



DISTRICT DIAGNOSTIC REPORT (DDR)



Tamil Nadu Rural Transformation Project
Cuddalore District

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GLOSSARY

CLG	Common Livelihood Group
FPO	Farmer Producer Organisation
ICAR	Indian Council of Agricultural Research
JLG	Joint Liability Group
KVK	Krishi Vigyan Kendra
MSME	Micro Small and Medium Enterprises
NABARD	National Bank for Agriculture and Rural Development
NABFIN	NABARD Financial services
NAF	National Agro Foundation
NGO	Non Government Organisation
NSDC	National Skill Development Corporation
NFSM	National Food Security Mission
NLC	Neyveli Lignite Corporation
NTFP	Non-Timber Forest Produce
PMFBY	Prime Minister Fazal Bima Yojana (PMFBY)
POPIs	Producer Organisation Promoting Institutions
RRS	Regional Research Station
SHG	Self Help Group
SFAC	Small Farmers Agribusiness Consortium
TANSEDA	Tamil Nadu State Seeds Development Agency
TNIAMP	Tamil Nadu Irrigation and Agricultural Modernization Project
TNAU	Tamil Nadu Agricultural University
VPRC	Village Poverty Reduction Committee

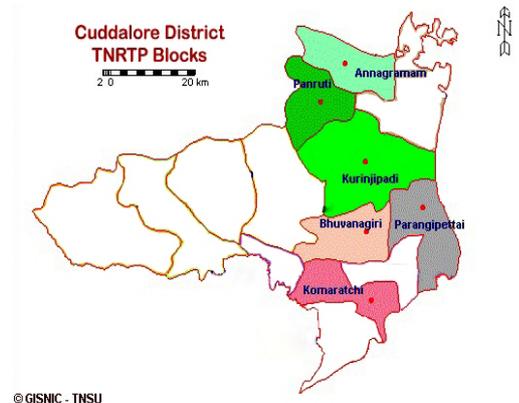
1.1 Tamil Nadu Rural Transformation Project (TNRTP)

The Tamil Nadu Rural Transformation Project (TNRTP) is an innovative World Bank assisted project that aims at rural transformation through strategies that focus beyond poverty alleviation by building sustainability and prosperity of rural communities through enterprise promotion, access to finance and employment opportunities. TNRTP is built on existing institutional capital and investments made by Tamil Nadu Pudhu Vaazhvu Project (TNPVP), Tamil Nadu State Rural Livelihoods Mission (TNSRLM) and National Rural Livelihoods Project (NRLP).

Operation of the Project in Cuddalore District:

The Project will be implemented in 2 phases covering 6 blocks and 280 village panchayats over a period of 6 years.

Phase	Name of the Block	No. of Panchayat
I	Panruti	42
	Kurinjipadi	51
	Komaratchi	57
II	Parangipettai	41
	Mel Buvanagiri	47
	Annagramam	42
	Total	280



Project Beneficiaries:

The project will target primarily the SHG households, who have basic level of assets, resource and skills created by the previous projects; the focus will be on women, scheduled tribes, scheduled castes, differently abled, youth and aspiring entrepreneurs. The beneficiaries will be producer households, aggregated into producer groups/ producer collectives and individual entrepreneurs across farm and non-farm sectors in the selected project blocks of Cuddalore Districts.

1.2. DISTRICT DIAGNOSTICS STUDY

The District Diagnostic Study (DDS) is the first level of analytics, based on stakeholder consultations and analysis of secondary information, the prioritization of the commodities focusing on farm and non-farm sectors, based on the potentiality in Cuddalore District.

In Farm sector Cashew, Black gram and Groundnut stand as prioritized crops for Cuddalore district. Additionally, Fruits and Vegetables can also taken up for priorities. Fisheries could be given a major thrust in Farm allied sector.

The objective of the diagnostics is:

- (1) To assess the socio-economic challenges and opportunities for the identification of cross-cutting /binding constraints to inclusive growth at the district level, and*
- (2) To identify and prioritize current and potential value chains.*

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

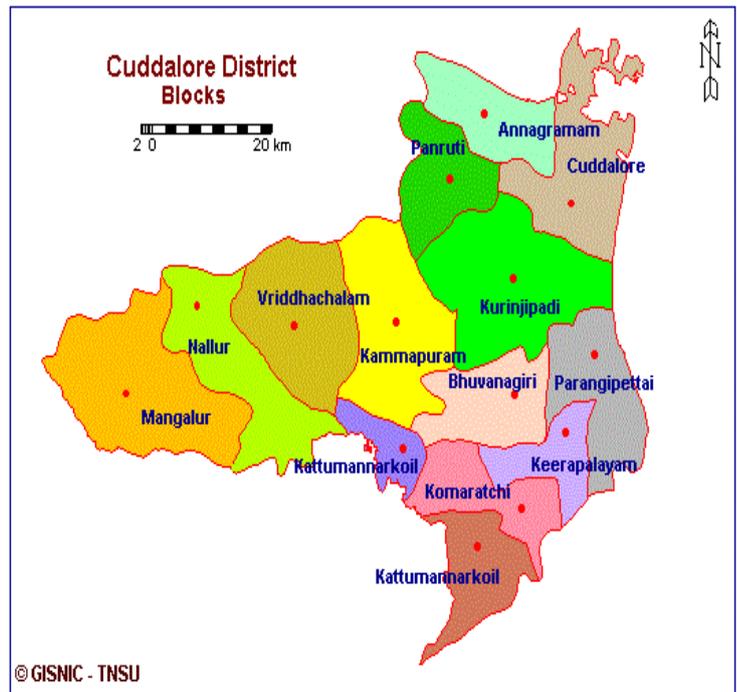
Methodology

Secondary Data was collected from various line departments, Resource Institutions and in the process the officials belonging to various departments were consulted. Interactions were also held with the District and block units of TNSRLM. Site visits were made to the resource institutions, FPOs, traders in the district. Focus Group discussion with the community was held to validate the secondary data.

Cuddalore is one of the backward districts in the State of Tamil Nadu. The district is located along the eastern coastal region of the State. It is bounded on the north by Villupuram district, on the south by Nagapattinam district, on the west by Perambalur and Villupuram districts and on the east by Bay of Bengal. Headquarter of this district is Cuddalore. The Southern boundary follows for the greater part of the length of two rivers - the Vellar and the Coleroon. The district lies between 78° 38' and 80° East longitude and 5° 5' 11" and 12° 35' North latitude. The total geographical area of the district is about 3,678 sq.km

2.1 DISTRICT PROFILE

The present Cuddalore District has been formed on 30.9.1993, by bifurcating the South Arcot district into two viz., Cuddalore and Villupuram. Cuddalore district consists of 3 Revenue Divisions, 10 Taluks, 13 Community Development Blocks, 5 Municipalities, 16 Town Panchayats, 8 Census Towns and 1 Township. The total number of Revenue Villages in the district is 907, of which 683 villages are inhabited.



The following table (1) gives number of taluks with number of towns and Community Development Blocks with number of villages in Cuddalore district.

Table .1. Details of Taluks and Blocks in Cuddalore district

S.No.	Name of Taluk	S.No.	Name of CD Blocks	No. of Villages
1.	Panruti	1.	Cuddalore	51
2.	Cuddalore	2.	Annagramam	42
3.	Kurinjpadi	3.	Panruti	42
4.	Chidambaram	4.	Kurinjpadi	51
5.	Kattumannarkoil	5.	Kattumannarkoil	55
6.	Vriddachalam	6.	Komaratchi	57
7	Titakudi	7.	Keerapalayam	63
8	Bhuvanagiri	8.	Bhuvanagiri	47
9	Srimushnam	9.	Parangipettai	41
10	Veppur	10.	Virudhachalam	51
		11.	Kammapuram	53
		12.	Nallur	64
		13.	Mangalur	66
	Total			683

Source Census of India 2011

3.1 Population:

Description	Number	Percentage
Total population	2600880	100.00
Male	1311151	50.41
Female	1289729	49.59
Rural population	1718249	66.06
Male	869252	50.59
Female	440732	49.93
Urban population	882631	33.94
Male	441899	50.07
Female	440732	49.93

Table.2. Population details of Cuddalore district*Source Census of India 2011*

The population size of Cuddalore district is 26.01 lakhs and it constitutes 3.61 percent of the total population of the State. The population density is 702 persons per sq. km. The details on the rural and urban population as per the 2011 Census are presented below, in Table .1. Cuddalore District ranked 11th place among the highest population size in the state of the total population in the district, 34% lives in urban areas.

The size of population of Cuddalore district is 26.01 lakhs and it consists of 17.18 lakhs of rural population and 8.83 lakhs of urban population. In the total population, the rural

population accounts for 66.06 per cent, and the urban population constitutes 33.94 percent. It could also be observed from the table that the male population is marginally higher than the female population. However, the difference is more vivid in rural than in Urban population.

The density of population in the district is 704/sq.kms against the State level of 555. The decadal population growth rate recorded during 2001-2011 is 14% in the district as against the State growth rate of 15.6%.

Among the blocks the Cuddalore block is the most populous one (3.05 lakhs), followed by Kurinjipadi (2.78 lakhs), Mangalur (2.28 lakhs), Panrutti (2.17 lakhs), Nallur (2.16 lakhs) etc. On the other hand, the minimum population is found in Melbhuvanagiri block. Vadakuthu village in Kurinjipadi taluk has the highest population of 21,236 and Akammapuram village in Kurinjipadi taluk has recorded the least population in the district. The SC population is maximum in Kurinjipadi block with 65919 followed by Nallur (63726) and Mangalur (63154), Cuddalore block with 57991, Keerapalayam block with 48698 etc. The SC population is comparatively lower in the blocks of Melbhuvanagiri, Parangipettai and Panruti. Overall the SC population constitutes 23.73 per cent in the total population of the district.

3.2 Sex Ratio

The district recorded the lowest Child Sex Ratio of 896 in the State. The district recorded the sex ratio of 987 as against the State sex ratio of 996.

3.3 Literacy rate

The details on the literacy levels among the total population, as well as among males and females in the district are presented in Table below. The literacy rate of the district is 71.12% as against the State literacy rate of 73.4%.

Table .3. Literacy level in Cuddalore district

Description	Number	Literacy rate(%)
Total literates	1849805	71.12
Male	1019160	75.73
Female	830645	64.14

Source Census of India 2011

3.4 Occupation

Table .4. Population by Broad Industrial Categories of Workers

S.No.	Industrial Category	No. of workers	Male workers	Female workers	% to Total Workers
1.	Main Workers	837271	586068	251203	32.13
a	Cultivators	136035	98806	37229	14.12
b	Agricultural labors	325599	184740	140859	46.11
c	Household: Manufacturing, Processing, Servicing& Repairs	19151	10469	8682	2.74
d	Other Workers	356486	292053	64433	37.04
2.	Marginal Workers	332609	163565	169044	12.76
	Total Workers	1169880	749633	420247	44.89
3	Non-Workers	1436034	562064	873970	--
	Total Population	2605914	1311697	1294217	--

Source: District Economics and Statistics 2017-18

WORKERS (Category Wise)

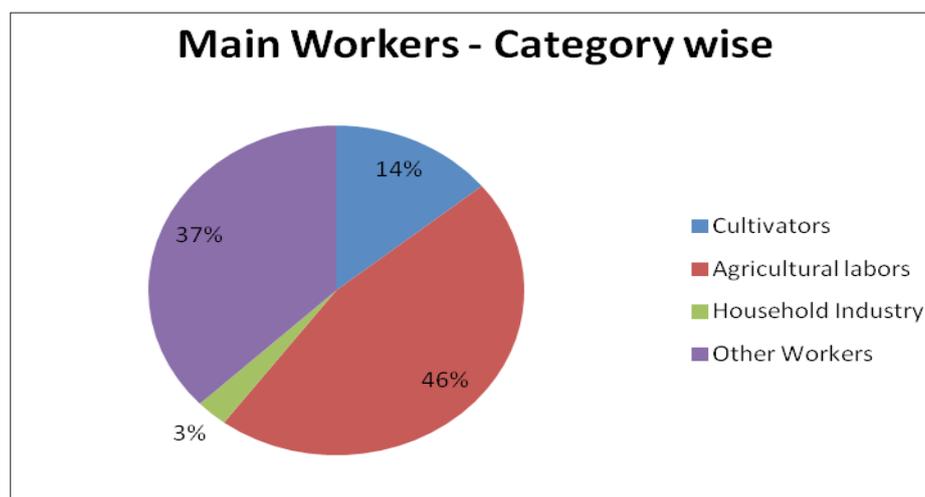


Figure (1) Percentage of workers (Category wise) 2017-18

The size of the work force in the district is 1169880 and it constitutes 44.89 per cent of the district population. The Agricultural labourers alone account for 46.11 per cent of the total work force in the district, while the cultivators constitute 14.12 per cent.

Among the blocks, Cuddalore has the highest workforce (122653 Nos) under different categories and the lowest work force is in Mel Bhuvanagiri block (45204 Nos). As regards agricultural labourers, the highest number is found in Kurinjippadi block (127651 Nos) and the least number is found in Parangipetai block (770 Nos).

The workers have been broadly classified as cultivators, agricultural labourers, household industry workers and other workers. There was negative growth rate (-11.14) of cultivators during 2001 and 2011. It shows that they have switched over to non – farm activities due to vagaries of monsoon and unstable farm income. The negative growth may be due to migration to urban areas in search of employment opportunities. Creating more income opportunities at the rural areas will help to reverse the trend. There was 20.08 percent increase in the growth rate of agricultural labourers during 2001 and 2011. The growth rate of household industry workers was 5.15% in the district during 2001 and 2011. The growth rate of this category is low when compared with other categories of workers except cultivators.

Source: Cuddalore Human development report 2017

3.5 Community based institutions

Community Based Organizations (CBOs) such as Village Poverty Reduction Committees (VPRCs) and Panchayat Level Federations (PLFs) 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 status of CBOs in the district are

No of SHG	Members	Active SHG	Defunct SHG
15390	193977	11754	3636

No. of PLF	CIF Amount	ASF Amount
683	1329 Lakhs	2999.77 Lakhs

No. of CLG	Dairy	Goat	Agri
324	241	43	20

Social Capital

CRP/CP/Motivators

CSTs

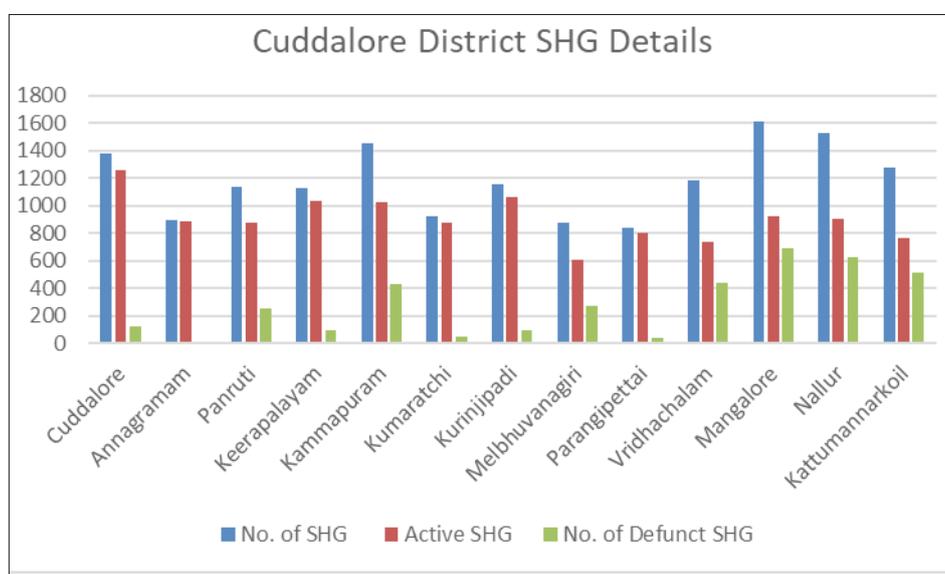
Book keepers

25049

23508

874

667



SHG - Bulk Loan Details

S.No.	Name of the Block	2018-19	
		No. of Bulk Loans	Amount (Rs. in lakhs)
1	Cuddalore	3	217
2	Annagramam	3	130.00
3	Panruti	1	40.00
4	Kumaratchi	1	56.00
5	Nallur	1	50.00
6	Melbhuvanagiri	2	110.00
Total		11	603.00

Most of the community-based organizations in Cuddalore 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. A total of 11317 SHGs have been linked with banks for credit to an amount of Rs 50196 lakh till the end of October 2019.

3.6 Farmer Producer Organizations (FPOs)

Table.5.Farmers Producer Organizations in Cuddalore

S. No	Farmers Producer Organisation	Block/Area	Crops/ Commodities	Resource Institution	Members	Supported By
1	Mangalore Millets Farmers Producer Company Ltd	Mangalur	Millets & Maize	Centre for Indian Knowledge Systems(CIKS-Chennai)	1000	Department of Agriculture Marketing
2	Veeranarayanan Agriculture Farmers Producer Company Ltd	Parangipattei	Black Gram, Green Gram	Centre for Indian Knowledge Systems [CIKS], Chennai.	1000	Department of Agriculture Marketing
3	Vadalur Musa Cocos Farmers Producer Company Limited	Cuddalore	Coconut Banana	Unique Educational Trust (UET)	1000	Department of Agriculture Marketing
4	Keerapalayam Collective Farming Farmers Producer Company Limited	Keerapalayam	Paddy, Pulses, Vegetables	National Agro Foundation[NAF], Chennai	300	Department of Agriculture Marketing
5	Thillai Natrajar Collective Farming Farmers Producer Company Limited	Komaratchi	Paddy, Pulses, Vegetables, Flowers	National Agro Foundation[NAF], Chennai	300	Department of Agriculture Marketing
6	Virudhagireeswarar Collective Farming Farmers Producer Company Limited	Vridhachalam	Paddy, Pulses, Vegetables	National Agro Foundation[NAF], Chennai	300	Department of Agriculture Marketing
7	Panruti Farmers Producer Company Ltd	Annagaram & Panruti	paddy, pulses oilseeds and vegetables	Centre for Rural Education and Economic Development (CREED)	460	NABARD
8	Kadalore District Organic Farmers Producer Company Ltd	Karaikadu	Organic Farming	Hand-in-Hand India	300	NABARD
9	Sri Selva Vinayagar Fruit Farmers Producer Company Ltd	Panruti & Cuddalore	Fruits	National Agro Foundation[NAF], Chennai	220	NABARD

10	Veerarajendra Chozhan Farmers Producer Company Ltd	Kattuman -narkoil	Maize	National Agro Foundation [NAF], Chennai	620	NABARD
11	Cuddalore Community Livelihood Services Producer Company Ltd	Cuddalore	Milk, Arecanut plates, Bamboo Basket, Papad, Ceramic	The Leprosy Mission Trust India		
12	Porto Nova Women Cashew Producer Company Limited	Parangipattei	Cashew			
13	Kalanjiam Milk Producer Company Limited	Kallanjavadi- Kurinjipadi	Milk			

Source: NABARD and Department of Agriculture Marketing

There are four FPCs Promoted by NABARD which were registered in year 2016-17 through POPIs CREED, Hand-in Hand and NAF. These are located in Annagramam, Panruti, Karaikadu, Cuddalore and Kattumannarkoil. They are formed on commodities Paddy, Pulses, Vegetables, Organic farming, Fruits and Maize. 82 FIGs. The number of members in the FPCs range from 220 to 620. In two FPCs there are about 50% women members. The business activities pursued by the FPCs are supply of inputs, Vermicompost and mushroom production.

Six FPCs have been promoted and registered by the Agriculture marketing department. They are located in Mangallur, Chidambaram, Cuddalore, Vriddhachalam, Keerapalyam, Kumaratchi and kollidam. They work on M Millets (Maize and Varagu), Seed processing units (Paddy and Pulses), Groundnut export and Neera. Under Supply chain management 30 cashew processing units have been given to FIGs in Cuddalore district. Also, two primary processing units for Jack, Guava and Vegetables have been supplied for carrying out cleaning, grading and packing of the fruits and vegetables. The Mangallur FPC which undertakes business activities on Maize and Varagu caters to animal and poultry feed units.

4

DISTRICT ECONOMIC PROFILE

The contribution of the district to state GDP has varied between a high of 3.3% and a low of 3.05%. The contribution has moderated in recent years and is steady at about 3.15% in 2008-09. Per capita incomes are low relative to the state, and urban rural disparity is wide. The district does moderately well on human development indicators like HDI and GDI, with scores of 0.64 for both, but still trails the state average.

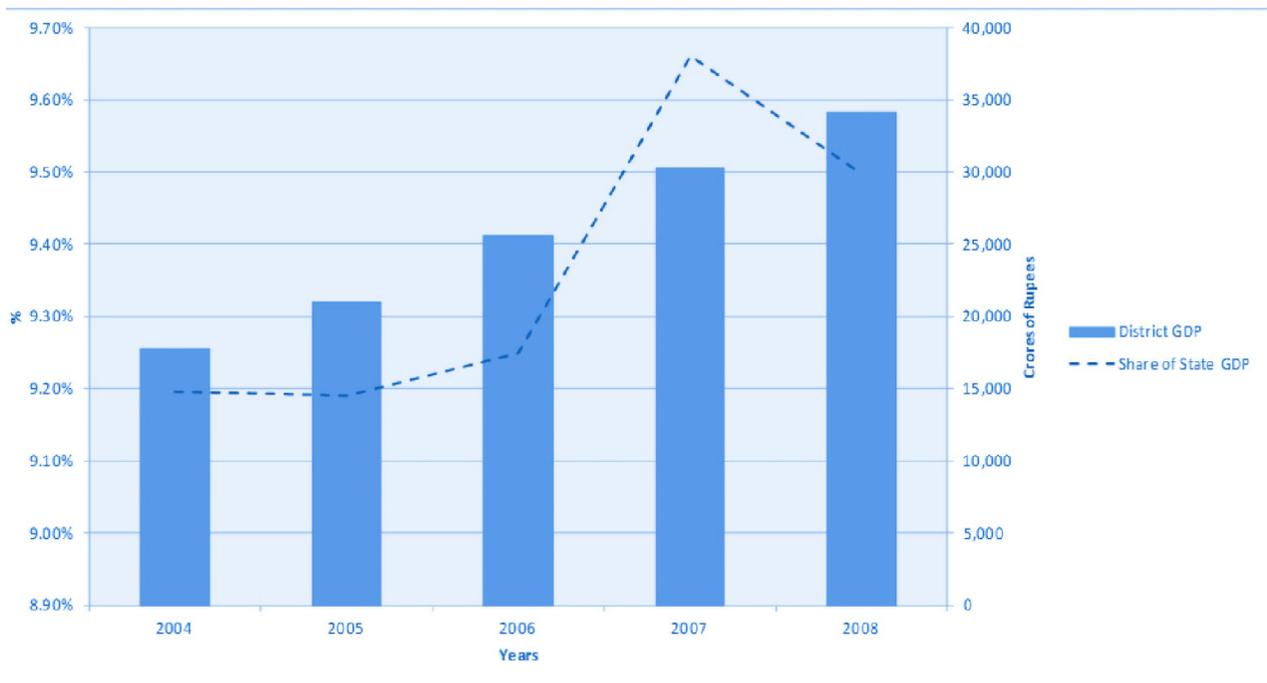


Figure.2. District GDP Growth and % Share of State GDP for 2004-2008

Source: NSDC report

Trade, hotels and restaurants accounted for 17% of the district GDP, followed by real estate services at 15%. Agriculture accounts for 9% while fishing activities accounts for another 2%. Manufacturing accounts for just 8%, of which the majority is unregistered manufacturing. Other dominant sectors include banking and financial services, communication and railways.

Per Capita Income (2011-12)

Human Development Indicators	Cuddalore	Tamil Nadu
Per capita urban income	67,500	100,600
Per capita rural income	28,500	39,400

Source: Indicus Analytics: Market Skyline of India (2011-12)

4.1 LABOUR AND EMPLOYMENT

Table.6. No. of Persons Registered During the year and total no. of persons waiting up to the end of the year as per live register.

Year: 2018-19

Sl.No	Type of Employment Exchange	No. of Persons registered during the year 2018-2019	Total No. of persons waiting Up to the end of the year
1	Cuddalore	31,208	2,70,726

Source: District Employment Exchange Cuddalore

From above table it could be inferred that the total number of persons awaiting till the end of 2019 is 27,83,346.

Table .7. No. of placements during the year 2018-19

Sl.No	Type of Employment Exchanges	Placements during the year 2018-2019
1	Cuddalore	59

Source: District Employment Exchange Cuddalore

4.2. CONNECTIVITY

Table .8. Length of Roads (In Kilometers)

S.No	Type of roads	Total length	Unsurfaced Roads	Water Ways	Bituminous	Cement Concrete
1.	Panchayat Union	3325.266	601.022	469.421	2082.055	146.945
2.	Town Panchayats	521.863	43.588	40.714	284.481	153.080
3.	Municipalities	503.869	54.332	35.000	246.035	168.462
4.	State Highways	1657.311	-	-	1652.746	4.565
5.	National Highways	152.800	-	-	152.800	-
6.	Other Roads (Specify) Sugar Cane/ Forests	205.746	0.100	-	205.646	-
	TOTAL	6366.855	699.042	545.135	4623.763	473.052

Source: Panchayat Union, Town Panchayat, Municipalities, State Highways, National Highways, Forests, Sugar mills, Cuddalore

Table .9. Railway Lines and Stations

S.No	Item	Broad Gauge	Broad Gauge & Meter Gauge	Total
1.	Route Length (in Kms.)	188	--	188
2.	Track Length (in Kms.)	188	--	188
3.	Number of Railway Stations	27	--	27

Source: Station Master, Cuddalore Port Junction,

Port Development:

There are intermediate ports at Cuddalore O.T. The details are presented below.

Table.10. Details of Port

Sl.No	Name of the Port	Vessels entered		Cargo handled in MT
		Ships	Others	
1.	Cuddalore	33	101	259070MTS& Barrels 16Nos

Source: Port Officer, Cuddalore Port

5.1 Topography

The District is located along the Eastern Coastal Region of the State. The District of Cuddalore is bordered by the district at Villuppuram, Nagapattinam and Perambalur. The district is also bordered by the Bay of Bengal on the Eastern side. It lies in the Agro Climatic zone II (East Coast Plains and Hills) and the Geographic Coordinates of the district are: Latitude is 15° 5" / 11° 11" and 12° 35" N, Longitude is 78° 38" to 80° 00" east and Altitude 4.6m MSL.

The total geographical area of the district is 3678 Square kilometers with coastal line of 57.5 kms from Marakanam which is now in the Villupuram District in the North to the Mouth of River Coleroon in the South. The terrain of the mainland is plain, gently sloping downwards from west to east without much undulation. The Geomorphology of the Cuddalore Coastal Stretch includes the coastal plain with an average width of 6 km. Its coastal landforms include strandlines, raised beaches, sand dunes, mangrove swamps and tidal flats with predominantly sandy beaches on the northern side and mangrove swamps to the south.

5.2 Land Use Pattern of the District

The total geographical area of Cuddalore district is 3,67,781 hectares. The total gross cropped area of the district was 316889.110 ha and net area sown was 213092.380 hectares in 2017-18. Further it could be seen that the forest area was a meager three per cent of the total geographical area (Figure 4).

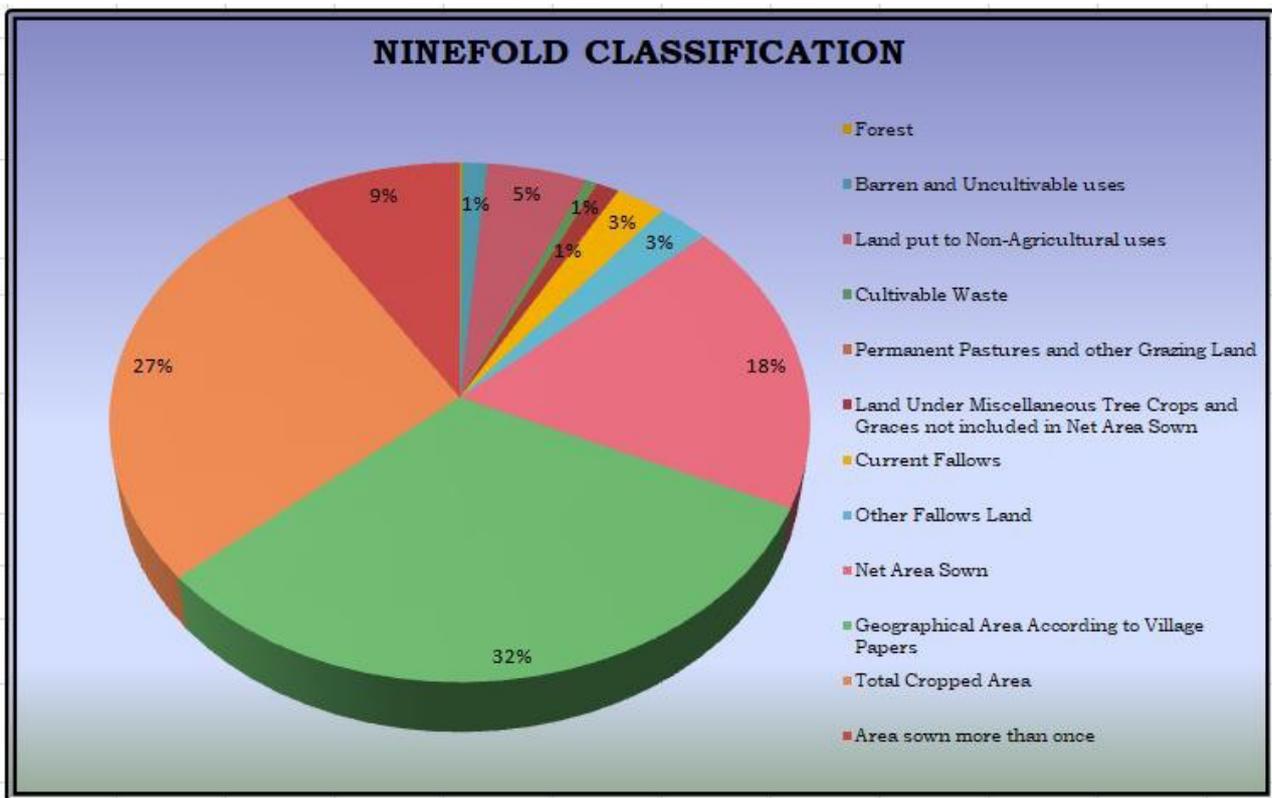


Figure. 3. Land use pattern Source: Dist stat Handbook 2017-18.

Most of the forest area lies in Panruti, Chidambaram Kattumannarkoil, Virudhachalam and Titakudi Taluks.

The net area sown is 213092.380 hectares (2017-18) which accounts to 18% of the total geographical area. The area sown more than once has decreased from 1,12,543 hectares (2014-15) to 1,03,796.730 hectares (2017-18) which shows that the potential of second crop is dictated by the behavior of the monsoon and corresponding availability of water in surface / sub surface storages

5.3 Land types

Based on the irrigation and cropping patterns, the lands are classified into three major types namely viz. Wet land, Garden land and Dry land. Sizeable extent of wetlands is found almost in all the blocks, except Mel Bhuvanagiri and Keerapalayam. About 10000 ha of wetlands are found in each of Kurinjipadi, Parangipetai, Kattumannarcoil, and Kumaratchi blocks which are coming under the Cauvery-Coleroonayacut. Virudhachalam is also having nearly 10000 ha of wet land and this might be due to Manimuktha river irrigation system.

Garden land area is found predominately in Kurinjipadi, Nallur, Cuddalore and Kammapuram blocks and on the other hand, dry land is found predominately in Mangalur, Panruti, Annagramam, Parangipetai and Virudhachalam blocks. Mangalur has got the maximum area of 28348 ha of dry land. (Source: District Agricultural Plan 2015-20)

5.4 Climate and Rainfall

The district has a hot tropical climate. The summer season, which is very oppressive, is from March to May. The southwest monsoon, which follows, lasts till September. October to December constitutes North East monsoon season. January to February is the comparatively cooler period. The highest and lowest temperatures recorded are in June (37.7° C), and January (20.4° C) respectively. The relative humidity recorded in Cuddalore district is about 65 to 85%. Highest humidity percentage is observed during the North East monsoon period i.e., from October through December. Wind velocity is moderate showing its maximum during May and lowest in November.

Cuddalore district is influenced by both the South West and North East monsoons, the latter is cyclonic in nature and attributable to a series of lows that develop in the Indian Ocean and Bay of Bengal and sweep across the peninsula. Normally this area receives about an annual rainfall of 1304.6 mm. The normal annual rainfall over the district varies from about 1748 mm to about 1292 mm. It is the minimum around Srimushnam (309 mm). It gradually increases and reaches a maximum around Veppur (1748 mm).

Table.11. Season Wise Rainfall Year: 2017-18

Period	Actual	Normal
SOUTH-WEST MONSOON	422.7	337.2
NORTH-EAST MONSOON	1026.8	838.1
WINTER	9.7	47.4
HOT SUMMER	27.7	81.9
TOTAL	1486.9	1304.6

Source: Dist Stat Handbook 2017-18

The above table indicated that annual rainfall received during the year 2017-18 above normal for south west and north east monsoon seasons respectively.

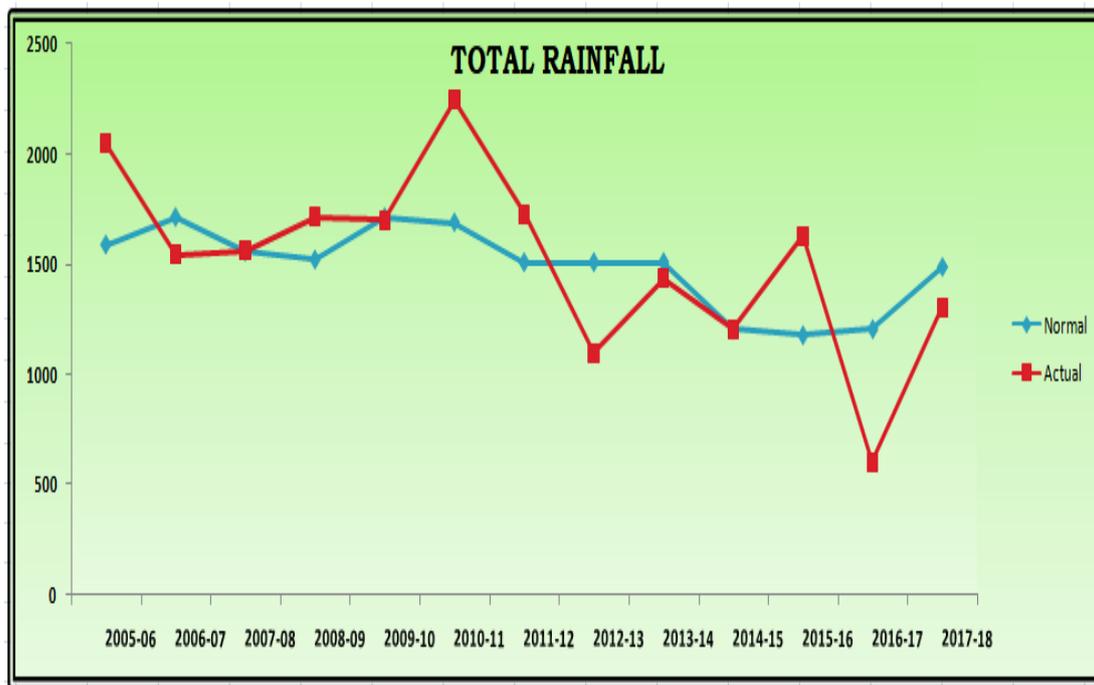


Figure.4. Source Dist Stat Handbook 2017-18

The above figure shows that the rainfall trend has been on an above normal rainfall for most of the years in Cuddalore district.

5.5 Disaster Vulnerability

Cuddalore has always been classified as a multi-hazard prone district. Cyclones and flood have wreaked havoc in the district several times in the past few centuries. The District also falls within the Zone-3 with respect to earthquakes. A part of the problem owes its genesis to the location of the district. The District has a long



coastline and therefore the district is vulnerable to the cyclonic depressions and the resultant rains which cause floods. The Bay of Bengal experiences severe tropical cyclones during North East Monsoon [October through December]. The cyclone surges are well known for their destructive potential and impact on human activities due to

associated strong winds along the coast and heavy rainfall. An added risk factor is that large parts of the coastal zone are low lying and with a gentle slope, resulting in large inundation, and therefore increased vulnerability of the region.

The district suffers from flooding when excess water flows down the local rivers and over the field due to northeast monsoon rains in the district. The drainage is poor and the encroachments over the drought years have led to a scenario where even rainfalls, which are slightly above normal causes floods disrupting the normal course of work. Along the coast of Tamil Nadu, the Nagapattinam–Cuddalore region experienced the worst impacts of the Tsunami surge and inundation caused by the great Sumatra Earthquake on 26th December 2004. The surge heights of waves along this coastal region were of the order of 2-5 to 3-3m, with inundation distances between 330 and 1,680 m into the hinterland. The devastation caused by the Tsunami has left coastal lands flattened and billions of dollars worth infrastructure, economic assets and materials losses. According to the official statistics, the proportion of human toll among women was three times more than men in Cuddalore district. It had severe impact on coastal fishing communities in Cuddalore destroying houses, boats, fishing gear agricultural land and salt pans wiping out the livelihoods of millions of people. Subsequently, Cyclonic Storm Thane was the strongest tropical cyclone of 2011 with in the North Indian Ocean. Thane made landfall, on the north Tamil Nadu coast between Cuddalore and Puducherry and left at least 39 people dead in Cuddalore district. Nisha in 2008 and Cyclone Thane in December 2011 created surge heights of waves between 1 and 5m.

5.6 Soil

Different types of soils found in the district are listed in Table (6.6) below:

Table .12. Soil types in the Cuddalore district

S.No	Type	Area(hectares)
1.	Sandy Loam	91679
2.	Sandy	31974
3.	Clay loam	115565
4.	Sandy Clay loam	128573
	Total	367791

Source: District Agricultural Plan, Cuddalore district, 2016

As could be seen from Table 4, the Sandy clay loam soil is found on the maximum area of 128573 ha in the district, followed by clay-loam (115565 ha), sandy-loam (91679) and sandy soil (31974 ha).

The black soil is found in the maximum area of 38021 ha in the Mangalur block followed by the blocks of Nallur (12185 ha), Kattumannarkoil (9000 ha), Virudhachalam (7300 ha), Keerapalayam (4720 ha), Mel Bhuvanagiri (3450 ha) and Kammapuram (250 ha).

The loamy soil is found in 60709 ha in the district. The loamy soil is also found on the maximum area of 13508 ha in Kurinjipadi followed by Kumaratchi (12857 ha), Kammapuram (12152 ha), Panruti (9426 ha), Keerapalayam (4800 ha), Mel Bhuvanagiri (4140 ha) etc.

Red soil is found in 44109 ha in the district. The maximum red soil area of 13633 ha is observed in Panruti block followed by Nallur with 9986 ha, Kammapuram with 7520 ha, Virudhachalam with 3700 ha, Kurinjipadi with 3200 ha, Keerapalayam with 2825 ha and Kattumannarcoil with 2000 ha. Sizable areas of alluvial soil is found in the blocks of Virudhachalam, Kurinjipadi, Kattumannarcoil and Mangalur Clay soil and Sandy loam are found in Parangipetai block, while the problem soils are spotted in the blocks of Virudhachalam, Mel Bhuvanagiri and Keerapalayam.

Overall, these soils except problem soils are highly suitable to raise the major crops like Paddy, Pulses, Sugarcane, Groundnut, Cotton etc. The problem soils however need special attention to reclaim and bring under cultivation.

5.7 Water Resources

Rivers

There is no perennial river in the district. Cuddalore district is endowed with the following five river basins

- a) Cauvery- coleroon river basin
- b) Vellar river basin
- c) Manimuthar river basin
- d) Lower Pennaiyar river basin and
- e) Gadilam river basin

Reservoirs

- 1) Lower Anaicut is built across the Coleroon river with an ayacut of 1,31,799 ha and it benefits Kattumannarkoil, Chidambaram and Cuddalore taluks through Rajan Canal and Veeranam tank.
- 2) There are five reservoirs and six anaicuts across Vellar river basins with total ayacut of about 32,980 ha.
- 3) Wellington Reservoir benefits Cuddalore, Vriddhachalam and Thittagudi taluk with an ayacut of 24,059 acres.



6

STATUS OF GROUNDWATER

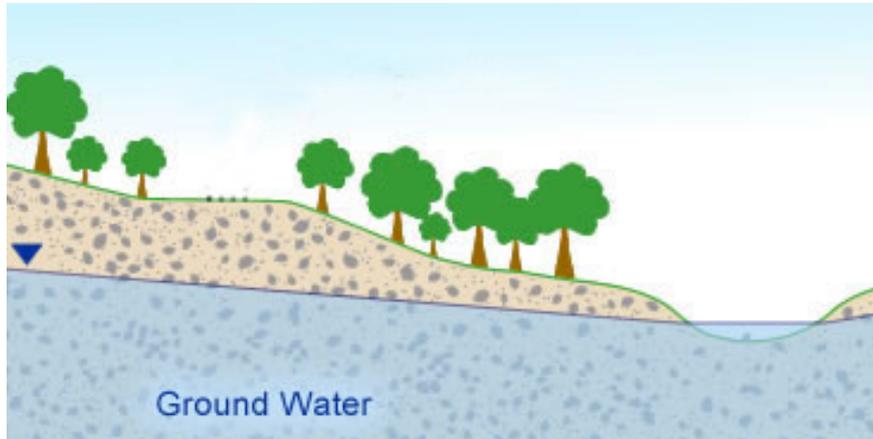


Table.13. Block Wise of details of Ground Water Potential of Cuddalore District

Semi Critical (60- 85%)	Safe
Annagrammam	Kattumannarkoil
Cuddalore	Keerapalayam
Kammapuram	Kumaratchi
Kurinjipadi	Parangipettai
Mangaluru	
Melbhuvanagiri	
Nallur	
Panruti	
Vriddhachalam	

Source: Tech Report Series, Central GroundwaterBoard,2009.

From the table, it could be seen Semi critical (60-85 per cent) was noticed in nine blocks of Annagrammam, Cuddalore, Kammapuram, Kurinjipadi, Mangaluru, Melbhuvanagiri, Nallur, Panruti and Vriddachalam.

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 (78.73 per cent) in Cuddalore district have less than one hectare occupying 38 percent of the land area. These details are presented in Table 7.

Table.14. Number and area of operational land holdings

S.I No	Category	Area	Operational Holdings Area in ha	% Operational Holdings	No. of Holdings	% total number of Holdings
1	Marginal	<1ha	87455	38.00	242959	78.73
2	Small	1-2ha	57680	25.06	42142	13.66
3	Small-medium	2-5ha	47490	20.63	17691	5.73
4	Medium	5-10ha	29754	12.92	5325	1.73
5	Large	>10ha	7741	3.36	488	0.16
	Total		230120			

Source: District Statistical Handbook 2017-18

Out of the total operational area , 38.0 per cent is under marginal holdings and 25.06 per cent is under small (1-2 ha area) and 20.63 per cent of the area is under small-medium holdings. The number of holdings is also the highest with marginal players (242959 holdings). Thus, while the least percentage of holdings is large owning more than 10 ha, the highest number is recorded with marginal players (less than one hectare). Further, the small and marginal farmers put together accounts for about 92 per cent of the holdings operating about 62 percent of the area.

Among the blocks Kammapuram has the highest percentage of marginal and Vriddhachalam has the highest number of small farmers in followed by Kumaratchi, Nallur in order. The lowest is noted in Panruti. Larger numbers of medium farmers are found in blocks like Mangaluru, Panruti, and Vriddhachalam etc. Larger holdings are found mostly in Panruti, Kurinjipadi, Cuddalore and Parangipetai. In overall, this district is characterized by larger number of small and marginal farmers.

7.2. Irrigation

Cuddalore district is at the tail end of the Cauvery delta region. Parts of the district get water from the irrigation canals that bring water from Mettur dam. Ground water from Neyveli mines also provides irrigation coverage to crops. According to a rough estimate, 30% of the farms are dependent solely on rainfall and the rest have access to irrigation/ground water pumps.

Table .15 Details of sources of irrigation in Cuddalore district

Source	Number	Net Irrigated Area (in ha)	Percent
Canals	270	38811.99	28.92
Tanks	592	2258.66	1.68
Tube wells	36940	88119.57	65.67
Open wells	4265	6870.21	5.11
Others		389.36	0.29
Total		134191.13	100

Source: District Statistical Handbook 2017-18

In Cuddalore district, 592 tanks, 270 canals and one major reservoir serve as the main source for irrigation. The tube wells are the major sources of irrigation in the district (65.67%) supplemented by canals (28.92%). Open well form only 5% The district had 188 major tanks (with ayacut of 40 ha. or more) and 404 small tanks (with ayacut of less than 40 ha.). Wellington reservoir is the major reservoir in Thittagudi Taluk and Veeranam tank is the major irrigation source in Chidambaram and Kattumannarkoil Taluks. In Kurunjipadi taluk, Perumal Lake is the major surface irrigation source.

Generally, for Agriculture purpose maximum amount of available water resource are utilized through minor irrigation schemes. The surface flow in the rivers can be observed only during monsoon periods. The deficient monsoon rainfall has affected the flow of surface water into reservoirs, anaicuts, lakes etc. Hence under these circumstances the agriculturists have to totally depend upon an alternative source i.e., ground water to meet their irrigation requirement. The south eastern part of this district comes under Cauvery ayacut, irrigated by the lower Anaicut-Vadalur Veeranam-Perumal tank irrigation system.

Canal irrigation is predominant in the Cauvery-Coleroon basin blocks of Parangipetai, Mel-Bhuvanagiri, Kattumannarcoil, and part of Kurinjipadi blocks. In these blocks, except Parangipetai, the canal irrigation is also supplemented by bore-wells irrigation to a considerable extent. However, the bore wells are predominantly found in blocks such as Kurinjipadi, Annagramam, Virudhachalam and Kammapuram. The open wells irrigation is predominant in Mangalore and Nallur blocks. It is also pertinent to observe that Panruti block is having very minimal area under irrigation. Nallur block also has comparatively the lowest area under irrigation.

The major irrigated crops in the district are paddy, pulses, groundnut, sugarcane, banana, vegetables, 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, groundnut and pulses can also be increased to the target levels by proper water management practices.

7.3. Cropping pattern and Major Crops

Important crops grown in the district are Paddy, Sugarcane, Groundnut, Cumbu, Maize, Cashew, pulses (Blackgram and Greengram), Tapioca, Jackfruit, Guava and Brinjal. The most important cash crop of the district is Cashew. Sugarcane is the next most important cashcrop of the District. Many cashew processing units are located in Panrutiblocks. EID Parry which is located in Nellikuppam near Cuddalore undertakes most of the Sugar cane related procurement and processing from the growers and is supplied to some other mills, located out of the district like Moongilthuraipattu and Thirupathur.

Cropping pattern:

The sequence of cropping season is from Kuruvai (April to July), Samba/ Thaladi/ (August to November) and Navarai / Kodai (December to March). Black gram is grown as rice fallow pulse in the district.

Area, Production and Productivity of Major Agricultural Crops:

Table.16. Area, Production and Productivity of Agricultural Crops (2018-19)

S.No.	Crop	Area(ha)	Production (MT)	Productivity (MT/ha)
1	Paddy	34345(122535) *	126373(513174) *	4.93
2	Maize	21666	132222	5.01
3	Cumbu	3976	13333	2.24
4	Varagu	719	1499	5.98
5	Blackgram	51641	31712	8.63
6	Greengram	10259	4655	3.53
7	Groundnut	9302	48951	5.35
8	Gingelly	2366	1540	5.45
9	Cotton	5492	5831	5.04
10	Sugarcane	16654	2105.94	1.44

Source: Joint Director of Agriculture, Cuddalore district.

From the above table it could be noted that Paddy, the major food crop is grown on more than one lakh hectares in the district (it has decreased only in the year 2017-18 due to water scarcity). Maize and Cumbu are cultivated on a considerable area. Pulses namely green and black grams are cultivated on more than 61000 hectares. Sugarcane is the next important crops grown on about 16654 ha. Groundnut is the major oil seed crop cultivated on an area of about 9302 hectares.

Table.17. Major crop in Area of Cultivation (ha) to State 2016-17 (Ranking)

S.No	Crop	Area(ha.)	State	Percent	Rank
1	Groundnut	8597	282488	3.04	9
2	Maize	20558	315030	6.53	5
3	Cumbu	4243	49673	1.35	3
4.	Blackgram	50981	429784	16.28	3
5.	Greengram	9890	165974	3.16	5
6.	Varagu	1034	1861	55.62	1

Source: Season and crop report 2016-17

It is also pertinent to note from the above table that the contribution of Cuddalore district in the state production is substantial in crops like Cumbu, Black gram, Gingelly and Sugarcane. Cuddalore also tops the state in Varagu Cultivation.

From the above table it could be inferred that Cuddalore contributes substantially to the state

Table. 18. Trend in Area of cultivation of Major agricultural crops

S.No	Crop	16-17	17-18	18-19
1.	Paddy	123847	122535	34345
2.	Blackgram	50982	51304	51641
3.	Maize	20557	18856	21666

Source: Joint Director of Agriculture, Cuddalore district.

It could be noted from above table that the area of cultivation was increasing in Blackgram and Maize whereas it has decreasing trend for Paddy.

The productivity in Paddy, Cumbu, Black gram, Green gram, Groundnut, Sugarcane, Cashewnut and Brinjal in Cuddalore district is higher than that of the state, while it is lower in Maize and Gingelly

7.4 Block-wise area under different crops

Among the blocks, Mangaluru has the highest area under crops (29635.18 ha) followed by Keerapalayam (27500.64 ha), Kurinjipadi (25017.00 ha), Kattumannarkoil (25861.00 ha) and Kumaratchi (24167.00 ha). Though paddy is cultivated almost in all the blocks, the maximum area is found in Kattumannarkoil and the minimum area is noted in Panruti block. While more than 12000 ha are under paddy in blocks coming under the Cauvery– Kollidam Ayacut area namely Kattumannarkoil, Keerapalayam, Kumaratchi, Mel-Bhuvanagiri and Parangipetai blocks, lesser than 10000 ha are found in the other blocks. The cholam cultivation is confined to only Mangaluru block, while Cumbu is cultivated on a sizable area in the blocks of Virudhachalam, Kurinjipadi and Kammapuram. The cultivation of maize is mostly confined to Mangaluru and Nallur blocks.

Pulses namely green gram and black gram are cultivated on the maximum area of 13598 ha in Keerapalayam block, followed by Kattumannarkoil (8505 ha), Kumaratchi (7881 ha) and Melbhuvanagiri (4662 ha) blocks and all these blocks are under Cauvery-Kollidam ayacut. In these blocks green gram and black gram are cultivated in the rice fallows. In Kammapuram block also the pulses are cultivated on nearly 4000 ha. Here also pulses are grown in rice fallows. Around 3000 ha are under pulses (mostly black gram) in Nallur block.

Among oil seeds crops, Ground nut is the major crop cultivated on more than 4000 hectares in each of Kurinjipadi, Mel Bhuvanagiri and Virudhachalam blocks. Ground nut is cultivated on an area of around 1000 hectars in each of Cuddalore, Anna gramam and Kammapuram blocks. Gingelly is yet another important oil seed crop, whose cultivation is confined to Kurinjipadi, Nallur and Mangaluru blocks. Cultivation of newly introduced crop namely Sunflower is confined to Virudhachalam block only.

Sugarcane cultivation is taken up on more than 4000 hectares in each of Annagramam and Nallur blocks. In blocks such as Cuddalore, Kurinjipadi, Panruti, Kattumannarkoil and Kammapuram sugarcane cultivation is taken up under 2000 to 3000 hectars in each. In Keerapalayam and Virudhachalam blocks it is cultivated in area of 1000 hectares in each. The newly introduced sugar beet crop is cultivated on an area of nearly 4000 hectares in Mangaluru block only.

Table.19. Area of production of Major Horticultural crops 18-19

S.No	Crop	Area(ha)	S.No	Crop	Area(ha)
1.	Banana	4586	6.	Brinjal	436
2.	Mango	979	7.	Cashew nut	29325
3.	Jack	709	8.	Coconut	1360
4.	Guava	883	9.	Turmeric	234
5.	Tapioca	5557	10.	Jasmine	184

It could be noted from the above table that the area of cultivation is very high in Cashewnut. and Jack. The horticultural crops like fruits, vegetables and flowers are also grown commercially and marketed in the district. Cashew and Jack cultivation is localized in Panruti and Kurinjipadi blocks of the district.

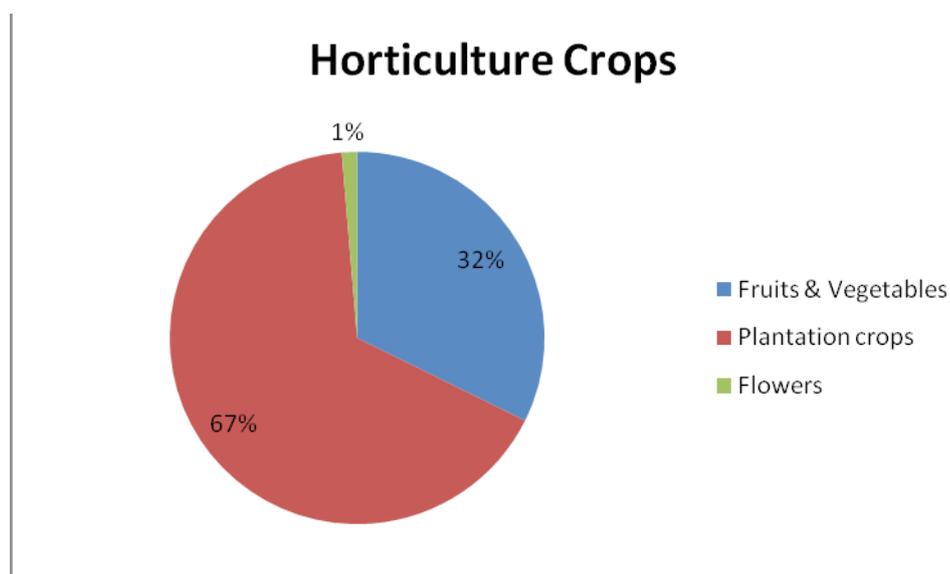


Figure.5. Percentage of Area of cultivation of Horticultural Crops

Regarding horticultural crops, Cashew is cultivated to the tune of 30000 ha in Panruti and Kurinjipadi blocks. Vegetables are cultivated on an area of about 10000 hectares in the district. More than half of this area is found in Mangaluru block. About one-third of area is found in Virudhachalam Limited areas are found under vegetables in the blocks of Cuddalore, Annagramam, Panruti etc.

Flowers (particularly Jasmine) are cultivated in less than 100 hectares in each of Cuddalore, Keerapalayam, Kattumannarkoil and Mangaluru blocks. The cultivation of the famous horticultural tree crops namely Cashew and Jack is localized in Panruti and the adjoining Cuddalore and Kurinjipadi blocks of the district. Cuddalore is famous for its special Jack varieties and a type of Brinjal found in Kottimalai and Vallampadugai villages.

Table .20. Comparison of Area of production of Cuddalore to State (2016-17) of Major Horticultural crops

S.No	Crop	Cuddalore	State	Percent	Rank
1.	Cashew	29307	86230	33.98	2
2.	Guava	6344	46271	13.58	2
3.	Jack fruit	686	3072	22.33	1

From the above table it could be noted that cuddalore tops the state of Tamilnadu in the area of cultivation of Cashew and Jack fruit.

Trend in area of cultivation -Horticulture Crops

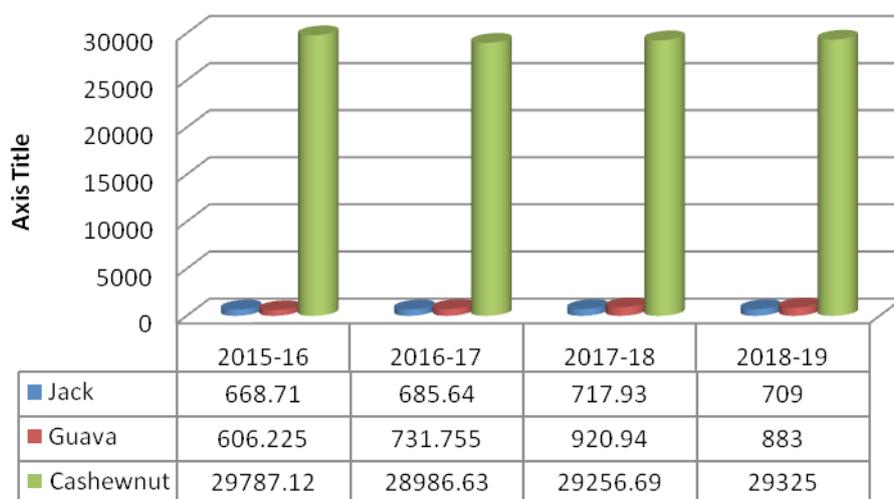


Figure.6.Trend in area of cultivation of Major Horticultural crops

7.5 Prioritisation of crops

Though Paddy and Sugarcane are the major crops Cuddalore in area of cultivation, these two crops are high water users and have more regulated approaches, hence could be excluded. Considering the widespread area of cultivation, trend in the cultivation of these crops and demand in the market namely **Cashew, Black Gram, Groundnut stand as prioritized crops in the district.**

Major crops in TNRTP blocks

Given below are the Major crops predominantly grown in TNRTP blocks.

Table.21. Major crops in TNTRP blocks

S.No	Blocks	Major Crops
1.	Annagrammam	Horticultural crops (Jack, Guava and vegetables,Pulses, Flowers
2.	Melbhuvanagiri	Paddy, Pulses (Black gram and Green gram), Flowers
3.	Panruti	Cashew and Jack, groundnut, vegetables, Flowers, Pulses
4.	Parangipettai	Paddy, Pulses (Black and Green gram), Vettiver, Cashew, Flowers
5.	Kumaratchi	Paddy, Pulses (Black and Green gram), Banana, cashew, vegetables and flowers.
6.	Kurinjipadi	Groundnut, Cashew(Both wetlands and garden lands),Pulses, Vegetables, Flowers

7.6 Crop wise block coverage

a.Cashewnut

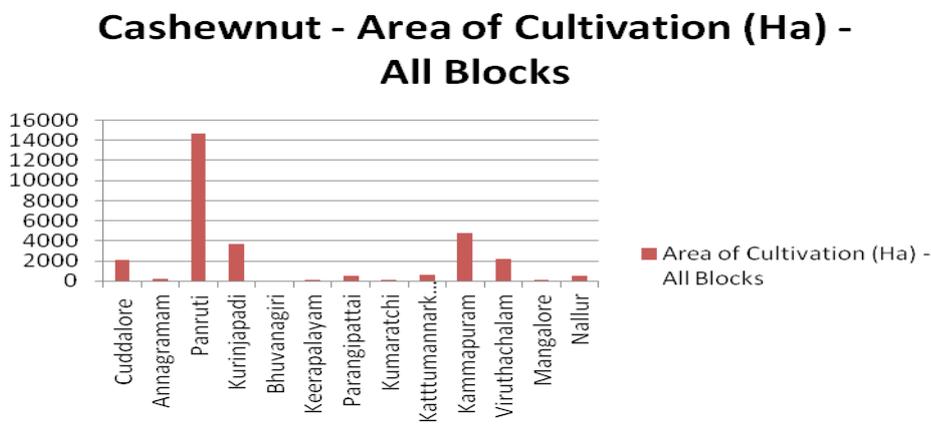


Figure.7. Blockwise area of cultivation in Cashewnut

The above figure shows that the area of cultivation is maximum in Panruti block (14500 ha) followed by kammapuram block (4500 ha). It is widely cultivated in all blocks except Melbhuvanagiri.

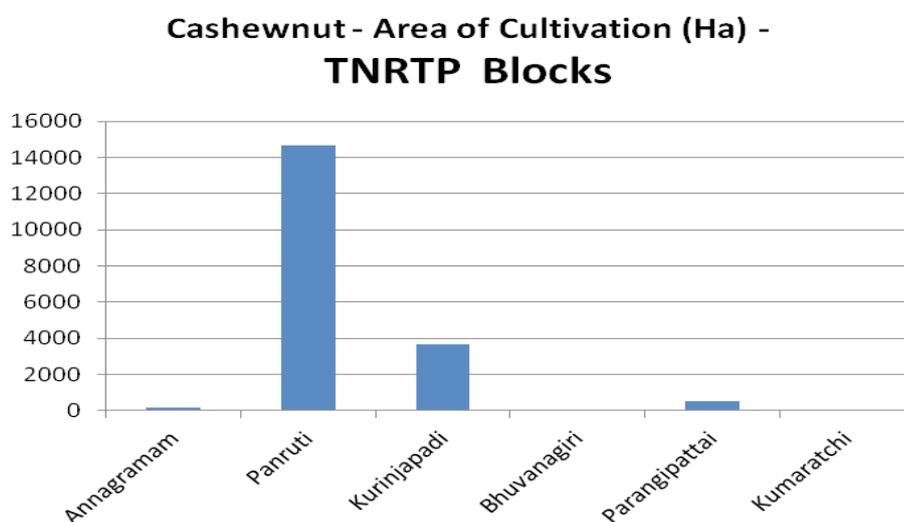


Figure.8.Area of cultivation of Cashewnut in TNRTP blocks

b.Black gram

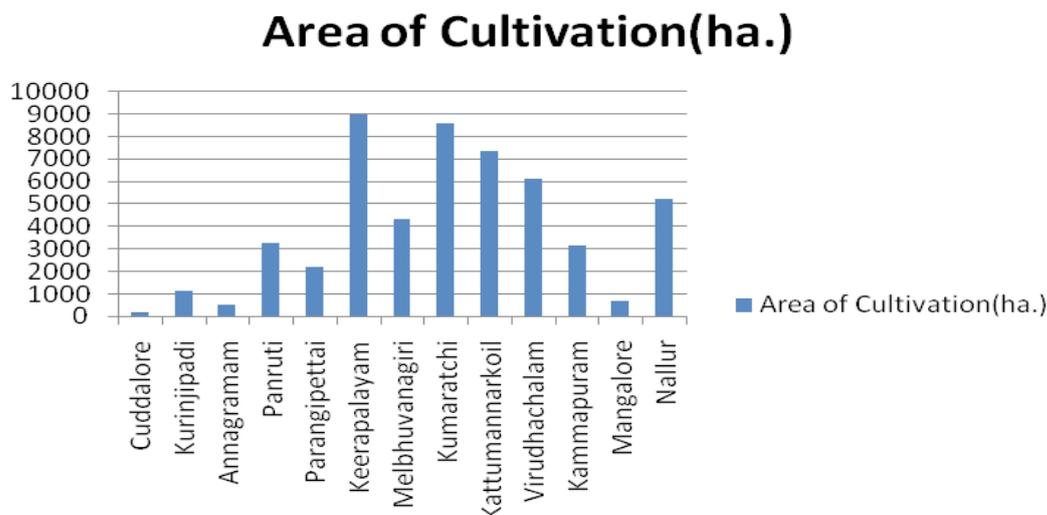


Figure.9. Blackgram area of cultivation in Cuddalore district(2018-19)

From the above figure it could be noted that blackgram area of cultivation is highest in Keerapalayam (8967ha), Kumaratchi (8581) and Kattumannarkoil (7374 ha) blocks of Cuddalore district. Among TNRTP block Blackgram cultivation was found to be highest in Kumaratchi block followed by Melbhuvanagiri block which is shown as in the figure below.

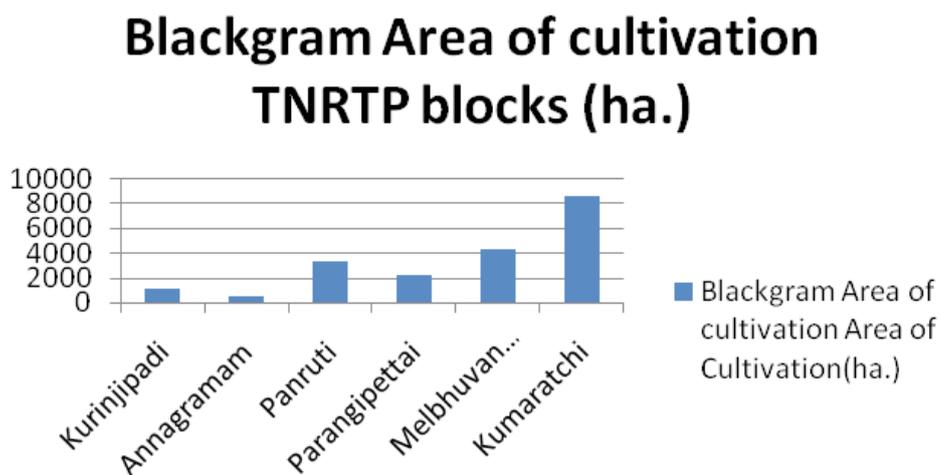


Figure.10. Blackgram area of cultivation in TNRTP blocks of Cuddalore district.

C.Groundnut

Groundnut Area of cultivation(ha.)

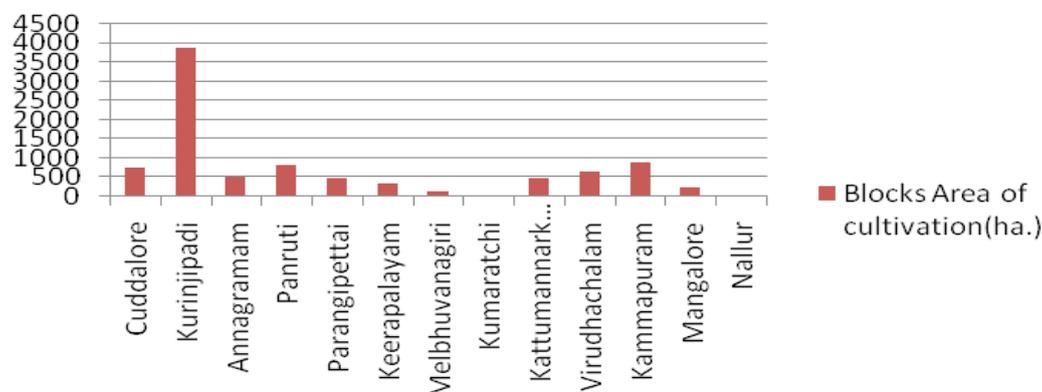


Figure (11). Groundnut area of cultivation (2018-19) in Cuddalore district

From the above figure it could be noted that groundnut area of cultivation is highest in Kurinjipadi (3875ha) followed by Kammapuram (893ha) and Panruti blocks(842ha). The trend of groundnut cultivation due to the cost of seeds and labour required for harvest.

The figure below depicts the area of cultivation of groundnut among TNRTP blocks. The area of cultivation was found to be highest in Kurinjipadi blocks followed by Panruti block.

Groundnut Area of Cultivation TNRTP Blocks (ha.)

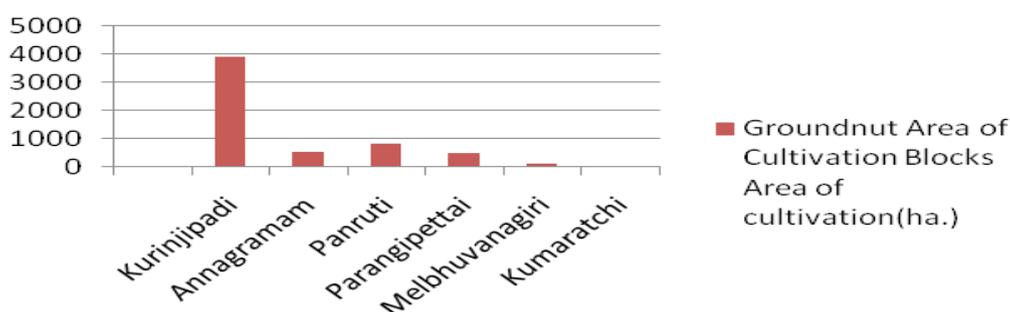


Figure.12. Area of cultivation of Groundnut in TNRTP blocks of Cuddalore dt.

Millets

Though the overall area of cultivation of millets (Maize, Cumbu and Varagu) is high in Cuddalore district, but it is largely confined to Mangallur, Nallur and Kammapuram blocks of the district.

Marketing of agriculture is done through various regulated markets, co-operative marketing societies, Uzhavarsandhai (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 as under.

Agricultural Marketing - Regulated Markets:

There are ten regulated markets in Cuddalore district. Majority of these Regulated Markets (RMs) are provided with the necessary infrastructure such as godowns, transaction sheds, drying yards and farmers rest sheds etc. The total arrival of agricultural produce to these markets during 2018-19 was of the order of 84973 MT. In order to avoid distress sale by the small and marginal farmers in the peak season, some of the RMs have been identified for providing pledge loans to the farmers. Under this scheme, the farmers can store their produce in these godowns for a maximum period of six months and take pledge loan at a maximum of 75 per cent of the value of the produce and up to the maximum limit of Rs. 25000. The name of regulated markets, the quantity and value of the commodities transacted in those markets are given in Table (21), below.

Table.22. Quantities of commodities transacted in the Regulated Markets of Cuddalore district during 2018-19

S.No	Name of the Regulated Market	Quantity of Arrival (MT)
1	Paddy	59617.54
2	Groundnut	6766.79
3	Gingelly	3083.51
4	Cotton	125.49
5	Black gram	6055.64
6	Green gram	129.64
7	Cashew	0.020
8	Coriander	22.63

9	Cumbu	2093.56
10	Ragi	563.71
11	Varagu	1062.99
12	Neemseed	13.28
13	Sugarcane Jaggery	8.33
14	Maize	4614.58
15	Copra	78.89
16	Thenai	79.84
17	Cowpea	404.21
18	Panipayaru	193.21
19	Turmeric	452.84
20	Horsegram	57.43

Source: Records of the Cuddalore Marketing Committee, Cuddalore 2019

From the above table it could be seen that there are about twenty commodities transacted in the regulated markets. Vrudhachalam is one of the biggest regulated markets in the district. Except for cotton all the commodities arrivals are noted in this Regulated Market. There are very low arrivals of cashew in the Regulated Markets and is mostly traded outside the RM.

The facilities available for marketing agricultural produce in Cuddalore district are Regulated Markets, Co-op marketing societies, Uzhavar Sandhais, Contract farming (crops / area covered), and Wholesale markets. The market committee is located in the district headquarters namely Cuddalore.

- In Cuddalore district, AGMARK Grading Laboratory is in Panruti.
- Uzhavar Sandhais are in Chidambaram, Virudhachalam, Panruti and Vadalur.

1. Cashew

Cashew kernels are widely processed in the district manually. Small Processing units could be set up to avoid drudgery for women. The cashew apples go as waste. The processing of Juices, Jam, Jellies from cashew apples could be further explored. Nurseries could be promoted to raise grafts for cashews as there is increasing demand for grafts. Women could be trained in grafts and nurseries. RRS has released VRI CWH1 which is very popular among growers.

2. Blackgram

Blackgram is grown as rice fallow pulses in the district. The outturn of rice fallow pulses is high. Dhal mills to process the pulses could be set up. The byproducts (husks) of blackgram go to animal and fish feed industry. Pappad making units also could be promoted among the women groups.

3. Groundnut

Ready availability of groundnut especially the varieties VRI 3/TMV 7 have high potential for value addition like cold pressed oils, barfi making and exports. The groundnut shells can be used for false roofing. Silica material is extracted from the ash and is used in silicon chips. 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. Groundnut seed multiplication could also be explored as breeder seeds are available with RRS Vriddhachalam

4. Millets

Maize has a hugemarkets as animal and poultry feeds. Processed Millet food such as aval, ready to cook, pop up, Flakes have huge potential in Market. There is need to improve the infrastructure facilities such as thrashing floor and also processing facilities like grading machines.

5. Vegetables

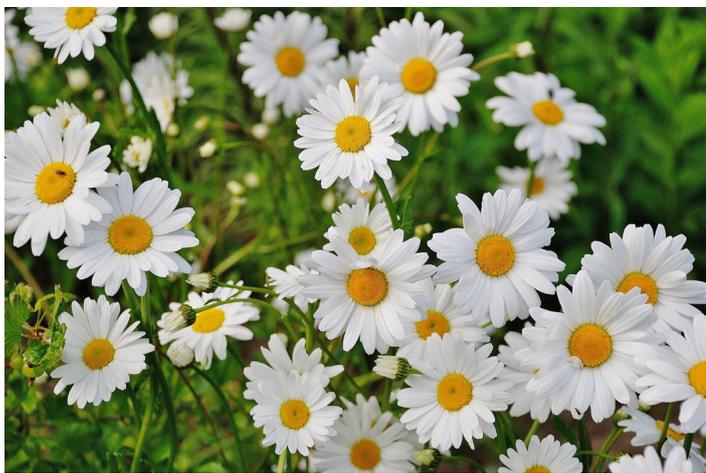
Annagramam and kumaratchi is a fruit and vegetable cluster which needs storage facilities and logistics support to boost up marketing

6. Flowers

A local variety of Jasmine is widely cultivated in Kurinjipadi and Kumaratchi blocks. Additional marketing facilities are required to promote this

7. Vettiver

Vettiver a herb which is cultivated in the coastal villages of Parangipettai block to the tune of 100 ha has commercial value and is widely used by the cosmetic industries like Cuticura and Kevincare





The GoI schemes in the district are National Agricultural Development Programme (NADP), National Horticulture Mission (NHM), IFS (Integrated Farming system) and PMFBY. The district is also covered under TNIAMP. FPOs are covered under the Collective farming scheme and SFAC scheme. Cuddalore district is also covered under PMKSY for micro irrigation.



TNAU has three main research stations at Cuddalore.

1. Regional Research Centre (RRC) Vriddachalam (for Cashew and Groundnut)
2. Sugarcane Research station, Cuddalore
3. Fruit and Vegetable Research Centre at Palur. A KVK managed by TNAU is functioning at Vriddhachalam.

The livestock and poultry sector provide ample opportunity and have to be developed in this district as the agricultural labourers population can earn income from this sector during the off season or non-cropping periods.

12.1 Animal husbandry and Dairy development

Livestock population in the district:

According to 12th Livestock Census, the approximate population of the livestock in the district includes 7,52,650 number. Of which 3,34,203 No's were cattle's, 3,28,824 No's were Goats, ponies and domestic dogs are few in number. Source: 12th Livestock Census, 2011.

The below figure(13) shows the growth rate of livestock from 2009 to 2014. It shows that the growth rate was highest in Goats(7.1%) and there was decrease in the population of Buffaloes from 2009 to 2014(-35.5%)

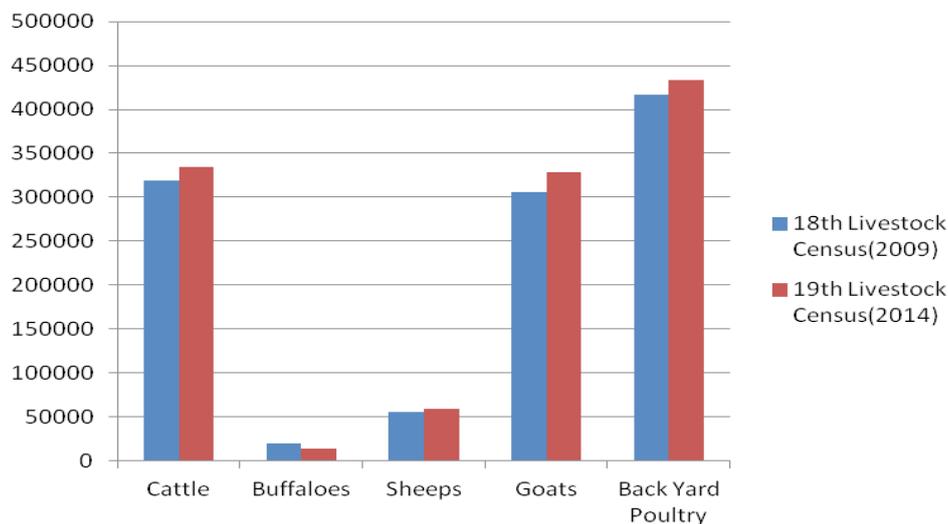


Figure.13.Livestock Comparison – Census 2009 & 2014

Dairy development:

The district holds about 188 milk societies at various blocks. From all the milk societies, the district collected about 39,583 litres of milk daily for value of 3118.14 lakhs rupees in the year 2017-18 (Source: D.R. Cooperatives, Cuddalore).

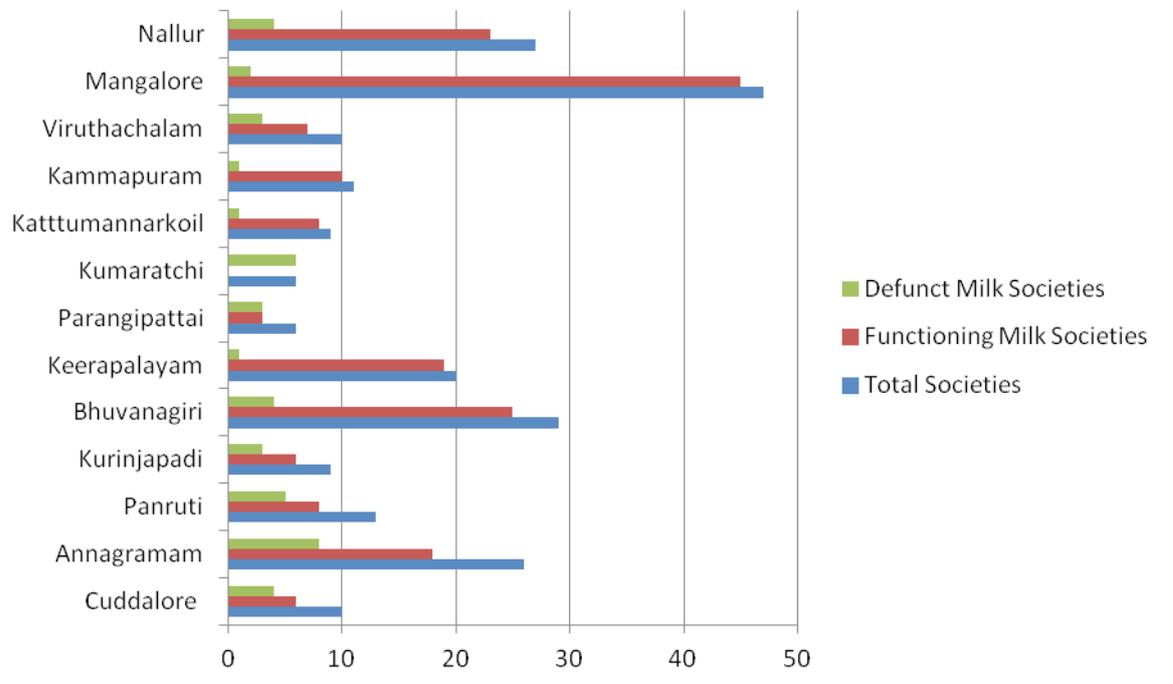


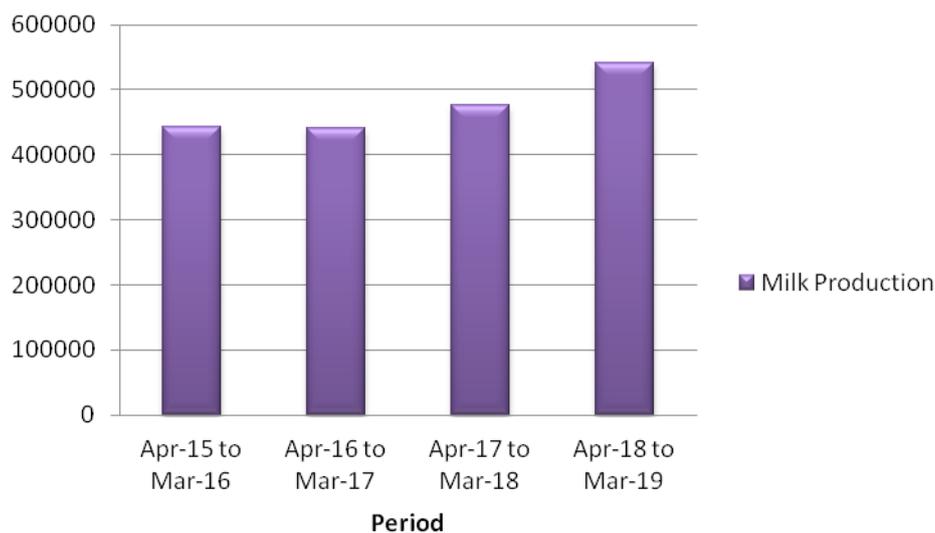
Figure.14. Block Wise Milk Societies Details Year 18-19

Source: DR Cooperatives, Cuddalore

The infrastructure facilities like dairy cooperative societies, cooperative marketing societies, veterinary clinics and milk collection centers were in different blocks of the district. The maximum number of dairy cooperative societies was in Mangaluru block (45 No's) followed by Kammapuram (12 No's) and Parangipettai (6 No's) respectively. Kumaratchi block had the least number of co-operative marketing society



Milk Production:



Figure(15) Trend in Milk production details in last four years

The above figure shows the trend in milk production for the last four years(2015-19). It shows that there the milk production there is a significant increase in the production of milk especially in the year 2018-19(63382 litres).

12.2 Poultry development

Poultry rearing is one of the important activities of Animal Husbandry Sector in the district. The backyard poultry in the district were 432983 and the Farm poultry were 517474 in numbers. (*District Statistics Handbook 2017-18*).

12.3 Fisheries

Cuddalore District north and is one of the important maritime districts of Tamil Nadu having a coastal line of 57.5 km. There are 49 marine fishing villages (As per the census 2010 of Fisheries Department, TamilNadu) and population of about 46634 which include 23674 male and 22960 female and total families reached 11965.

A major share of crafts like vallam, mechanized and fiber boats are operated in these villages apart from the traditional non-mechanized craft. The marine fish catch mainly comprises of Mackerel, Seer fishes, Grouper, pomfrets, Tuna, Squids, Leognathus, flying fish, catfish, prawn, silver bellies, crabs, rays and other miscellaneous varieties. Apart from the marine fisheries, Inland fisheries and Brackishwater fisheries are also actively pursued in Cuddalore district. There are 35 Marine fishermen cooperatives in the district.

The Inland fisheries are mainly found in areas adjoining rivers, lakes, tanks reservoirs (Veeranam tank, Wellington reservoir, Perumal tank, and Wallajah tank). Wellington reservoir at Tittagudi with an area of 834 ha is used for inland fisheries. There is 27,966 hectare of inland water resources namely major irrigation and long seasonal tanks, Fish Farmer’s Development Agency (FFDA) tanks, derelict water and aquaculture farms which comprises of 6100 ha of Veeranam tank, 834 ha of wellington tank, 5599 ha of intensive fish ponds, 3000 ha of Rural panchayat tanks, temple tanks of 800 ha and 340 ha of brackish water and 400 ha of MI tanks. Govt. Fish hatchery at Lalapet is rearing 16 lakh fingerlings of various species annually. Fresh water prawn hatchery is situated in Alapakkam in Cuddalore district. Government Farm at Lalapet and 18 private seed farms are also supplying seeds. There are 3 nos. of private hatcheries in the district.

The brackish water fisheries are practiced in Killai, coleroon and Vellar backwaters. A total of 25650 fishermen are involved in fishing activities. (Source: AD fisheries Dept, Cuddalore). The number of fish markets are seven located in Chidambaram, Neyveli, Gundu Uppalavadi, Titupadripuliyur, Manjakuppam, Devanampattinam, Cuddalore OT. The major fish landing centres are in Cuddalore, MudasalOdai, Parangipettai, Annan koil, Samiyarpettai, MGR ThittuPettodai.

Table.23. Fish production in Cuddalore district (2016-17)

S. No.	Type	Quantity (Tonnes)
1.	Inland Fisheries	5283 tons
2.	Marine Fisheries	25000 tons
3.	Brackish water Fisheries	170 tons

The world bank funded scheme on Fisheries Management for Sustainable Livelihood of fishermen is been implemented in all marine districts in the state. The following components are covered in the scheme in Cuddalore district

- a. Supply of life buoys to country craft fishermen for ensuring their safety at sea
- b. Provision of Seamless communication equipment for ensuring the safety and security of fishermen at sea
- c. Management of fishing harbors and fish landing centers
- d. Hygienic marketing of fishes through modern fish kiosks
- e. Dissemination of information to fishermen through Fisheries Information centers.

12.4 Sericulture

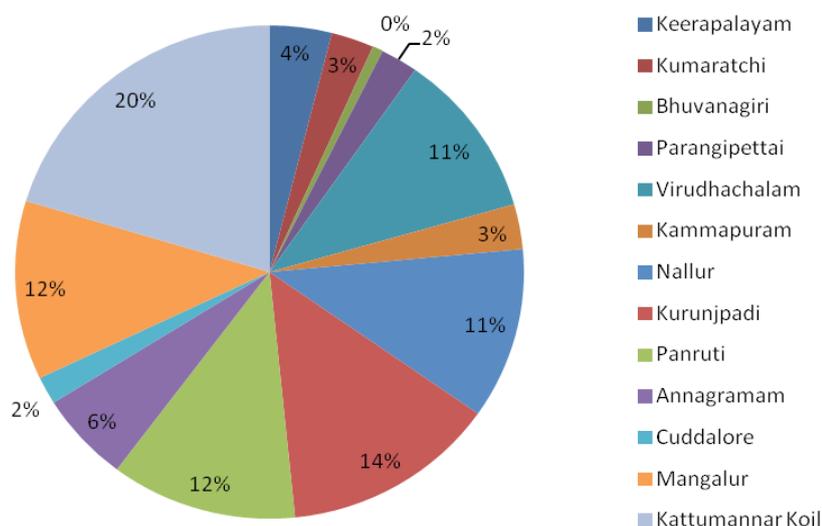
In 2018-19, the area under Mulberry cultivation 443.25 area of land is under mulberry cultivation in this District and the Cocoon production was 106458.93 in Cuddalore district. Source: Asst Director of sericulture, Villupuram and Cuddalore districts.

Table.24. Blockwise Mulberry area of cultivation in Cuddalore district

Mulberry Standing Acreage as on 31.03.2019			
S.No	Blocks	Mulberry Area (in Acre) As on 31.03.2019	Cocoon Production in KGs in 18-19
1	Keerapalayam	17.5	4212.62
2	Kumaratchi	12	2888.65
3	Bhuvanagiri	3	722.16
4	Parangipettai	10.5	2527.57
5	Virudhachalam	48	11554.62
6	Kammapuram	13	3129.37
7	Nallur	49.5	11915.7
8	Kurunjpadi	60.5	14563.63
9	Panruti	52.5	12637.86
10	Annagramam	26	6258.75
11	Cuddalore	8	1925.77
12	Mangalur	51.75	12457.32
13	Kattumannar Koil	90	21664.91
	Total	442.25	106458.93

Source of AD-Sericulture Villupuram & Cuddalore District year

Mulberry Standing Acreage as on 31.03.2019



The area of mulberry cultivation was highest in Kaattumannrkoil block (20% of the total area) followed by Kurinjipadi(60%), Panruti(52.5%) and Mangalur(51.75%) blocks



13.1. Industrial scenario

In the past, Cuddalore main industry was fishing. Although Cuddalore was once a port town, the shipping trade has now moved to larger centers. Tamil Nadu's development plans for the area include a heavily subsidized industrial park, SIPCOT Industrial Complex, under the auspices of the State –owned corporation State Industries Promotion Corporation of Tamil Nadu Limited. SIPCOT was formed in 1975 near the coastal areas of Cuddalore. to promote small medium and large-scale industries in “backward” area by providing a host of incentives and infrastructure for industries to locate in certain areas. The Cuddalore industrial complex is a home to a number of chemical, biotech, pharmaceutical and fertilizer companies. A new harbour for ship building industry is under construction Further Cuddalore district hosts energy industries and also has got strong base on handicrafts industries. Traditional handicrafts units are spread over across the district. Cashews, cashew kernel, organic chemicals, marine products, ceramics and jewelries are exported to other countries. The industry sector employs 1.39 people in the district. High sugarcane yield has led to the development of multiple sugar mills in the district.

There are three large scale sugar companies operating in Cuddalore. In addition, there are also six large scale chemicals and dyeing companies in the district. Overall, there are 35 large scale units, 731 medium and small-scale units and 200 cottage industries operational in the district. These units generate sizeable employment opportunities and revenues in the district.

There are significant mining operations carried out by the government owned Neyveli Lignite Corporation in the district. The three operational mining units have a production capacity of 280 lakh tons of lignite per annum, fuelling two thermal power units with a combined capacity of 1020 MW.

There are 3 Private sugar factories at Nellikuppam and Pennadam and Sithur one co-operative Sugar mill at Sethiathope. These factories are not only producing Sugar but also produce rectified spirit and carbonic gas. E.I.D. PARRY Company Ltd, Nellikuppam is producing confectionary.

Ceramic factories at Vridhachalam and Vadalur are producing crockery and Sanitaryware. A huge refinery unit is also proposed by private sector.

The district has many other special and hazardous industries, which are classified as "Red" by Tamil Nadu Pollution Control Board (TNPCB). These are mostly chemicals, textiles and pharmaceutical industries.

Industries at a glance

The bifurcation of the district in 1993-94 has resulted in the redistribution of industries based on location. The details on the number of industries are given below.

Industries in the District

1. No. of Working Factories	:	228
2. No. of Trade Unions	:	57
3. Large Scale Industries	:	35
4. Small Scale Industries	:	617
5. Cottage Industries	:	200
6. Medium Scale Industries	:	114

Name of the Important Industries in the District

1. Neyveli Lignite Corporation, Neyveli
2. MRK Sugar Mill, Sethiathopu
3. EID Parry (I) Ltd, Nellikuppam
4. Ambiga Sugar Mills, Pennadam
5. TANFAC, Cuddalore Old Town (OT)

6. Vanavil, Cuddalore O.T
7. National Cotton Mills, Chidambaram
8. SPIC Pharma Chemicals, Cuddalore O.T
9. Asian Paints (I) Limited, Cuddalore O.T
10. Tagros Chemicals (I) LTD.Cuddalore O.T
- 11.Clariant Chemicals LTD., Cuddalore O.T

Industrial Estates in the District Cuddalore.

Table.25. Details of Industrial Estates in Cuddalore district

S.No.	Name of Industries Area
1	SIDCO Industrial Estate, Semmandalam, Cuddalore-1
2	SIDCO Industrial Estate, Vadalur,
3	Ceramic Industrial Estate, Vridhachalam
4	SIPCOT Industrial Estate, Kudikadu, Cuddalore -5. Phase-I

Investment scenario in Cuddalore

The availability of agricultural raw material, ample land resources, sufficient thermal powered electricity generation and good transport infrastructural facilities has led to the development of the industrial sector in the district. These factors conducive to growth have also attracted investments for various industrial sub sectors. Capex data indicates that four sub sectors of ceramic products, machinery, polymers and textile processing have investments over INR 30 crore each, lined up in the short to medium term. This could create more economic opportunities for the district's inhabitants, thereby enabling the district to overcome its developmental barriers in the future.

Investments in Cuddalore

Table.26.Details of investments made in Cuddalore

NIC Code No.	Type of Industry	Number of Units	Investment (In Lakhs)	Employment
20	Agro Based	190	1614.71	1983
22	Soda Water	12	6.00	76
23	Cotton Textiles	16	20.11	82

26	Ready-made Garments & Embroidery	510	443.70	1478
27	Wood/Wooden based furniture	479	500.93	1337
28	Paper & Paper products	365	338.73	986
29	Leather based	96	81.08	413
31	Chemical /Chemical based	26	100.72	170
30	Rubber. Plastic& Petro Products	50	196.92	284
32	Mineral Based	1012	2576.53	8441
33	Metal based (Steel Fab.)	56	2138.65	325
35	Engineering Units	58	216.65	283
36	Electrical Machinery and Transport equipment	20	181.29	157
97	Repairing & Servicing	427	2562.00	2135
01	Others	736	5460.67	4301

Source: District Industries Centre, Cuddalore

The table above shows that the maximum investment has been made in Mineral based industries followed by Repairing and servicing. Readymade Garments & Embroidery units, Agro & Food Processing units have also taken the maximum share of investment and employment

MICRO, SMALL AND MEDIUM ENTERPRISES

Udyog Aadhaar Memorandum (UAM)

Govt. of India, Ministry of Micro, Small and Medium Enterprises (MSME) has notified the Udyog Aadhaar Memorandum (UAM) under the MSMED Act, 2006 to promote ease of doing business for MSMEs.

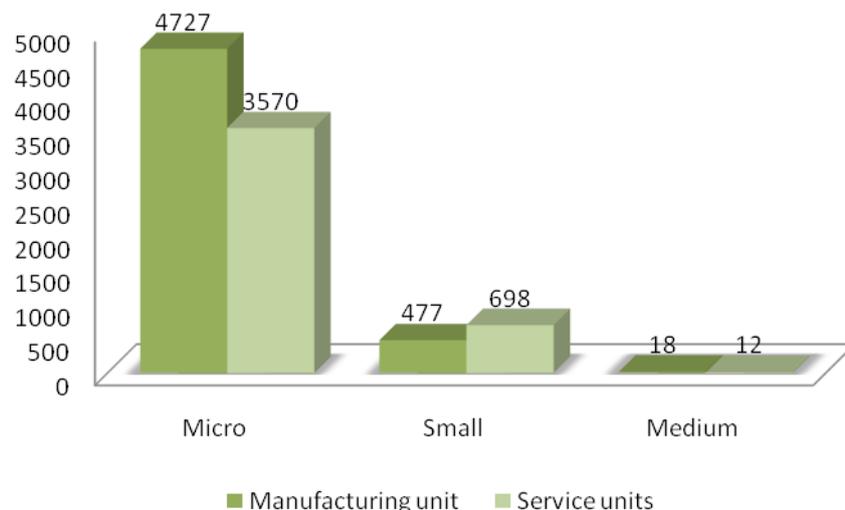


Figure.16. Number of Registered MSME in Udyog Aadhaar(18-19)

Source: District Industries Centre, Cuddalore

13.2 MSME CLUSTERS

Existing clusters of micro & small enterprises.

The existing clusters of Micro and small enterprises are given in the following table.

Table.27. Existing clusters of Micro and small enterprises

Name of Cluster	Block/Location
Ceramic and Refractory	Vriddhachalam
Cashew Processing	Panruti Block
Pottery	Cuddalore
Jewellery	Chidambaam
Coir	Cuddalore
Handlooms	Kurinjpadi, Cuddalore and Melbhuvangiri

Ceramic Cluster

Ceramic Cluster, Virudhachalam, manufacturers of toys has availed grant under MSE-CDP scheme of Govt. of India and Govt. of Tamil Nadu for establishing common facility centre (CFC) for Tunnel Kiln and the cluster is running successfully. Ceramics units

are concentrated in Virudhachalam area. The Virudhachalam ceramics and refractory industries cluster in the district is 50 years old; it was started by the Tamil Nadu state government with the aim of creating a local ceramic industrial hub, considering the availability of relevant raw materials. A skill development institute, the Institute of Ceramic Technology, was also established to create a pool of trained persons in the area. There are about 300 MSME units in the cluster producing various types of ceramic and refractory products. The ceramic products like refractory bricks, tiles, insulators, other electrical items, decorative items, and also producing terracotta toys. The total number of MSMEs in the cluster is 300. The production and turnover is 60000 tonnes per annum. The products have very high demand inside and outside Tamilnadu. They are also exported outside the country. The availability of raw material is an issue. Each unit employs about 100 labourers especially women. They also manufacture lamps (Agal Vilakku) which are in high demand during festival season. Wholesale shops are also concentrated in the cluster. The leading industry association(s) are as follows:

- TamilNaduRefractoryManufacturersAssociation, D-1 Industrial Estate, Virudhachalam - 606001
- Virudhachalam Industrial Estate Ceramic Manufacturers Association, C-6 Industrial Estate, Virudhachalam – 606001

Artificial Jewellery: The producers concentrated in Kurinjipadi, Melbhuvanagiri and Keerapalayam blocks of Cuddalore district. The producers are mostly women. They are engaged as wage labourers by enterprises who are engaged in the business. They supply raw materials, design to the women and also buy the finished products from them.

Pottery: There are about 58 units in Cuddalore district providing employment to about 164 persons.

Toys: Clay toys from Panruti are very popular. They are made either by hand or in a mould. The toy varieties are in very naturalistic style. They have a tradition of excellent workmanship and fine colouring. The type of items made are Ayyannar Horses, Pots, Urraliy, statuettes, Toys, Terracotta items.

Handlooms: Handlooms are concentrated in Cuddalore, Kurinjipadi and Melbhuvanagiri blocks of the district. The number of families engaged in Handlooms is presented in the table below. The major products are Shirting, Hand kerchiefs, Mats, Shirting, Curtain cloth, Mosquito netting and Lungie. They cater to both National and international markets.

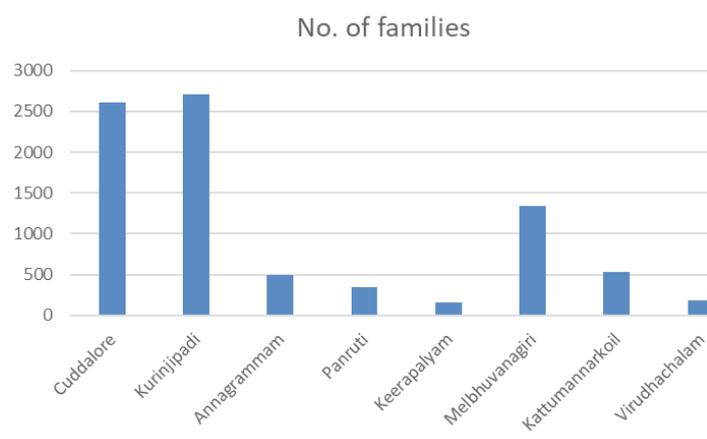
Incense sticks from Flowers: It is noted that the effort of making incense sticks from waste flowers collected in temples has become viable economic activity and provide employment opportunities and livelihood creation.

Nataraja Temple, also referred to as the Chidambaram Nataraja temple or Thillai Nataraja Temple dedicated to Shiva as the lord of dance in Chidambaram. The temple is one of the five elemental lingas and considered the subtlest of all temples in Hinduism.

Daily many hundred and during festival time thousands of people visit Nataraja temple and provide offerings as garland and flowers to the Lord, the flowers are discarded after offerings. With the cooperation of the temple authorities the discarded flowers can be collected and used in making incense sticks. This activity can be taken as an enterprise activity covering in and around Chidambaram areas. Source: HelpUsGreen Company in Kanpur has promoted incense sticks and stones.

Table.28.Handlooms in Cuddalore district (2017-18)

S. No	Block	No. of families
1.	Cuddalore	2611
2.	Kurinjipadi	2715
3.	Annagrammam	499
4.	Panruti	341
5.	Keerapalyam	159
6.	Melbhuvanagiri	1344
7.	Kattumannarkoil	533
8.	Virudhachalam	189
TOTAL		8391



Weaving: There are about 100 families involved in weaving of silk sarees in Melbhuvanagiri of Cuddalore district.

13.3 MANUFACTURING SECTOR

There are about 98 Food manufacturing industries employing 2581 persons and 261 Non Food manufacturing industries employing about 5077 persons in Cuddalore district. The maximum numbers of food industries are located in Cuddalore and Panruti blocks and non-food industries are located in Cuddalore, Panruti and Vriddachalam.

13.4 SERVICE SECTOR

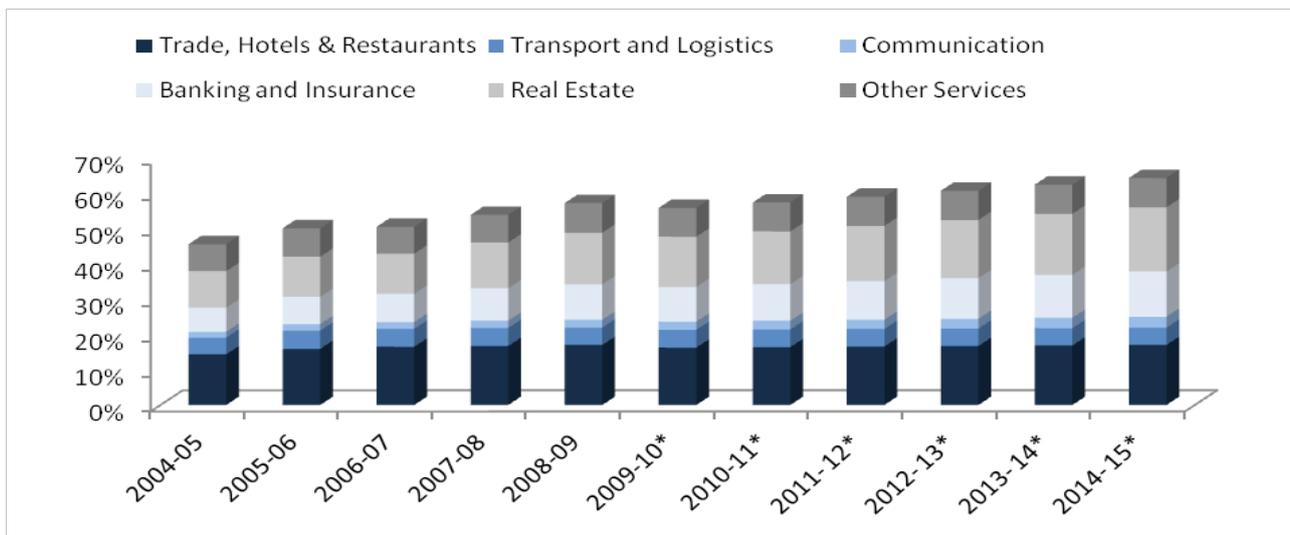


Figure.17. Contribution to District GDP

Source: Department of Economics and Statistics, Government of Tamil Nadu

At an average CAGR of 14%, the service sector has witnessed buoyant growth in the district and is expected to contribute to almost 60% of the district GDP in 2012-13. At a CAGR of 19%, the banking and insurance sector is the fastest growing sector and is expected to contribute to 13% of GDDP in 2012-13. Despite a lower growth rate, real estate and trade, hotels and restaurants jointly contribute to one third of the district GDP and remain the largest contributors to output. The services sector employs over 4.11 lakh people in the district. There are 170 automobile service centers(113 in TNRTP blocks,1008 Restaurants, 2206 cafes, and 3836 (eateries, cool drinks, tea shops and mess). Source: Statistical handbook of Cuddalore district 2017-18. Tourism also plays a significant role in the service sector. Increasing tourist has been complemented by the development of transport infrastructure in the district. During peak festivals places like Vadalur and Chidambaram about 2-3 lakhs throug the places in a day.

Health care services, however, haven't developed at the same pace – although there are 18 hospitals and 382 health care centers, the population per doctor is 11,308, far lower than most of the other districts in the state, reflecting the need for healthcare development in the district.

13.5.Tourism

Located along the coastline of Tamil Nadu, Cuddalore attracts tourists throughout the year. The district is famed for its beaches and temples. The tourism growth rates depict an increasing trend for tourist arrivals until 2004. Following the Southeast Asian tsunami in 2004, the district witnessed a sharp fall in both domestic and foreign tourism. However, tourist activity seems to have picked up, if not more sharply than before, by mid-2005. Two places in particular – Chidambaram and Pichavaram are tourist hotspots, attracting a steady stream of domestic and foreign tourists.

Places for Tourism

- Chidambaram Temple
- Silver Beach
- Fort St David
- Neyveli Lignite Corporation
- Pataleswarar Temple
- Pichavaram
- Satyagnana Sabha
- Thillai Kali Temple
- Thiruvadigai Temple
- Thiruvanthipuram Temple
- Vriddhagiriswarar Temple



Divine Tourism

The presence of temples with significant heritage makes Chidambaram more appealing for the domestic tourists. The most famous of these is the temple of Shiva Temple where the main deity is Padaleeswarar. It is located in Thiruppadiripuliur. Chidambaram, a town, known for dance and Lord Nataraja, is only 43 kms away from Cuddalore. Thiruvanthipuram temple, the Sacred Abode of Lord Devanatha, is one of the ancient Vaishnavite temple and also one of the 108 Vaishnavite shrines sanctified by the visit of the great Alvars and Acharyas. At Srimushnam, there is a famous Vaishnava temple of Bhavaraha, representing the Varaha Avatar (an incarnation of the Hindu God(MahaVishnu.)

Eco-tourism

while the development of eco-tourism at Pichavaram over the past decade has made it more attractive to the foreign tourists. Pichavaram mangrove forest is located between two prominent estuaries, the Vellar estuary in the north and Coleroon estuary in the south. The backwaters, interconnected by the Vellar and Coleroon river provide wide scope for water sports such as rowing kayaking and canoeing. Pichavaram is known for its backwater and mangrove forests. Cuddalore district is well known for its temples.

Others

Silver beach which remains swarmed with tourists round the year is situated in the eastern side of Cuddalore in Devanampattinam. The Neyveli Lignite Corporation in Neyveli which generates 3000 MW of power per year from three stations is also a place of tourist attraction.

Table.29. Potential Areas for Non-Farm sector

S.No.	TNRTP Blocks	Non-Farm
1.	Parangipettai	Sea food products, Mobile fish vending with ice box, Cold Storage, Fish processing center, Solar dryer for dry fish, Ornamental fish farming and Vettiver extraction unit, Eco Tourism
2.	Melbhuvanagiri	Dhall Mills, Dhall Processing and Millets processing units, Storage units, BMC, feed mixing units, Artificial jewelry, Handlooms products and Silk Textiles.
3.	Kumaratchi	Artificial jewelry, Dhall Mills, Dhall Processing and Millets processing units, Storage units, Bulk Milk Chill (BMC) Units, feed mixing units, Storage of Dairy Products, Divine and Educational tourism
4.	Annagrammam	Bio-fertilizer units, Processing units, Cold Storage facilities, Value Addition activities,
5.	Panruti	Bio-fertilizer units, Cashew Processing units, Value Addition activities,
6.	Kurinjpadi	Ceramic ware making units, Oil extraction unit, BMC, feed mixing units.

a. Incremental Human Resource Requirement

The development of the TNPCPIR (Tamil Nadu Petroleum, Chemical and Petrochemical Investment Region) along the coast of Cuddalore is expected to create a large human resource requirement in the chemicals & pharmaceuticals industry. Incremental human resource requirement will be highest in chemicals, construction and tourism and travel. Agricultural employment will contract by more than 88,000 jobs. The unorganized sector will employ an additional 30,000 people by 2022. The highest growth sectors will be electronics hardware, textiles, gems and jewellery and IT/ITES.

The long-term growth sectors for Cuddalore appear to be textiles, food processing, tourism and travel, and transportation and logistics. The hospitality industry is already well established in the district and is expected to grow rapidly. IT/ITES and electronics hardware industries will require an enabling environment to grow and are expected to expand rapidly over a span of several years. Traditional industries like food processing and textiles are expected to continue robust growth, though there will be shifts products produced as competing districts will erode the cost-based competitiveness of these industries, necessitating higher levels of technology and richer products.

Skill Gap:

The skill gap at the semi-skilled level is expected to be 30,000 by 2017 and 53,000 by 2022. At the skilled level, the gap between incremental human resource requirement and availability is estimated to be approximately 17,000 by 2017 and 37,000 by 2022. Strong growth of sectors such as chemicals, construction and tourism will drive the skilled human resource requirement, while the fall in human resource requirement in agriculture and handlooms will lead to an excess availability of unskilled human resources.

Table.30. Skill Gap in 000s

District skill gap (in 000s)	2012-2017				2017-2022			
	Unskilled	Semi skilled	Skilled	Total	Unskilled	Semi Skilled	Skilled	Total
Incremental Human Resource Requirement	14	39	44	248	57	62	67	330
Incremental Human Resource Availability	75	8	27	111	84	8	30	123
Skill Gap	-61	30	17	137	-27	53	37	207

Note: Figures in negative indicate excess human resource availability

Source: Athena Research

The pattern of skill gap suggests sustained increase in the requirement for semi-skilled and skilled human resources with the growth of traditional sectors such as food processing. In this period, traditional industries will employ a large number of semi-skilled workers and improve their production processes. This trend will continue in the next period, as employment grows with an expanding industry.

Opportunities for addressing Skill Gap in Non-Farms Sector/Sub-Sector



The Indian Bank is the Lead Bank in Cuddalore district. There are 267 branches of commercial banks (CBs), 40 branches of cooperative bank and 167 primary agricultural credit societies (PACS) operating in the district. Indian Bank has opened branch exclusively for meeting the needs of SHG members. Indian Bank self-employment training institute (INDSETI) and FLCC are operating under Indian Bank, lead bank in Cuddalore district. The details are presented in the following

Table.31. Details of financial institutions in Cuddalore district.

SI No	Financial Institutions	Numbers
1.	Commercial Bank Branches	267
	Public sector Branches	165
	Private sector Branches	83
	Regional Rural Bank	19
2.	Total Number of Coop bank Branches	40
	District central coop bank branches	31
	State Agri and rural dev Bank Branches	6
	Urban coop bank branches	2
	TAICO Bank	1
3.	Other financial institutions	1
	TIIC	1

The Annual credit plan is presented as below

Annual Credit Plan 2019-20

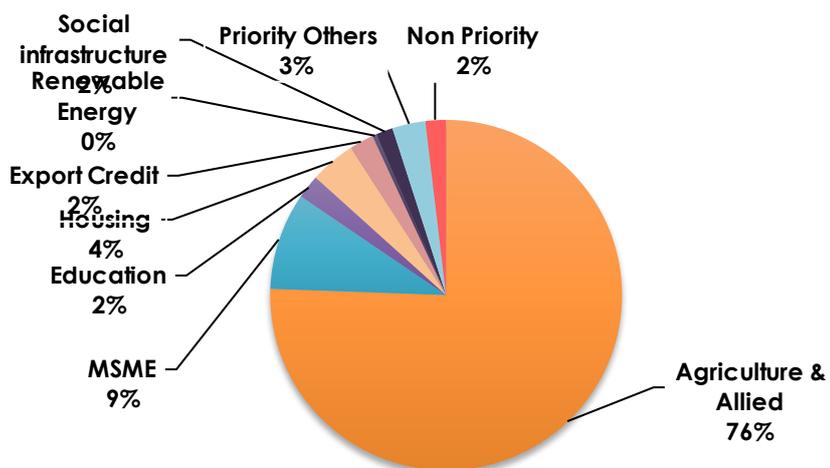


Figure .18. Annual credit plan 2019-20

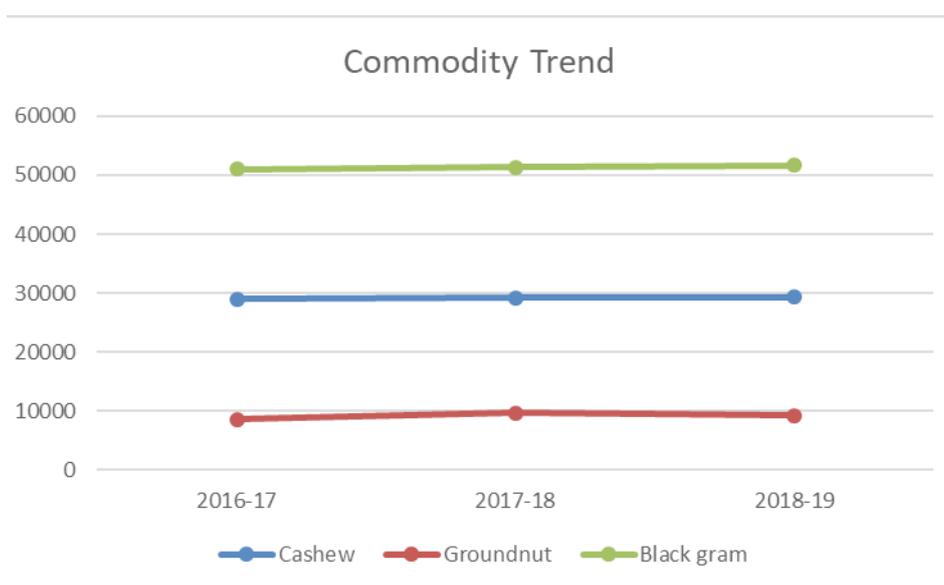
The major Microfinance Institutions in the district are Muthoot, Equitas, IDFC, BELLSTAR, L&T financial services, HDFC, Ujeevan, ASSEFA, RBL, and NABFINS

Table.32. Commodity prioritization of Major commodities (farm) in Cuddalore district.

Commodity Prioritization Table						
S. No	Criteria	Description	COMMODITY			
			Paddy & Sugarcane	Cashew	Black gram	Groundnut
1	Trend in number of producers involved in the commodity	For commodities which has large number of producers.		Positive	Positive	Positive
2	Community Interest	Economic viability, Staple food, Knowledge and technology availability, Extension services, Awareness about Market availability	Water Intensive crop. Hence not prioritized	Widely cultivated in all blocks. One of the Topmost district in the state in the area of cultivation and production,	Raised under rice fallow with no irrigation	Soils highly suitable and can be grown both in wetland and garden land condition
3	State/ National Priority (Thrust from government)	State/National Government Schemes and Investments		One of the chosen districts for Horticulture Mission	One of the chosen districts for Oilseed promotion, NFSM, Integrated Development of Pulses	Chosen district for promotion of oils seeds promotion Regional Research Station for groundnut in Vriddhachalam.
4	Comparative advantage	Production, Favourable climatic conditions, GI type characteristics, Uniqueness emerging out of Ethnicity and culture, A prevalent cluster.	Not prioritized due to high water requirement	2 nd Major share in state production, High demand for Certain varieties, soil favourable for cashew production	Largest producer of Blackgram, 3 rd Major share in state production favorable climatic condition,	Table varieties grown and the favourable conditions

5	Access to Market	Ability to sell the produce at a remunerative price- Local, National & International markets.		High demand for cashew kernels and exported	Steady increase in demand throughout the nation, rise in prices.	High demand for groundnut in local market and arrivals to APMC
6	Opportunity for Value Chain Interventions	Productivity and value-added products.		Exports, Processing Cashew apples processing and other Value-added products, Nurseries.	Scope for productivity enhancement, promotion of summer pulses, delayed marketing facilities,	Groundnut seeds, Shells, Delayed marketing

In Farm sector Cashew, Black gram and Groundnut stand as prioritized crops for Cuddalore district. Additionally, Fruits and Vegetables can also taken up for priorities. Fisheries could be given a major thrust in Farm allied sector.



Potential activities in the non-farm sector in Cuddalore district



SWOT ANALYSIS

Strengths

- Coastal line of 57.5KM kilometers
- Agro-based industries and industrial estates
- Well-functioning regulated markets
- Sizable paddy, groundnut, pulses area and production
- Sizable Cashew production and processing industry
- Large number of small ponds and tanks
- Presence of Regional resource centre and warehousing facilities.
- Highly fertile soil and water potential area
- Tamil Nadu Government and Government of India in 2005 to set up the Agri Export Zone for Cashew at Panruti

Weaknesses

- Uneven distribution and heavy rainfall in coastal areas compared to interior areas.
- Fragmented land holdings.
- Rivers are seasonal.
- Greater dependence on ground water resulting in depletion of groundwater potential
- Three main blocks are coming under over exploited region with reference to groundwater potential
- Heavy dependence on Agriculture.
- Rain fed ponds are not yet fully utilized for short term fish culture
- Increasing fish seed demand not met.

Opportunities

- Scope for strengthening cashew cultivation and processing industry
- Establish a marketing centre for fish.
- Scope for increasing the productivity of pulses in the wetland Cauvery ayacut areas
- Scope for development of Horticulture and Floriculture,
- Lands can be used for both dairy and fodder development
- Scope for developing inland fish farming (164ha) and brackish water shrimp farming (366.41ha)
- Fish seed production if revived would greatly contribute in meeting the seed demand of this district.
- Scope to improve tourism
- Scope for setting up oil processing units
- Scope for improving packing and grading facilities for fruits and vegetables.
- Scope for establishing nurseries and train women to produce grafts

Threats

- District vulnerable to natural hazards
- Irrigation water problem due to sea water intrusion in the coastal areas and reduction in area under cultivation.
- Rain and rain water flooding and damage of crops during north east monsoon in most of the years. Unusual heavy rains during the winter season and damage of pulse crops etc., once in 3 to 4 years.

CONCLUSION

The major commodities in the farm sector in TNRTP blocks and the potential activities in the non-farm sector are presented in below.

S.No.	TNRTP Blocks	Farm	Non-Farm
1.	Parangipettai	Black and green gram, Vettiver	Sea food products, Mobile fish vending with ice box, Cold Storage, Fish processing center, Solar dryer for dry fish, Ornamental fish farming and Vettiver extraction unit, Eco Tourism
2.	Melbhuvanagiri	Black and green gram, Flowers & Dairy	Dhall Mills, Dhall Processing and Millets processing units, Storage units, BMC, feed mixing units, Artificial jewelry, Handlooms products and Silk Textiles.
3.	Kumaratchi	Black and green gram	Artificial jewelry, Dhall Mills, Dhall Processing and Millets processing units, Storage units, Bulk Milk Chill (BMC) Units, feed mixing units, Storage of Dairy Products, Divine and Educational tourism
4.	Annagrammam	Cashew, Jack and Guava and Vegetables	Bio-fertilizer units, Processing units, Cold Storage facilities, Value Addition activities,
5.	Panruti	Cashew, Jack and Guava	Bio-fertilizer units, Cashew Processing units, Value Addition activities,
6.	Kurinjipadi	Groundnut	Ceramic ware making units, Oil extraction unit, BMC, feed mixing units.

In Parangipettai, Melbhuvanagiri and Kumaratchi which are the delta blocks, Black and green gram are major commodities which are cultivated in large area. Parangipettai is also a coastal block which offers a high scope for marine fisheries. Apart from these, inland and brackish water fisheries also have very high potential. Vettiver is found in selected coastal villages of Parangipettai block which has a high value in cosmetic industries. Besides these Handicrafts, Brick kilns and Banana and coconut leaves processing are also predominant activity in Kumaratchi Block.

Groundnut has a high potential in Kurinjipadi block. Certified seed production and Burfi making, out of table varieties are the major opportunities in groundnut. The groundnut shells could also be used for roof tops and also for silica extraction. Panruti block is very well known for cashew and Jack cultivation. It is a hub for cashew cultivation. Each household is involved in the cashew processing which are done manually. Cashew processing units can be taken up by enterprising groups or individuals. Processing of cashew apples in the block is unexploited.

The prospects of processing of cashew apples into juices, candies, Jellies and Jams could be further studied and promoted in the district. Nurseries could be promoted to raise grafts for cashews, as there is increasing demand for grafts. Women could be trained in grafts and nurseries. The cultivation of Cashew, Guava and other vegetables is predominant in Annagramam block. Fruits and vegetables have a very high potential in Cuddalore district and the eco-system to market vegetables needs further strengthening. It could be done by creating additional facilities for primary processing, grading and packing in Annagramam block.

S.no	Sources
1	<i>Census of India 2011</i>
2	<i>District Economics and Statistics 2017-18</i>
3	Cuddalore Human development report 2017
4	NABARD and Department of Agriculture Marketing
5	<i>NSDC report</i>
6	<i>Indicus Analytics: Market Skyline of India (2011-12)</i>
7	<i>District Employment Exchange Cuddalore</i>
8	<i>Panchayat Union, Town Panchayat, Municipalities, State Highways, National Highways, Forests, Sugar mills, Cuddalore</i>
9	<i>Station Master, Cuddalore Port Junction,</i>
10	<i>Port Officer, Cuddalore Port</i>
11	<i>District Agricultural Plan 2015-20</i>
12	<i>Dist Stat Handbook 2017-18</i>
13	<i>District Agricultural Plan, Cuddalore district, 2016</i>
14	<i>Tech Report Series, Central Ground water Board, 2009.</i>
15	<i>Joint Director of Agriculture, Cuddalore district.</i>
16	<i>Season and crop report 2016-17</i>
17	<i>Joint Director of Agriculture, Cuddalore district.</i>
18	Records of the Cuddalore Marketing Committee, Cuddalore 2019
19	DR Cooperatives, Cuddalore
20	AD-Sericulture Villupuram & Cuddalore District
21	<i>District Industries Centre, Cuddalore</i>
22	<i>Department of Economics and Statistics, Government of Tamil Nadu</i>

ANNEXURE - 1

SUMMARY OF DISCUSSIONS WITH TNSRLM BLOCK LEVEL STAFF ON FARM AND NON-FARM OPPORTUNITIES IN CUDDALORE DISTRICT

S. No	BLOCK	FARM	NONFARM
1.	Panruti	<ul style="list-style-type: none"> Vaipuripattinam 12 Villages Cashew Fruit 3000 small and marginal growers 	<ul style="list-style-type: none"> Doll making
2.	Annagramam	<ul style="list-style-type: none"> 42 villages Guava 5000 producers Groundnut in rainfed conditions Tapioca with G.Nut 	<ul style="list-style-type: none"> Pottery- Traditional Dolls Wood carving
3.	Kumaratchi	<ul style="list-style-type: none"> Paddy B.gram Vallampadugai 20 villages 	<ul style="list-style-type: none"> 7 or 8 villages Chidambaram artificial jewelry 2 villages Pottery
4.	Kattumannarkoil	<ul style="list-style-type: none"> Srimushnam Floriculture Inland Fisheries Veeranam lake Five panchayats Betelvine leaves 	
5.	Melbhuvanagiri	<ul style="list-style-type: none"> Floriculture Five panchayats Groundnut 7-8 Panchayats Inland fisheries 	<ul style="list-style-type: none"> Chidambaram artificial jewellery Pottery
6.	Vriddhachalam	<ul style="list-style-type: none"> Groundnut Oil extraction Paddy 29 panchayats Warehousing Gingelly, Blackgram 51 panchayats Pudukooraipettai- Nursery 150 families engaged in stringing of flowers 20 panchayats Jasmine 	<ul style="list-style-type: none"> Ceramic 20 panchayats Brick making
7.	Mangalur Block	<ul style="list-style-type: none"> Cotton Paddy S.Cane Tapioca 15 villages Colocasia Maize 	

8.	Nallur	<ul style="list-style-type: none"> • 26 Panchayats Paddy, • Sugarcane, Cotton • Maize 15-20 villages • Varagu Export 15-20 villages 	<ul style="list-style-type: none"> • 10 families Pottery
9.	Kurinjipadi	<ul style="list-style-type: none"> • Paddy, Groundnut • Five villages Jasmine flowers 	<ul style="list-style-type: none"> • 650 members Peramathur catering services
10.	Parangipettai	<ul style="list-style-type: none"> • Coastal 12 panchayats Fish drying 	<ul style="list-style-type: none"> • Chidambaram artificial jewellery • Kothangudi • Vettiver 7-8 panchayats • Tapioca Rainfed Groundnut
11.	Keerapalayam	<ul style="list-style-type: none"> • 80% Paddy Blackgram • Groundnut, Murungai Tailoring 2 villages • Floriculture 	<ul style="list-style-type: none"> • Vayalur Cement works • Chidambaram Covering • Cashew and tamarind processing • Wood crafts and carpentry
12.	Kammapuram	<ul style="list-style-type: none"> • Paddy, Blackgram • NLC 5 villages • Stringing of flowers • 10 panchayats- Cashew • 4 villages Inland fisheries • 7 villages floriculture • 5 villages vegetables Brinjal kottimalai • Dairy development all villages 	<ul style="list-style-type: none"> • Tailoring and flower stringing
13.	Cuddalore	<ul style="list-style-type: none"> • Paddy, S.Cane, Banana • Organic cultivation Marketing • Vermicompost 2 or 3 villages • Tamarind 2 to 3 panchayats • Rainfed Groundnut • 5-6 panchayats- Cashew processing • Guava 4 or 5 panchayats • 9 panchayats Dry fish 	<ul style="list-style-type: none"> • 15 panchayats Pottery

ANNEXURE - 2

Block wise Crop Details

S.No	BLOCK	CROP
1.	Panruti	<ul style="list-style-type: none">Cashew nut, Jack ,Guava, Groundnut and Black gram
2.	Annagramam	<ul style="list-style-type: none">Vegetables, Cashew nut, Jack, Guava, Groundnut and Tapioca
3.	Kumaratchi	<ul style="list-style-type: none">Paddy, Black gram & Green gram
4.	Kattumannarkoil	<ul style="list-style-type: none">Flowers, Groundnut and Black gram
5.	Melbhuvanagiri	<ul style="list-style-type: none">Flower, Groundnut, Black gram
6.	Vriddhachalam	<ul style="list-style-type: none">Groundnut , Paddy , Gingelly Blackgram and Flower
7.	Mangalur Block	<ul style="list-style-type: none">Cotton, Paddy, Sugar Cane Tapioca and Maize
8.	Nallur	<ul style="list-style-type: none">Paddy, Sugarcane, Cotton Maize and Varagu
9.	Kurinjipadi	<ul style="list-style-type: none">Paddy, Groundnut and flowers
10.	Parangipettai	<ul style="list-style-type: none">Groundnut , Black and Green gram
11.	Keerapalayam	<ul style="list-style-type: none">Paddy, Blackgram, Groundnut, and Flower
12.	Kammapuram	<ul style="list-style-type: none">Paddy, Blackgram , Vegetables
13.	Cuddalore	<ul style="list-style-type: none">Paddy, Sugar Cane, Banana, Groundnut Guava Flowers and Vegetable



Tamil Nadu Rural Transformation Project

No.41, Rettai Pillayar Koil Street, Pudhupalayam, Cuddalore - 1.
E-mail : cdr.tnrtp@yahoo.com | Mobile : 9385299719