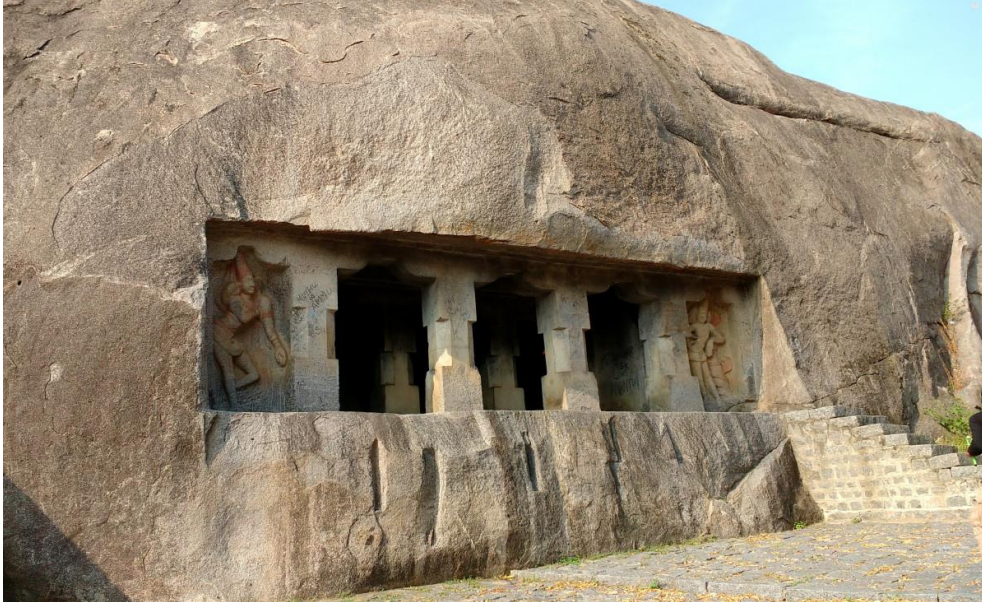


Marakkanam Beach is located in Marakkanam which is a coastal panchayat town & Taluk in Villupuram district in the Indian state of Tamil Nadu.

To the west, Marakkanam is connected to the town of Tindivanam by the SH - 134. Marakkanam is situated on the declared National Waterways NW - 4. On materialization of National Waterways NW - 4, Marakkanam will be connected to two states Andhra Pradesh (Kakinada) and Puducherry through north and south of Buckingham Canal. In Marakkanam there is a peaceful beach. In the production of salt Marakkanam places second position in Tamil Nadu.

4. Mandagapattu-The Rock Cut Temple

Figure 21 : Mandagapattu-The Rock Cut Temple



Mandagapattu Tirumurti Temple is a Hindu temple situated in the village of Mandagapattu in the Villupuram district. Pallava ruler Mahendravarman-I build this cave temple. There are two dvarpalas carved into the front facade. The dvarpala on eastern end is shown in tribhanga posture. His right hand is going all across the waist and under his left arm armpits over the handle of the club.

There is only one inscription found on front pillar of this cave. This Sanskrit language inscription is written in Pallava Grantha script, in Giti metre. This brick-less, timber-less, metal-less and mortar-less temple, Lakshita-yatna, which is mansion for the Brahma, Ishvara and Vishnu was caused to be made by the king Vicitra-citra (Pallava king).

These four pilasters on back wall forms three cells, each 3 feet deep, one for each in Hindu Trinity, Brahma, Vishnu and Shiva. There are few traces of painting seen on the back walls of the cells suggesting worship of painted deities.

5. Gingee Fort

Figure 22 : Gingee Fort



Gingee Fort or Senji Fort (also known as Chenji, Jinji or Senchi) in Tamil Nadu, India is one of the surviving forts in Tamil Nadu, India. It lies in Villupuram District, 160 kilometers (99 mi) from the state capital, Chennai, and is close to the Union Territory of Puducherry.

Originally the site of a small fort built by the Chola dynasty during the 9th century AD, Gingee Fort was modified by Kurumbar during the 13th century. As per one account, the fort was built during the 15–16th century by the Nayaks, the lieutenants of the Vijayanagara Empire and who later became independent kings.

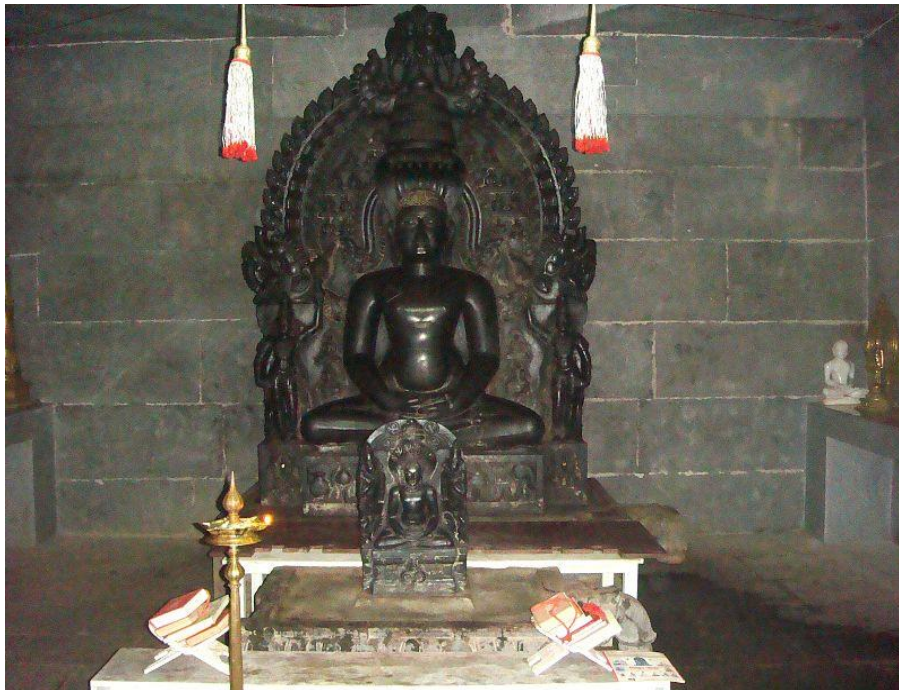
The fort passed to the Marathas under the leadership of Shivaji in 1677 AD, Bijapur sultans, the Moghuls, Carnatic Nawabs, French and the British in 1761. The fort is closely associated with Raja Tej Singh, who unsuccessfully revolted against the Nawab of Arcot and eventually lost his life in a battle.

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The fort complex is called 'Troy of the East', as the fort was very effective in keeping attackers at bay that it earned the quality of being 'impregnable' just like Troy. The Gingee Fort complex has been a Monument of national importance since 1921.

6. Mel Sithamur Jain Math

Figure 23 : Mel Sithamur Jain Math



Jina Kanchi Jain Math, Mel Sithamur, is a Jain Math that is located near Gingee, Villupuram district, Tamil Nadu, India. It is the primary religious center of the Tamil Jain community. It is headed by the primary religious head of this community, Bhattaraka Laxmisen Swami. The Villupuram area has been an important centre of Jainism since ancient times. Historically, there was a Jain Math at Kanchipuram but it was shifted to its current location here.

It was since the rule of Vijaya Nagar kings that the parts around Gingee started flourishing one. Sri, Venkatappa Nayakkar helped to renovate Paresan Temple. He had also sanctioned permission to erect Maanasthambam.

7. Thiruvakkarai-Fossil Park

Figure 24 : Thiruvakkarai-Fossil Park



The National Fossil Wood Park, Thiruvakkarai is a geological park located in the Villupuram District in the Indian state of Tamil Nadu and is maintained by the Geological Survey of India.

The park contains petrified wood fossils approximately 20 million years old, scattered throughout the park, which covers about 247 acres (100 ha). The park consists of nine enclaves, but only a small portion of the 247 acres (approx 1 square km) is open to the public. Officials of the GSI believe the fossils were formed during massive flooding that occurred millions of years ago. The park hosts about 200 fossilized trees. They range in size from 3 to 15 metres (9.8 to 49.2 ft) meters in length, some of which are up to 5 meters in width. They are strewn and partially buried in the park grounds. No branches or leaves remain on the fossilized trunks.

All the above said Tourist sports have attracted Tourists from both at National and International Level.

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TNRTP Block wise Important Tourist places in Villupuram District

Table 41 : Important tourist places at TNRTP Blocks

Sl.No.	Name of the Blocks	Tourist Places and (No. of visitors per year)
1	Thiruvannainallur	Lord Siva Temple-(15000) birthplace of Sadayappar and Koothandavar temple- Kirimedu village-(100000), Mariamman Kovil (25000)
2	Vallam	St.Xavier Church (50000)
3	Mugaiyur	Alampadi Rock Drawing, Keezhwalai Drawing and Jambai Jambu Natheshwarar Temple (100000)
4	Kolliyanur	2000 years old Walishwarar Temple, Koormanga sanishwarar Temple, 1000 years old Pudruvazhiyamman temple (200000)
5	Kanai	Kalpattu Sanishwarar Bhagavan Temple, Vanthur Chinnapar Alayam, Banamalai Sivan Malai Kovil (150000).
6	Vikravandi	Mandagapattu Pallava period Clave Temple, Ennairam Narasimma Perumal Temple (10000)
7	Sankarapuram	L.N.Patti Kudiyalur Falls and Mushkunda Falls, Veeriyur Matha Temple, Vadakiranur Tharka, Putai Mariaman Temple (150000)
8	Rishivanthiyam	Thiruvankam Primal Kovil, Rivanthiyam Anthanar Temple (50000)

(Source: Block statistics officer – Villupuram, 2018-19)

Villupuram District has many ancient place and more than 1000000 people visits to tourist places of TNRTP blocks. It has more opportunists to develop environmental based Eco tourism.

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15.0 Quantitative Skill Gaps:

There are numerous number of training institutions on the functional areas of Agriculture, Horticulture, Veterinary, NGOs and MSMEs which provide more effective training for skill development among the youths of Villupuram district and potential people who are well trained people are more, we can convert these man power to enhance their life by convergence through TNRTP project.

Table 42 : DDU-GKY – Villupuram District – 2018-2019

Sl. No.	Project Implementing Agency	Name of the training	No. of Participant	Candidate Placed so far
1	Reward Society	Tally & Electrician	175	122
2	Jayaram	Nursing	10	10
3	Apollo	Nursing & Tally	70	55
4	Dhanamoorthi ITI	Fitter & Welder	50	35
5	ICICI	Welding & Fitting	30	21
Total =			335	243

(Source: TNSRLM – Villupuram, 2018-19)

Deen Dayal Upadhaya Gramin Kousalya Yojana (DDU-GKY) played a vital role in skilling 100% employment opportunities in and around Villupuram district during the year 2018-2019 by different Project Implementing Agencies. Because of that, predominant of youths between the age group of 18-35 are showing more interest to join in the DDUGKY project. In DDUGKY 485 candidates had joined and 383 candidates were placed in the relevant departments.

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15.1 Skill Training MGNREGS - Villupuram District - 2018-2019

Table 43 : MGNREGS Skill Training

Sl. No.	Project Implementing Agency	Name of the training	No. of Participant	Candidate Placed so far
1	Bharathy Industrial School	Basic Sewing, Operator	60	43
2	Dhanamootthy Education Trust	Electrician, Welder & A/c. Mechanic	60	46
3	Radha Driving School	Automobile (LMV & HMV)	60	44
4	Sri Rangapoopathi College of Nursing	Medical & Nursing Assist	30	30
5	SRM Infotech	Courier & Logistics, Tally	60	54
6	Sri Saravana Driving School	Automobile (LMV & HMV)	29	29
7	Carmel ITI	Basic Sewing Operator, Electrician	60	60
8	St. Marys College of Paramedical Science	Medical & Nursing Assit	54	33
9	CCSS Computer Education	Retail Operation Assistant, Hospitality Assistant	60	--
Total =			473	339

(Source: TNSRLM Office - Villupuram, 2018-19)

Mahatma Gandhi National Rural Guarantee Scheme (MGNRGS) plays a vital role in skilling employment opportunities around Villupuram district 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 (MGNRGS) project. In Mahatma Gandhi National Rural Guaranty Scheme (MGNRGS) 473 candidates had joined and 339 candidates were placed in the relevant departments.

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Table 44 : Youth Skill Training Block Wise :

S. No.	Block Name	Training Name	Name of The Institution	No of Participant	Candidate Placed so far
1	Thiruvannainallur	JCB, Tally, Beautician, Hand craft, Tailoring & Toys	Visuvam, Reward Society, CSC, Indian	564	340
2	Vallam	Lab Tech., Computer & Tailoring,	Kamaraj Inst., SRM Inst. & Reward Society	423	364
3	Mugaiyur	Tailoring, Mechanic, Computer & Nursing	Bharathi, ICICI, CSC, Appollo & PMDS	422	190
4	Koliyanur	Typewriting, Computer, Driving, Tailoring, ITI, Beautician, Hand craft & Tally	Sangaran, Kannan, Reward Society, Indian Inst.& CSC	253	213
5	Kanai	Tally, ITI (Elec. & Fitter, A/c.), Tailoring, Beautician, Nursing & Catering	CSC, ITI-Karthikayan, Thiruvaluvar ITI, Reward Society & ES. College	161	145
6	Vickravandi	Tailoring, Beautician	Reward Society & Child graft	122	113
7	Sankarapuram	Computer, Nurising, HMV, Beautician & Electrical	SRM, CSC, Appollo, Om Sakthi, Sakaraya & Modern ITI	140	66
8	Rishivanthiyam	Fitter, Tally, Tailoring, Beautician & Electrical	Dhanvandhri, CSC, Appollo, Jara, Shirmi & Morden ITI	99	59

(Source: Block statistic officer – Villupuram, 2018-19)

The largest skill gap is at the semi-skilled level at 33,000 in 2012-17 and 57,000 in 2017-22. There is estimated to be an excess availability of human resources at the unskilled level due to the fall in human resource requirements in agriculture, without adequate growth in the other industrial sectors. At the skilled level, the gap was 17,000 in 2012-17 and estimated to be 43,000 in 2017-22

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i) Inadequate emphasis on 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 the district is also low and mainly consists of a few small and medium scale rice mills, whose 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.

ii) 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.

iii) Lack of guidance and awareness regarding skill development:

Recently a number of government schemes, like tax holidays have given a boost to industrial growth in the district. TNSDM 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. 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.

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16.0 Banking Penetration in the District:

In Villupuram, Indian Bank is the Lead Bank of the district. The district is having 12 Public Sector Banks with 145 branches and 7 Private Sector Banks. There are 246 branches of commercial Banks, 27 branches of Regional Rural Bank, 27 Branches of District Central Co-op Bank, PACSB operating in the District is 238 with 268 branches and the number of private sector banks. There are no unbanked villages in the district.

16.1 Annual Credit highlights:

The banks have projected Rs 7948.09 crores for 2019-20. Crop loan at Rs 4164.00 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/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.

16.2 SHG Bank linkage

Total credit linkage through SHG in the district in the year 2018 - 19 is 490 crore through 11507 SHGs. Financial literacy centre is present in Villupuram. INSETI (Indian Bank Self Employment Training Institute) is a RSETI model of training institute functioning in Villupuram has completed six years of functioning.

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16.3 Joint Liability Groups (JLGs)

The total number of JLGs promoted in the district are 550. They have been promoted by Women's Development organizations in Villupuram District which are Reward Society, Kalvi Kendra, NAF, VSP, MSRF, PMSS and REAL

16.4 MFI Presence:

Tamil Nadu contributes to 16% of the total MFI portfolio in India (8048 crore). There are 25 institutions with 951 branches with a present outstanding of INR 3666 Crores with a member level average outstanding of 14301 INR. Small Banks are the new category of banks announced by RBI in July 2014. Around 10 companies have received this bank license across India. Villupuram District is moderately served by Microfinance institutions. **ESAF, FINCARE and BELLSTAR** have good presence in district. Grama Vidiyal, LNT, Equitas are the small finance banks operating in district.

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Table 45 : Credit Potential for Agriculture Crops Villupuram District

Sl. No	Activity	PLP Projection 2019-20	
		Phy unit	Bank Loan (in Lakh)
1	Paddy	173000	129750
2	Cumbu	25500	5355
3	Ragi	3900	702
4	Maize	33700	13480
5	Others (Millets)	1300	234
6	Groundnut	44800	14784
7	Gingelly	11200	2352
8	Red Gram	800	304
9	Block Gram	85100	31487
10	Green Gram	1500	555
11	Cow pea	4600	782
12	Other Pulse	2900	1073
13	Tapioca	5295	2276.85
14	Sugarcane (Planting)	41000	51660
15	Sugarcane (Ratoon)	41000	39770
16	Cotton	11500	6210
17	Turmeric	2350	1927
18	chillis	925	166.5
19	Banana	980	803.6
20	Watermelon	950	294.5
21	Vegetable	3570	1428
	Total	495870	305394.45

(Source : NABARD-Potential linked credit Plan-2018-2019)

Government, private, PACCSB and other financial Banks have provided loan to agriculture crop cultivation and Horticulture crop cultivation with physical unit is 495870 and money value of 305394.45 lacks in Villupuram districts.

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Table 46 : Credit Linkage Plan and PLP Projection for the Year 2019-20 in Villupuram District

Sl. No	Activity	PLP Projection 2019-20	
		Phy unit	Bank Loan (in Lakh)
1	Rice mill	21	1039.5
2	Modern Rice Mills	21	2858.63
3	Groundnut decorti casting	42	47.25
4	Groundnut Oil	21	987.53
5	Sugarcane gur	21	393.75
6	Fruit Processing	42	415.8
7	Flour Mills	42	138.6
8	Cattle feed Plant	22	123.75
9	Fish Processing	50	131.25
10	Bakery	220	759
11	Masala Making	151	1121.18
12	Millet Products Making	110	148.5
	Total	763	8164.74

(Source : NABARD-Potential linked credit Plan-2018-2019)

Government commercial banks, private banks and other financial Banks have provided loan to small scale industry developed with physical unit is 763 and money value of 8165 in Villupuram district.

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17.0 SWOT Analysis of Villupuram District:

The results of the SWOT analysis of Villupuram district are presented below.

<p style="text-align: center;"><u>Strength:</u></p> <ul style="list-style-type: none">▪ Good transport facility (road and railway)▪ Nearer to State capital Chennai, Trichy Salem and Puducherry▪ Good banking network▪ Availability of adequate number of skilled and unskilled labour▪ Fertile soil and high-water table for water cultivation▪ Upgrading of latest technical line department available	<p style="text-align: center;"><u>Weakness:</u></p> <ul style="list-style-type: none">▪ Uneven rainfall▪ Fragmented land holding▪ River irrigation; low precipitation▪ Low literacy rate▪ Lack of motivation towards entrepreneurship
<p style="text-align: center;"><u>Opportunity:</u></p> <ul style="list-style-type: none">▪ Scope for major crop cultivation▪ Scope for convergence with line departments▪ Livestock population is enormous▪ Scope for setting non-farm enterprises is high▪ More Number of Enterprise related institutions are more▪ Women farmers and market linkage is high	<p style="text-align: center;"><u>Threat</u></p> <ul style="list-style-type: none">▪ Conversion of agriculture land to real estate and industrial purpose▪ Poor loan recovery from bank

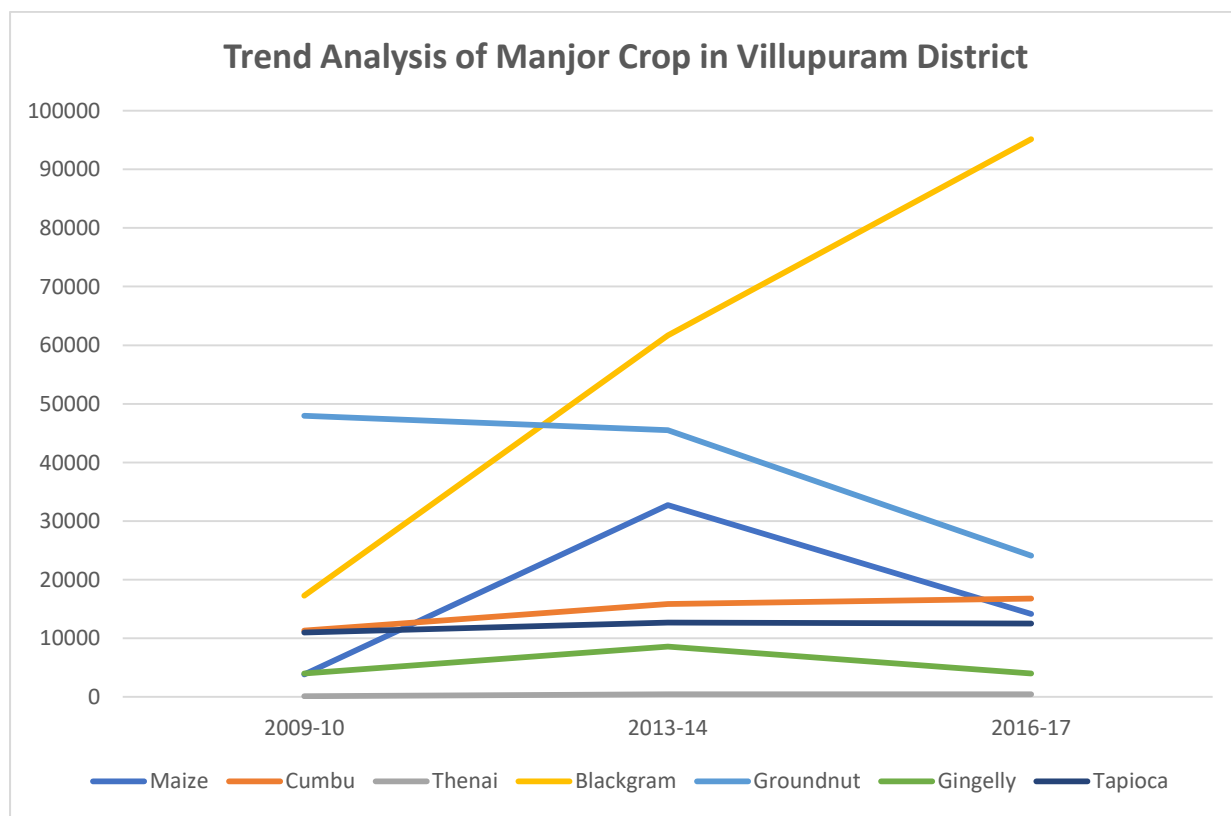
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Trend analysis of major crops in Villupuram District (Major crop production area in ha):

S. No	Crop	2009 - 10	2013-14	2016-17
1	Maize	3811	32736	14139
2	Cumbu	11325	15834	16791
3	Thenai	112	468	443
4	Blackgram	17276	61681	95135
5	Groundnut	47975	45487	24100
6	Gingelly	3974	8580	4016
7	Tapioca	11013	12705	12538
	Total Cultivable Area	337997	471400	483300

Figure: Trend Analysis of Major Crop in Villupuram District

Figure 25 : Trend Analysis of Major Crop in Villupuram District



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18.0 Commodity Prioritization of Criteria and Description of Villupuram District:

Table 47: COMMODITY PRIORITIZATION TABLE

S.No	CRITERIA	DESCRIPTION	COMMODITY			
			Goat & Sheep	Groundnut	Black gram	Millet (Cumbu & Thenai)
1	Trend in number of producers involved in the commodity	For commodities which has large number of producers.	25.49%	11%	14%	4% (Positive)
2	Community Interest	Economic viability, Staple food, Knowledge and technology availability, Extension services, Awareness about Market availability	Rural goat rearing population is more. Rearing knowledge is more. Demand for goat and sheep meat is also high in nearby districts also.	As per latest data, third district in production of groundnut. Since the soil in Villupuram District is fertile and very apt for groundnut, community interest is more.	Rain fed and rice follow cultivation are traditionally done in the district. High income with low expense crop.	Plains are known for millet production in rainfed condition.
3	State/National Priority (Thrust from government)	State/National Government Schemes and Investments	KVK Veterinary research station at Chinnasalem. Private goat research station at Vikravandi block	One of the chosen districts for Oilseeds mission and seed production, MSDA scheme.	One of the chosen districts for NFSM, Integrated Development of Pulses Village Scheme/mission	Chosen district for promotion of small Millets promotion Centre for excellence in Millets
4	Comparative advantage	Production, Favorable climatic conditions, GI type characteristics, Uniqueness emerging out of Ethnicity and culture, A prevalent cluster.	Grazing land and fodder availability in the district is more. Arid and semi-arid climatic condition is favorable for goat	High demand for Certain varieties, Soil and climate favorable for groundnut production	Topmost district raised under irrigation, rainfed conditions Under water stressed conditions Major share in largest producer of Blackgram, favorable climatic condition,	One of the largest producer of millet in the State

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5	Access to Market	Ability to sell the produce at a remunerative price- Local, National & International markets	Demand at local shandies and other district. Products are also transported to other states in India through farmer producer companies	High demand for groundnut for oil extraction. Arrivals in APMC after Paddy	Steady increase in demand throughout the nation, rise in prices.	High demand for millet in local market and the proximity to Andhra & Karnataka which major market for Cumbu and Thenai
6	Opportunity for Value Chain Interventions	Productivity and value-added products.	Goat and sheep rearing are easy. Goat and meat farmer producer company may be set up in the future. Products may be sold at end to end through value chain involvement.	Productivity significantly lower than the State Average though largest producing state, Value added products	Scope for productivity enhancement, promotion of summer pulses, delayed marketing facilities,	Productivity significantly higher and high value product linkage in food processing.

19.0 Conclusion:

Villupuram is an agrarian and industrial backward district. 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.

Under farm sector the commodities that could be prioritized are Groundnut, Gingelly, pulses (Blackgram) and millets (Cumbu and Thenai). Groundnut and gingelly are widely cultivated in all blocks of Villupuram district. It is cultivated under both irrigated and rainfed conditions 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 is widely cultivated in all blocks of Villupuram district, the production of groundnut is very high in blocks of Sanakarapuram and Rishivandiyam blocks. Blackgram is highly cultivated in Kanai, Vikravandi,

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Koliyanur and Mugaiyur blocks. 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 Vikravandi, Rishivandiyam and Sankarapuram blocks which has a high market value. The potentiality of millet crop (thenai and cumbu) and medicinal crops (Coleus – 3rd place in the State) unique to this area is not fully tapped. Floriculture is picking up in Vikravandi, Koliyanur and Vallam blocks as the market potential is high. There is a high potential to improve the productivity in all the crops. Villupuram District has occupied fourth place in the State 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 Kanai, Mugaiyur and Gingee blocks. Mat weaving is predominant in Rishivandiyam and Sankarapuram blocks. Stone carving is a major enterprise in Rishivandiyam, Vanur and Marakkanam blocks. Tourism is one major opportunity which could be promoted in Villupuram district. The prospects for agro processing industries, small scale oil extraction and organic pickle making units are high.

20.0 Overall Observation on Future Opportunities:

- Various indicators clearly indicate that the district is an agrarian district and there is a great potential for agriculture and horticulture crops. About 70% of the population is engaged in agriculture and allied activity. Therefore, many rural enterprises like producer group based out of agriculture may be formed in the near future.
- Many individual enterprises may also be formed in future, as non-farming produces such as handloom products, pickle making, oil extraction is widely spread in the district

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- As the district leads in the State with highest production of oil seeds, pulses, vegetables and total cereals production, there is a good chance for formation of Farmer Producer Group/Collective Group.
- The district has many heritage sites and spiritual sites which are unnoticed due to unavailability of guides, etc., which clearly indicates that there is an untapped market in terms of rural tourism which can be addressed in the future
- There is a good number of Youth population, SC population, ST population whose skill can be further enhanced by capacity building and trainings and thereby be availed to employment opportunities.
- Penetration of banking is commendable in the district which may pave a way for hassle free credit linkage and other financial support to the beneficiaries.
- Well-resourced line departments are a clear indication that there is a good chance for convergence in the district.
- MKSP project through TNSRLM in Villupuram district is an integrated training approach to enhance agriculture, horticulture and veterinary related activities. Promoting cluster groups based on marketing, stockholders supply chain and high value agro based product and small industries may be initiated in selected blocks.
- Current focus in Agriculture to become "Business of Farmers" to "AGRIPRENEURS" will be initiated as farmers producer companies in oil seed, meat production (goat and sheep farming) through Collectivization of produces, especially small and marginal farmers, into producer organizations and improved access to investments, technology, inputs and markets.

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- Seed is a basic agricultural input and it is an embryo. Seed with good quality will result in good production which will thereby increase of food production in Villupuram district. Prioritised groundnut, black gram and millet seed production shall be promoted in the District through TNRTP.
- Government training institutions and NGOs are more in number in Villupuram district and skill trainings are conducted in different locations promoting employment opportunity in the district.
- Environment based ecosystem may be developed which paves an opportunity for green enterprises like yellow bag production, biofertilizer, organic food product and home hand making product in some of the blocks in the district namely Koliyanur
- Women Industrial Training Institutes (ITIs) have higher dropouts, lower enrolment rates and lower placements compared to other ITIs. Primary research indicates low willingness to migrate for work or education among women. A significant proportion of the workforce in sectors such as gems & jewellery, textiles and leather is female. Self Help Group (SHG) models have been successful in imparting skill training to women, particularly in relatively backward blocks such as Kanai, Vallam and Sankarapuram. There is a need to facilitate transition of female workers from home enterprises to factories through awareness campaigns and targeted skilling initiatives.
- Food Processing - Value addition from food processing has great potential to increase the earnings for all of the stakeholders across various value chains in Villupuram district - In Villupuram district, immediate steps may be taken to improve the quality of supply chain management. - Tying in with the value chain approach, identifying high value crops, that have large potential for value

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enhancement through food processing must be identified, and farmers encouraged to move towards these value chains.

- Supply Chain Management - New initiative, to be pursued in districts – by leveraging the FPOs that are being registered. It is estimated that effective channeling of fruits, vegetables, oil seed product and goat meat product and managing the supply chain at all points can increase prices realized for farmers by at least 15%. This can be achieved through adequate investments in infrastructure to minimize wastage, and improve post-processing, while increasing the linkages to markets.
- Production of organic fertilizer usage through women SHG and also through promotion of integrated farming practices.
- Improving dry season cultivation strategies and ensuring growth of high value crops in the off-season, with high cropping intensity may be done
- Increasing the role of animal husbandry/livestock rearing, as a source of secondary income, while promoting integrated farming is also possible. e-NAM or similar private facilities may be used to eliminate intermediaries and improve benefits to the farmer.
- Villupuram District is known for its paddy, groundnut and Black gram cultivation. There is a good scope for the industry that is willing to manufacture energy food for all age groups and rice mills, oil mills and pulse grain processing for identified as dynamic cluster.
- Traditional industries like handlooms, silk weaving and rice milling are concentrated in Sankarapuram, Koliyanur and Kanai blocks. In fact, the silk industry cluster at Kandamangalam (Siruvanthadu) block has also secured GI TAG recently.

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- The Goat and sheep population is high in the District and therefore, the meat gravy related industry may have huge potential in the future.
- The District has achieved self-sufficiency in the milk production and the surplus milk can be used to produce dairy products.
- The fruit and vegetables based nutritious beverages are gaining popularity and are in good demand at Koliyanur and Vikravandi blocks. There is a good scope for units like mango, citrus pickles, guava drinks, and vegetable candy. In Marakkanam and Vanur blocks There is a good demand for dried fish, fish meal, dried shrimp, canned shrimp and frozen shrimp in domestic as well as export market. There is good scope for exporting these products to others countries as well.
- Villupuram district is surrounded with over 50 percentage of agriculture and horticulture crops. Organic production may be emphasized in the future by setting up block level organic resource center through women groups interested in production of biofertilizers, biopesticide, vermicompost, panjakaviya and agricultural machinery etc.
- Villupuram district has a good scope for the two and four-wheeler service stations and mechanical units have good future. Skill training with may be offered to relate the business further.
- Villupuram District occupies fourth place in the State production of fruits, vegetables and flowers. Crops like Guava, sapota, brinjal and beans and marigold to the needs of horticulture growers to market their produce both in domestic and international markets.
- Vikravandi, Koliyanur, Vallam and Sankarapuram blocks where the potentials can be exploited by undertaking agro based food processing activities in the Villupuram district so, promotion of

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chekku oils, pulses packing unit, pickles making and aricanut plant production etc. may be done in the future

- The major Handloom and power loom weaving industries include lungies and silk sarees in Sankarapuram, Mugaiyur ,Vikkravandi and Koliyanur block where these clusters were predominately started for rural enterprise business promoting with different stakeholders, marketing value chain support and more than 45000 families are engaged in silk industry and their spectacular creations are marketed by a number of cooperative societies.
- A considerable number of granite polishing and blue mattes gravels units are concentrated in Vanur, Marakkanam, Mailam and Vikravandi blocks in Villupuram district under the control of DIC.
- The District provides enough scope for the development and growth of industries engaged in Textiles Garments, Leather Products, Granites, Silk Alloy castings, Machine Tools and Automobile products.

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List of persons met

Sl. No.	Designation & Dept.
1	District Collector
2	Additional Collector (Revenue)
3	PD - DRDA
3	PD- TNSRLM
4	LDM-Indian Bank
5	DDM-NABARD
6	Deputy Director (Agri. Business Marketing)
7	General Manager DIC
8	Deputy Director- Statistics
9	Joint Director – Agriculture
10	Assistant Director-Seed Certification
11	Deputy Director- Horticulture
12	Asst. Director (Sericulture)
13	Agriculture Officer- Uzhavar Sandai
14	Agriculture Officer Agri. Business
15	Village Federations
16	Deputy Director Animal Husbandry
17	Assistant-Agriculture Marketing
18	AO (Agri Business Marketing)

DDS Preparation By :

Villupuram District Project Management Unit

Tamil Nadu Rural Transformation Project,
Villupuram District.