

## District Human Development Report - 2017

Virudhunagar District

State Planning Commission Tamil Nadu

# VIRUDHUNAGAR DISTRICT HUMAN DEVELOPMENT REPORT 2017

District Administration, Virudhunagar and State Planning Commission, Tamil Nadu in association with Ayya Nadar Janaki Ammal College (Autonomous), Sivakasi

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#### MESSAGE

Tamil Nadu is a pioneer in implementing welfare programmes. The State's Twelfth Five Year Plan insists upon the betterment of Human Development status. Tamil Nadu is on the path of development for achieving accelerated, innovative and inclusive growth.

The State Planning Commission had earlier published Human Development Reports for the State and 8 districts. The analysis on the inter district and intra district disparities has led to policy recommendations and formulation of specific schemes like State Balanced Growth Fund to address backwardness. As a sequel, State Planning Commission has taken up the preparation of Human Development Reports for all districts.

This report is prepared with an objective to address Human Development concerns at the block level. An in-depth analysis on the Human Development status through Health, Education, Standard of living, Gender, Demography, Social Security sectors has been made to study the performance of blocks at the sub-district level. This could play as an effective tool for grassroots level planning.

I take this opportunity to place on record my sincere appreciation to the District Collector and Line Department Officials for sharing data on various parameters for the preparation of District Human Development Report. I thank all the stakeholders for their contributions to this report.

ANIL MESHRAM MEMBER SECRETARY STATE PLANNING COMMISSION

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#### PREFACE

Human Development Report for countries in the world is released by United Nations Development Programme every year since 1990. The latest report says that Human Development is improving worldwide but the rate of improvement has slowed. In respect of Virudhunagar District, Human Development Report has been prepared by Ayyanadar Janakiammal College under the assistance received from UNDP and State Planning Commission. This report has been prepared incorporating Human Development Indices like Education, Health, Income, Poverty, gender. This report enables the core departments to formulate actions in specific areas. This report critically assess the strength and weakness of human development pertaining to Virudhunagar District and also explores the reasons.

The Success depends, to a great extent, on the ability to involve a large number of manpower to adopt modern technologies by imparting them the necessary technical Know – how and technical do-how, In fact, the modern latest technologies mainly involves scientists, extension personnel and adopters as they are integral part of development and production process.

Regional disparities exists not only because of lack of natural resources and infrastructure, but also largely due to human resource. Also it should be noted that, Human resource alone is not helpful in removing the disparities. It is pertinent to note that, now a day's huge portion of investment is made on the Human Resource Development.

This Human Development Report for Virudhunagar District will be helpful in formulation of policies that require intervention at micro level which will lead us towards wholistic and sustainable development of the District. We are thankful to State Planning Commission in providing necessary support and Guidance in preparation of this report.

I once again congratulate those who contributed for preparation of this report, inculcating all micro level details. This report will surely aide and assist in improvement of the development of Virudhunagar District in the coming days.

A.SIVAC NANAM

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With great pleasure I am acknowledging the help rendered by the Block Development Officers (BDOs), the elected representatives of the district, SHG members, and Municipal Commissioners. Besides, the various heads of department at the district level provided invaluable assistance. Specifically Superintendent Engineer, TNEB, Joint Director, Health & Family Welfare, Joint Director, Agriculture, Deputy Director, Health Services, Chief Educational Officer, Chief Educational Officer (SSA), Project Officer, Mahalir Thittam, Executive Engineer, (Urban), TWAD; Executive Engineer, (RWS), TWAD, Deputy Director, Statistics, Special Deputy Collector, SSS, Cuddalore, District Elementary Educational Officer; District Social Welfare Officer, Project Officer, ICDS; Labour Officer, Manager, Lead Bank; Manager, NABARD, All Executive Officers, All Town Panchayats; all Block Medical Officers; Virudhunagar District and others who have also co-ordinated with us in executing the work.

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Dr. S. GANESAN

Ayya Nadar Janaki Ammal College, Sivakasi

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### CHAPTER 1 VIRUDHUNAGAR **DISTRICT - A PROFILE**

#### **CHAPTER**

1

#### DISTRICT PROFILE

Virudhunagar district is famous for its temples and food which is in the South Indian State of Tamil Nadu. Upto the beginning of 20th century AD; Virudhunagar was called as Virudhupatti which was one among the six important places of Ramanathapuram District. Due to the rapid growth in the field of trade and education, it was renamed as Virudhunagar on 29 October 1923.

The term 'Virudhu' means Award' in Tamil. Virudhunagar is very famous for business. Virudhunagar does not produce anything, but exports everything. It is a business hub like Singapore. All agricultural products like chilly, sesame are brought to Virudhunagar to sell and all buyers come to Virudhunagar to buy. Thus, got a saying "Virudhunagar does not produce anything but exports everything". Former Chief Minister of Madras Province and President of the Indian National Congress Shri. K. Kamarajar was born here. Virudhunagar Assembly Constituency is part of Virudhunagar Lok Sabha constituency.

This chapter presents an overview of the physical, historical, cultural and economic facets of the district and places it in an appropriate context in relation to human development. A detailed analysis of the various issues is taken up in the chapters that follow.

#### Topography

Physiographically, the district consists of two distinct regions. The eastern slopes of the Western Ghats in Srivilliputhur and Rajapalayam taluks and the black soil plains of Virudhunagar, Sivakasi, Tiruchuli, Kariyapatti, Aruppukkottai, and Sattur taluks. There are 11 blocks in the district. They are Rajapalayam, Srivilliputhur, Watrab, Sivakasi, Vembakottai, Sattur, Virudhunagar, Aruppukottai, Kariyapatti, Thiruchuli, Narikudi. The average height of the hills of the eastern slopes of the Western Ghats is 1500 metre, though a few peaks rise to 1700 metre. The highest peaks are Peyimalai Mottai and Kottamalai. The foothills have rich loamy soil with good vegetation cover. The plains with black cotton soil have underlying calcarious formations.

Virudhunagar district is situated in the southern portion of Tamil Nadu State. It is bounded on the north by the districts of Madurai and Sivagangai, on the east by the districts of Sivagangai and Ramanathapuram, on the south by the districts of Thoothukudi and Tirunelveli

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and on the west by a portion of Kerala State and the district of Madurai. The administrative headquarters is located at Virudhunagar town. The district lies between 90°20' and 90°72' of north latitude and 77°20' and 78°70' of east longitude. The general geographical information of the district is that of a simple and flat area. Two non-perennial rivers, namely Arjuna River and Vaipar River are flowing in the district and it will be dry during the summer season. It has an area of 4432.55 sq. km.

#### History

From the 19<sup>th</sup> century AD, District Collectors and Judges appointed by the British controlled the area. In 1910, the District of Ramanathapuram was created for reasons of administrative convenience, by carving-out territories from Madurai and Tirunelveli districts. In 1948, after India attained independence, the zamins were abolished. In 1985, the Ramanathapuram district was trifurcated vide State Government Notification, G.O. Ms. 347 dated 8.3.1985 to create the districts of Ramanathapuram, Pasumpon Muthuramalinga Thevar Tirumagan (later renamed Sivaganga) and Kamarajar district (later renamed Virudhunagar district). The district is divided into 8 taluks, namely Aruppukkottai, Kariyapatti, Rajapalayam, Sattur, Sivakasi, Srivilliputur, Tiruchuli and Virudhunagar.

#### Language

The official language spoken in the district is Tamil, Which is one of the oldest languages of India. It has undergone several panoramic changes with significant contributions made by poets, scholars and rulers over several centuries. 'Tholkappiam' dating back to the 5<sup>th</sup> century BC, is a standing monument testifying to the antiquity of the Tamil language. The earliest literature namely 'Sangam' pottery, originated in Madurai and reached its zenith in the 2<sup>nd</sup> century. Pottery and literature flourished for almost three centuries during the 'Sangam' age. 'Sangam' literature is remarkable for its high literary quality and sophisticitation. The best known work of this age is 'Tirukkural' (couplets providing philosophy and guidelines for a righteous living), written by Saint Thiruvalluvar, which is relevant even today. 'Silapathigaram' (wrtitten by Elango Adikal, son of a Chera King in the 2<sup>nd</sup> and 3<sup>rd</sup> century AD) and 'Manimegalai' (written by Sealthalai Sathanar) are two major classics. Other great poets of this age were the 'Nayanmars' and the 'Alwars'. Kambar, who composed a Tamil version of 'Ramayana', lived during this time. The then rulers nurtured the Tamil language, fostering its growth and development. Tamil is the medium of instruction in educational institutions and is widely used in the conduct of Government business in the district.

#### Art, Architecture and Culture

Every year, during the Tamil month of Panguni, the famous Panguni Pongal festival is celebrated with several hundred thousand devotees taking up Fire Pot Procession as way of respect to Goddess Mariamman. Relatives and friends gather together during the processions for Water Deluge of Goddess Mariamman, Black and White dot smeared body adorned with neem leaves camaflouge dressing, Kairu Kutthu, Agni Chatti carrying by devotee's plain palm and Temple Car (Therottam) functions and they go around the town.

A big festival is organised for Veyiilugandha Amman during Tamil month Vaikasi. In the month of October, to welcome the onset of monsoon, festivals are organised for Mother Goddess Kaliamman at various localities on every Tuesday and Wednesday nights. Karagam, Kolattam, Oyilattam and other lively programmes are organised on large scale at different streets during these weekly events during September–October.

Virudhunagar Exhibition is conducted in the KVS School premises for the benefit of school fund during summer holidays attracts many people from the nearby towns and villages. The exhibition also serves as a unique family convention centre for matrimonial match making arrangement facilities for the aspiring grooms and brides.

During Dusserah celebration, a large procession with Tiger Dance and Tamil Martial art fencing is organised by several locality groups of Virudhunagar town. To participate and witness this festival, nearly one lakh people assemble in one evening. Virudhunagar has one Theppam (artificial pond to replenish ground water) in the centre of the town. Now facilities have been done to maintain water in Theppam throughout the year. There are many yoga, music, dance and art classes in the town. There are several garden temples for Kaaval Deivangal (guardian angels) in Aruppukottai Road, Sattur Road, Madurai Road and in Chinnamoopanpatti village on the northern suburb of Virudhunagar. Festivals are celebrated during January, February in these garden temples in a grand manner.

Sri Periyazhvar and Andal were born and lived in Srivilliputhur, a temple town of this district. It is also a pilgrim centre recognized by the Government of Tamil Nadu. The temple tower of Andal Thirukkoil is 197 feet, the tallest in Tamil Nadu, which is inscribed as the emblem of Tamil Nadu Government. Mariamman temples at Virudhunagar and Irukkankudi are

also famous temples in the district. The Siva temple at Tiruchuli, the birth place of Thiru Ramana Maharishi is notable for its architectural excellence.

On a hillock in Thiruthangal town, stands "Ninra-Narayana Perumal Temple" constructed during the early Pandiyan Emperor. Tirumangaiazhvaar has written hymns in praise of this temple.

The main pilgrim centres are Andal Thirukkovil, Irukkankudi Mariamman Temple, Boominathar Temple, Srinivasaperumalkoil and Meenakshi Sundareswarar Temple. Pongal, Adiperukku, Karthigai Deepam, temple car festival, Chitra and Brahmotsavam are the major festivals. Other important fairs and festivals include Iyanar koil festival, Vailukanthamman koil festival, Perumal koil festival, Kannicheri Pudur fair, Muthalamman festival and Mullai Kottai Mariamman koil festival.

#### **Population Trends**

According to 2011 population census, the total population of Virudhunagar district is 1942288. Among them, male population is 967709 and female population is 974579. The total population increased from 2001 to 2011 census over 190987. The percentage increase was 10.91. The literate population increase over 2001 was 262214 and percentage increase was 23.07. The population density rate of the district is 458 per sq.km. It is inferred that the female population is more than that of the male population by 6870 in the district.

#### **DISTRICT MAP**

#### Virudhunagar District



(Map Not to Scale) Digital Map Source : TWAD Board, Chennai Web Design : NIC, TNSC

The basic demographic indicators of Virudhunagar district are shown in Table 1.1.

TABLE 1.1 DISTRICT BASIC DEMOGRAPHIC INDICATORS

Indicators	2001	2011
Population	1751301	1942288
Decennial Growth (%)	11.90	10.91
Density of population per sq. km.	395.10	458
Urban population (%)	44.39	50.47
Sex ratio	1012	1007

Source-Census documents 2001 and 2011

The comparative status of the demographic indicators of the district is clearly picturised in Table 1.1. Over ten years, the total population of the district has increased from 1751301 in 2001 to 1942288 in 2011. Even though the total population has increased, but the decennial growth rate has decreased from 11.90 to 10.91. That is one per cent decrease in the decennial growth rate in the district. It reveals the people have moved towards adoption of family planning measures and the efforts taken by the health department towards disseminating small family norms and reducing the growth rate of population in the district. There is an increasing trend in the density of population. According to 2011 census, the urban population of the district is 50.47 percent but it was only 44.39 per cent in 2001 census. Considering the sex ratio there is a positive trend over 2001. By comparing the district sex ratio (1007) with the State average (996), there is greater difference i.e., the district sex ratio is greater by 11 compared to the State. At the same time, the district average is also far better than the national average (943).

#### **ECONOMY**

An economy consists of three sectors Primary, Secondary and Tertiary. This part discuss the structure of the above three sectors in the district.

#### Agriculture

The area under cultivation accounts for 27 per cent of the total geographical area. Agriculture provides sustenance to 52 per cent of the working population. Productivity of agriculture is influenced by numerous factors such as soil, climate, irrigation marketing, credit facilities, agricultural practices and techniques. The soils of the district are of poor productivity and are

mainly black loamy soil (locally known as Karisal). Cotton, pulses, oilseeds and millets, which do not require much irrigation are the main crops grown. Paddy and sugarcane are grown, where tank or well irrigation is available. The crops cultivated are black gram, green gram, cowpea, lablab, cholam, cumbu, ragi, maize, sunflower, groundnut, gingelly and small millets like thinai, varagu, samai, kuthiraivali, cotton, chilli, paddy, and sugarcane.

The economy of the district is predominantly agriculture. Paddy is the most predominant crop, being cultivated in 22973 hectare. Next to paddy, cotton is the most important crop grown in 8209 hectare. Cumbu, cholam, ragi, varagu, chillies, blackgram, hosegram, groundnut and gingelly are the important crops grown in the district. The north-south monsoon is preferred for raising dry crops in all over the district. Though half of the geographical area is under cultivation, the important farm machinery is not much common in this district. Only a few progressive farmers use improved farm machinery and implements.

The most striking feature of this drought prone district is absence of dependable irrigation sources such as perennial rivers. Though on an average one-third (1/3) of the cultivated area is classified as irrigated area, assured irrigation is available only for 57 per cent through the wells, the remaining area being irrigated by rain-fed tanks. Two reservoirs, namely Periyar and Kovilar at Pilavakkal in Watrap irrigated about 3800 hectare through 40 tanks. The main reservoir systems in the district are Pilavakkal Reservoir System, Anaikuttam Reservoir Scheme, Vembakottai Reservoir, Kullursandai Reservoir, Golwarpatti Reservoir, Chennampatti Reservoir, Athikulam Reservoir Scheme, Ambalathadi Reservoir Scheme, Irrukkankudi Reservoir Project, Nagariar Reservoir and Nilayur Extension Canal.

The district offers considerable scope for development of the sheep rearing. This district has a sizeable sheep population say 165416, but they are of low genetic potential. Sheep population is rich in Aruppukottai, Satur and Srivilliputhur taluks. Hot climate, high cost of food and high mortality rate are some of the significant factors which arrest the development of poultry in this district. The sectoral distribution of Gross District Domestic product at constant prices (2004 – 2005 prices) is presented in Table 1.2.

## TABLE 1.2 SECTORAL DISTRIBUTION OF GROSS DISTRICT DOMESTIC PRODUCT

(Rs. in lakh)

Year	Primary	Secondary	Territory	Total
2007 – 08	64957	570971	511623	1147551
2008 – 09	66684	560687	560694	1188065
2009 – 10	61118	725273	597632	1384023
2010 – 11	66118	823282	674834	1564234
2011 – 12	78128	852307	728334	1658769

Source: Department of Economics and Statistics, Govt. of Tamil Nadu

It is evident from Table 1.2 that the total Gross Domestic Product of the District has increased from Rs. 1147551 lakh in 2007 – 2008 to Rs. 1658769 lakh in 2011 – 12. By comparing the three sectors, the contribution made by all the three sectors showed an increasing trend. But the contribution of secondary and territory sectors were more when compared to the primary sectors. The percentage contribution to GDDP by primary sector for the year 2007 – 2008 was 5.66 and it has declined to 4.71 per cent during 2011 – 12. Regarding the secondary sector contribution there is a sharp increase from 2007 – 2008 to 2009 – 2010 i.e., from 49.76 per cent to 52.40 per cent and again there was a declining trend with 51.38 per cent during 2011 – 2012. Considering territory sector, there is a sharp increase in 2008 – 2009 with 47.19 per cent in 2011 – 2012. Even though majority of the people in rural areas of Virudhunagar district depend on agriculture, the contribution of primary sector to GDDP is very low.

#### Industry

The establishment of textile mills, cement factories and a number of industries in the small and medium sectors coupled with the encouragement given by the State Government in the form of incentives and setting up of District Industries Centre (DIC) has accelerated the rate of industrialization in the district.

Cotton is a major commercial crop of the district and the cotton industry, therefore, occupies an important place in the economy. Rajapalayam is the chief centre for spinning mills and ginning factories. Surgical cotton and bandage cloth are manufactured in Rajapalayam.

Textile mills in the district produce a variety of cotton yarn. As the district has deposits of limestone and gypsum, the cement industry has gained a strong foothold. The Tamil Nadu Cements – a public sector undertaking at Alangulam and the Madras Cements Ltd., a private sector undertaking at (Ramasamy Raja Nagar) Thulukkapatti are the two largest cement producing units. Tamil Nadu Cements has an annual production capacity of 4 lakh tonne of portland cement, while the Madras Cements Ltd., has an annual capacity of 4.15 lakh tonne. The Tamil Nadu Asbestos is another public sector unit in the district producing asbestos cement sheets.

Sivakasi and Sattur are famous for the match industry. There are over 4500 match units. Crackers and fireworks is another important industry with about 400 units in the district. Over 70 per cent of the total production of matches and fireworks in India is manufactured in Virudhunagar district. A large percentage of crackers are exported. The printing industry was originally established to supply labels for the match and fireworks industries. Soon the industry developed and diversified into other areas of printing like books, posters, greeting cards and diaries, Sivakasi now offers state of the art, world class printing facilities.

Sundaram Fasteners and Brakes India Ltd., private sector enterprises of the TVS group are located at Aviyur and Kanjanaiyakanpatti in Kariyapatti taluk. The former manufactures high density bolts and nuts, while the latter manufactures automobile breaks.

There are 21638 registered small scale industrial units as on 31<sup>st</sup> March 2004 engaged in the manufacture of a very wide range of products. Cottage and village industries are dispersed throughout the rural areas. Some common cottage industries are making boxes and other articles from palmyra leaves, metal artifacts fashioned from copper, brass and aluminum vessels manufactured for domestic use. Gem cutting has been introduced to provide employment for women.

#### **Income and Poverty**

Table 1.3 clearly indicates the trends in per capita income of the district from 2004 - 2005 to 2011 - 2012.

#### TABLE 1.3 DISTRICT PER CAPITA INCOME

(in Rs.)

Year	Per Capita Income
2004 – 05	47514
2005 – 06	54418
2006 – 07	63217
2007 – 08	62038
2008 – 09	63783
2009 – 10	73811
2010 – 11	82890
2011 – 12	87361

Source: Department of Economics and Statistics, Govt. of Tamil Nadu

The Per capita income is one of the most important indicators in estimating the development of the district. There is a gradual and continuous increase in the per capita income of the district. During 2004 – 2005, the per capita income of the district was Rs. 47514 and it has increased to Rs. 87361 during the year 2011 – 2012. It refers to the positive development of the district.

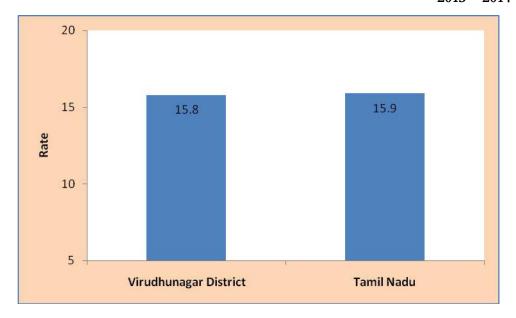
#### SOCIAL SECTOR

#### Health

"Health is Wealth"; and "If health is lost, everything is lost" are some of the old proverbs which indicate the importance of health. The major health indicators are Infant Mortality Rate (IMR), Maternal Mortality Rate (MMR), Crude Birth Rate (CBR), Malnourishment *etc.* The IMR is the number of deaths under one year of age occurring among the live births in a given geographical area during a given year per 1000 live births. The MMR is the number of maternal deaths per 100000 live births. The CBR is the number of live births occurring among the population of a given year, per 1000 thousand mid year total population. The CBR and IMR are analysed in the district and the same is picturised in Figure 1.1 and 1.2.

FIGURE 1.1: CRUDE BIRTH RATE

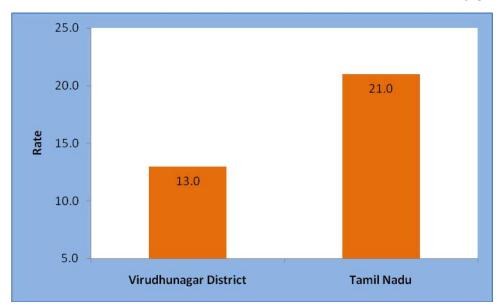
2013 - 2014



Comparison of CBR of the district with the State reveals that, the CBR in the district is 15.80 it is lower than the State CBR by 0.10. The district performance is better than the State.

FIGURE 1.2: INFANT MORTALITY RATE

2013 - 2014



The Infant Mortality rate of the district is 13.00 in 2013 - 2014. Efforts taken by the health authorities of the district are appreciable and further steps should be taken to reduce the IMR.

#### Literacy and Education

Virudhunagar is one of the 32 districts giving importance to education and providing a quality education to its people. Virudhunagar district stood first in 10<sup>th</sup> standard and +2 results in pass percentage consecutively for 24 years. Estimating the human development index of the district, the literacy and educational status of the district plays a vital role. Educationally developed district should possess a high human development index compared to educationally backward district. Educated males are more in number than the female in Virudhunagar district. Further, the educational status of the urban population is greater than that of the rural population in the district. The total literacy of the district is 80.80 per cent. Considering the male literacy rate, it is 88.50 and female literacy is 73.10 per cent. In the district male literacy rate is higher than the female literacy rate. The Gross Enrolment Rate of the District at primary level is 101.34 and the secondary level is 91.17.

#### **CONCLUSION**

Virudhunagar district is situated in the Southern portion of Tamil Nadu State. The district consists of eight taluks, namely Rajapalayam, Srivilliputhur, Sivakasi, Sattur, Aruppukkottai, Virdhunagar, Thiruchuli and Kariyapatti. Eleven blocks in Virudhunagar district namely, Ralapalayam, Sirivilliputhur, Sivakasi, Sattur, Aruppukkottai, Virudhunagar, Thiruchuli, Kariyapatti, Watrab, Vembakkottai and Narikudi. Shri Periyazhvar and Andal were born and lived in Srivilliputhur, a temple town of this district. The birth place of Ramana Maharishi -Thiruchuli is one of the eleven blocks of Virudhunagar district. The then Chief Ministers Kumarasamy Raja and Karma Veerar K. Kamarajar are belonging to this district. The temple tower of Andal Thirukkovil is 197 feet, the tallest in Tamil Nadu, which is inscribed as the emblem of Tamil Nadu Government. Main Pilgrim Centres are Andal Thirukkovil, Irukkankudi Mariamman Temple, Boominathar Temple, Ninra - Narayana Perumal Temple etc. Total population of the district according to 2011 census is 1942288. Male – 967709; Female – 974579. Density of population is 458. Urban population is 50.47 per cent. Sex ratio is 993. The district is predominantly agriculture oriented. The most striking feature of this drosught prone district is absence of dependable irrigation sources such as perennial rivers. The total Gross Domestic Product of the District has increased from Rs. 1147557 lakh during 2007 – 2008t to Rs. 1658769 lakh during 2011 - 12. Surgical cotton and bandage cloth are manufactured in Rajapalayam. Sivakasi and Sattur are famous for match industry. There are over 4500 match units. Crackers and fireworks is another important industry with about 400 units in the district. The per capita income of Virudhunagar district during the year 20s14 was Rs. 47514 and it has increased to

#### <u>DISTRICT HUMAN DEVELOPMENT REPORT - VIRUDHUNAGAR</u>

Rs. 87361 during the year 2011 – 2012. IMR of the district is 13.00. CBR of the district is 15.80. Virudhunagar district stood first in 10<sup>th</sup> and +2 results in pass percentage consecutively for 24 years. Overall literacy rate of the district is 80.80. Male literacy rate is 88.50. Female literacy rate is 73.10. Gross Enrolment Rate: Primary – 101.34 and Secondary – 91.17.

# CHAPTER 2 STATUS OF HUMAN DEVELOPMENT

## **CHAPTER**

2

### STATUS OF HUMAN DEVELOPMENT

#### Introduction

The Human Development Index (HDI) is calculated on the basis of the guideline given by the UNDP. Human development is a process of enriching choices of the people. The main aim of development is to provide a healthy and wealthy environment for the people to enjoy their life. Wealth is essential to enjoy the life but health is most important to earn the wealth. For estimating HDI, three dimensions like standard of living, health and education are taken into account. These indicators are included in each dimension. Regarding standard of living, access to cooking fuel, toilet facilities, drinking water, electricity and pucca houses are included. The IMR, MMR and under 5 year Mortality Rate (U5MR) are included in health and for education, literacy rate, Gross Enrolment Ratio (GER) at primary and secondary schools are taken as indicators. The HDI values ranges from 0 to 1. Zero indicates the worst performance and 1 indicates the best performance. The UNDP methodology to construct the HDI is to facilitate the comparison of human development in Virudhunagar district with the State and also to compare the interblock variations. This chapter clearly depicts the indices of Human Development, Gender Inequality, Multidimensional Poverty and Child Development at block and District levels based on the indicators given by the State Planning Commission.

### **Human Development Index**

The HDI ranges from 0 to 1. The HDI value ranges from 0 to 0.5 explains low HDI; between 0.5 to 0.8 medium HDI and above 0.8 high HDI.

#### Human Development Index- VNR District and State Context

The Virudhunagar District HDI is 0.625 when compared to the State HDI of 0.736. It is in the middle band. The HDI value of the district is lower than the State index value.

# Human Development Index—Inter-Block Variations

The HDI has been constructed for 11 blocks in the district using the UNDP methodology. As indicated above, the HDI value for Virudhunagar district is 0.625. This value ranges from 0.456 to 0.871 at the block level. Among 11 blocks in Virudhunagar district, Sivakasi stood first in HDI with 0.871. Sivakasi is one of the industrially developed blocks in the district and creates more employment opportunities. People from nearby villages have migrated to Sivakasi for seeking employment. Due to employment and income, the standard of living of the people is

high, when compared to other blocks. Sivakasi stood first in all the three dimensions, namely, standard of living, health and education. The indicators used in different dimensions for the estimation of HDI are:

Dimensions	Indicators
Standard of living	Access to cooking fuel
	Access to toilet facilities
	Access to drinking water
	Access to electricity
	Access to Pucca houses
Health	Infant Mortality Rate
	Maternal Mortality Rate
	Under 5 Mortality Rate
Education	Literacy rate
	Gross enrolment in Primary
	Gross enrolment in secondary

An attempt has also been made to identify an overall view of the status of human development in all the blocks with respect to each indicator separately. The best performing three blocks and the least performing three blocks have also been identified and the same is depicted in Table 2.1.

TABLE 2.1 TOP AND BOTTOM THREE BLOCKS IN HUMAN DEVELOPMENT INDEX

Top '	Гhree	Bottom Three		
Name of the Block Value		Name of the Block	Value	
Sivakasi	0.871	Thiruchulli	0.456	
Srivilliputhur	0.780	Vembakkotai	0.485	
Rajapalayam	0.735	Narikudi	0.505	

Source: Computed Value

Human Development Index is estimated using different indicators like standard of living, health and education. Among the 11 blocks, the top three positions are witnessed in Sivakasi (0.871) followed by Srivilliputhur (0.780) and Rajapalayam (0.735). Further, Thiruchulli is the block having the lowest HDI value with 0.456 followed by Vembakkottai (0.485) and Narikudi (0.505).

It is understood that Sivakasi is the only block among top three blocks in the district and this block stood first in two human development dimensions namely, standard of living and health considered for computing indices. Aruppukottai block was top in education. The best

performance in all dimensions was witnessed in Sivakasi followed by Srivilliputhur and Rajapalayam blocks. Considering the bottom three blocks, the worst performance is in Thiruchulli block followed by Vembakkottai and Narikudi blocks.

# Gender Inequality Index (GII)

Gender Inequality Index (GII) is estimated by taking health, empowerment of women and labour force as dimensions and the indicators are:

Dimensions	Indicators
Health	MMR
	Share of institutional delivery
	Share of Antenatal coverage
Empowerment	Female literacy rate
	Male literacy rate
	Share of female children $0 - 6$ years
	Share of male children $0 - 6$ years
	Share of male elected representatives in RLBs and ULBs
	Share of female elected representatives in RLBs and ULBs
Labour market	Female work participation rate
	Male work participation rate
	Female work participation rate in non Agri. Sector
	Male work participation rate in non Agri. sector
	Female Agri. wage rate
	Male Agri. wage rate

Gender Inequality Index is helpful in analyzing the gender inequality in Virudhunagar district in a comparative framework. On the basis of the GII value, the best and worst performing three blocks are compared with their values and the same is given in Table 2.2.

TABLE 2.2 TOP AND BOTTOM THREE BLOCKS IN GENDER INEQUALITY INDEX

Top 7	Гhree	Bottom Three		
Name of the Block Value		Name of the Block	Value	
Sivakasi	0.041	Aruppukkottai	0.076	
Srivilliputhur	0.045	Watrab	0.066	
Narikudi	0.048	Kariyapatti	0.061	

Source: Computed Value

The top three blocks in GII are Sivakasi (0.041), Srivilliputhur (0.045) and Narikudi (0.048). The worst performing three blocks are Aruppukkottai with the index value of 0.076 followed by Watrab and Kariyapatti with the index value of 0.066 and 0.061 respectively.

To identify the inequality among gender, the GII values have been estimated for the district as well as for all the blocks in the district. Under Gender Inequality Index, the least value indicates the good performance and the highest value indicates the worst performance in gender equality. Once again Sivakasi is placed the best followed by Srivilliputhur and Narikudi blocks and the worst performance is witnessed in Aruppukottai followed by Watrab and Kariyapatti.

# Multidimensional Poverty Index (MDPI)

Health, education and standard of living are taken as parameters to estimate the multidimensional poverty index. The rural blocks are low in all the three parameters. Considering health, IMR and malnourishment are high in Rajapalayam, Watrap, Virudhungar, Naikudi and Aruppukootai blocks. This is because of inadequate medical facilities, lack of access to health services etc. Regarding education, the district is performing well. It should be enhanced more. Considering the standard of living, the status in rural blocks is in pathetic condition. The LPG usage is very low in rural areas. Still people depend on fuel wood and agricultural waste for their energy need. Open defection is common in rural areas. People in the rural areas do not come forward to construct and use latrine in their houses for defection. Availability and accessibility of safe drinking water is inadequate in both rural and urban areas. People in this district are provided with adequate drinking water by the local bodies. If the people feel the water provided by the local authorities like village panchayats and municipalities are inadequate, the people purchase drinking water from the market and spend a portion of their income for the purchase of drinking water.

Dimensions	Indicators		
Health	IMR		
	Higher order birth rate		
	Malnourished children		
Education	Drop out of the primary		
	Drop out in secondary		
Standard of living	Access to cooking fuel		
	Access to toilet facilities		
	Access to drinking water		
	Access to Pucca houses		
	Access to electricity		

The best and worst performing blocks are identified on the basis of index value and the same is presented in Table 2.3.

TABLE 2.3 TOP AND BOTTOM THREE BLOCKS IN MULTIDIMENSIONAL POVERTY INDEX

Top	<b>Three</b>	Bottom Three		
Name of the Block Value		Name of the Block	Value	
Sivakasi	0.275	Kariyapatti	0.615	
Vembakkottai	0.342	Watrab	0.560	
Srivilliputhur	0.345	Narikudi	0.557	

Source: Computed Value

It should be noted that again Sivakasi block is good in multidimensional poverty index and stood first in top three blocks followed by Vembakkottai and Srivilliputhur. The worst performance is witnessed in Kariyapatti followed by Watrab and Narikudi. The district is very low in all the parameters. Under MDPI, the least value reveals best performance and the highest value reflects the worst performance.

# Child Development Index (CDI)

The child development index for various blocks in Virudhungar district was calculated taking health and education as parameters. The indicators taken for the parameters health and education for the estimation of child development index is as follows:

Dimensions	Indicators				
Health	U5MR				
	Child sex ratio				
	Percentage of malnourished children				
Education	Gross enrolment ratio in primary				
	Gross enrolment ratio in secondary				
	Children never enrolled in schools				
	Transition rate from primary to upper primary				
	Transition rate from upper primary to secondary				

On the basis of the above dimensions, the CDI was estimated for all the 11 blocks and it was ranked. Table 2.4 shows the position of top and bottom three blocks in CDI in terms index value.

TABLE 2.4 TOP AND BOTTOM THREE BLOCKS IN CHILD DEVELOPMENT INDEX

Top Three		Bottom Three		
Name of the Block Value		Name of the Block	Value	
Srivilliputhur	0.691	Vembakkottai	0.276	
Rajapalayam	0.664	Thiruchulli	0.352	
Narikudi	0.595	Kariyapatti	0.374	

Source: Computed Value

It is revealed from Table 2.4 that, among the 11 blocks, Srivilliputhur was in the first position with the index value of 0.691 followed by Rajapalayam (0.664) and Narikudi (0.595). Considering the bottom values, the performance of Vembakkottai is worst with the index value of 0.276 followed by Thiruchulli and Kariyapatti with the value of 0.352 and 0.374 respectively. Comparing different blocks, the performance of urban blocks are good in CDI and the rural blocks are in worst condition. Narikudi block is an exception among the rural blocks, it stood third in CDI.

## Classification of Blocks on the Basis of HDI, CDI, GII and MDPI

Classification of blocks on the basis of HDI, CDI, GII and MDPI are ranked and the same is exhibited in Table 2.5.

TABLE 2.5 COMPARISON OF HDI, CDI, GII AND MDPI

Block	HDI		CI	ΟI	G	GII		MDPI	
	Index	Rank	Index	Rank	Index	Rank	Index	Rank	
Rajapalayam	0.735	3	0.664	2	0.056	7	0.358	4	
Srivilliputhur	0.780	2	0.694	1	0.045	2	0.345	3	
Watrap	0.541	7	0.445	8	0.066	10	0.560	10	
Sivakasi	0.871	1	0.532	5	0.041	1	0.275	1	
Vembakkotai	0.488	10	0.276	11	0.056	6	0.342	2	
Sattur	0.520	8	0.545	4	0.058	8	0.371	5	
Virudhunagar	0.725	4	0.460	7	0.054	5	0.450	7	
Aruppukkotai	0.668	5	0.497	6	0.076	11	0.386	6	
Kariyapattai	0.590	6	0.374	9	0.061	9	0.615	11	
Thiruchulli	0.456	11	0.352	10	0.053	4	0.520	8	
Narikudi	0.505	9	0.595	3	0.048	3	0.557	9	
District	0.625		0.494		0.056		0.434		

Source: Computed Value

Top Three

Bottom three

### Conclusion

- The performance of Sivakasi block is the best in Virudhunagar district in three indices, namely, HDI, GII and MDPI it stood first and fifth in CDI. The reason behind this is high level of employment and income. This is the base for all development. Sivakasi block is good in generating employment opportunities by setting up of more and more industries. By way of that, the people in and around Sivakasi get gainful employment opportunities and income and enhance their standard of living.
- ❖ Urban blocks are in better position when compared to rural blocks. The rural blocks namely, Kariyapatti, Vembakkottai, Thiruchuli and Watrap are worse in majority of the indices. The reasons identified are predominance of agriculture, lack of industries, lack of educational facilities, poor access to health, poor road and other infrastructure. Hence, to develop the rural blocks as equal to urban blocks, the Government should take initiative to set up employment oriented and need based industries and provide other facilities in the rural areas to enhance their income and to overcome other problems.

# CHAPTER 3 EMPLOYMENT, INCOME AND POVERTY

## **CHAPTER**

3

## EMPLOYMENT, INCOME AND POVERTY

#### Introduction

The level of employment and income will determine the level of living. Employment and income are positively associated with each other and they are negatively related with poverty. It means, in an economy, increase in employment opportunities enhances the income of the people and in turn, it reduces poverty. Economic development of a nation is very closely associated with the structural changes in income and employment. Further, increase in the share of industrial sector than the primary sector, the GDP will lead to development of an economy. But in Tamil Nadu, people in rural areas depend primarily on agriculture. Since agriculture is seasonal in character, there is possibility of disguised unemployment. Low productivity is one of the important characteristics of agriculture. In order to understand the linkages between employment, income and poverty in a better way, this Chapter discusses in detail the employment and income over a period of time in Virudhunagar district.

#### **EMPLOYMENT**

#### Size of the Workforce and Workers Participation Rate

The size of workforce depends upon the total population. The total population of the district according to 2011 census was 1942288. Out of this, 48.92 per cent are the total workforce. It implies that less than 50 per cent of the population come under the working group and the remaining are the non-working group. The major reason for poverty is lack of income. Here, it is evident that, in the district one man's income is shared by two men. Hence, if we want to eradicate poverty, the share of total workers to the total population should be increased. The same situation will be applicable to the blocks also.

TABLE 3.1 NUMBER OF WORKERS AND NON-WORKERS IN VIRUDHUNAGAR DISTRICT

Block	Total Workers	Main Workers	Marginal Workers	Non - Workers	Total Population
Rajapalayam	153993	140241	13752	173313	327306
Srivilliputhur	92140	83124	9016	101831	193971
Watrap	62073	52667	9406	57527	119600
Sivakasi	178898	169922	8976	189366	368264
Vembakkotai	62489	57596	4893	51040	113529
Sattur	66461	62260	4201	62730	129191
Virudhunagar	106494	94441	12053	128979	235473
Aruppukkotai	87436	76864	10572	102707	190143
Kariyapattai	53634	45600	8034	52721	106355
Thiruchulli	46479	38861	7618	38955	85434
Narikudi	40061	32490	7571	32961	73022
District	950158	854066	96092	992130	1942288

Source: Census 2011

The total workforce of the district is 950158. Out of this 854066 are main workers and the remaining 96092 are marginal workers. The non working population in the district is higher than the total workforce of the District. Considering the rural blocks like Thiruchulli, Narikudi, Watrab and Vembakkottai, the total workforce is higher than the non-workforce. But the trend is opposite in the case of urban blocks.

# Workers Participation

Workers participation is given in Table 3.2.

TABLE 3.2 WORKERS PARTICIPATION
IN VIRUDHUNAGAR DISTRICT

Rural/Urban	2001	2011
Rural		
Male	286422	287096
Female	240418	224919
Persons	526840	512015
Urban		
Male	231239	292015
Female	123704	146128
Persons	354943	438143
Rural/Urban		
Male	517661	579111
Female	364122	371047
Persons	881783	950158

Source: Census 2001 and 2011

Considering the Workers participation of Virudhunagar district, the rural workforce is greater than the urban workforce. By comparing male and female, the workers participation rate is high among males when compared to female both in rural and urban areas. By comparing 2001 and 2011 census, the workers participation in urban areas has an increasing trend when compared to the rural workers participation.

## **BOX 3.1 CHILD LABOUR IN THE DISTRICT**

The district is not free from child labour. The number of child labour identified during 2012 was 15, but it has increased to 70 in 2014. It is because of poverty and inadequate income to manage the family expenditure. Further, out of 70 identified, 55 are admitted in schools and the remaining 15 are handed over to their parents with proper advice.

## **Sectoral Composition of Workers**

The worker employed in different sectors in the district is given in Table 3.3.

TABLE 3.3 COMPOSITION OF WORKERS

(in per cent)

Name of the Block	Total workers	Cultivators	Agri- Labourers	House hold Industries	Other workers
Srivlliputhur	47.50	1.78	8.72	2.04	30.32
Watrap	51.90	3.37	21.29	2.74	16.63
Rajapalayam	46.86	1.38	8.37	1.69	31.41
Sivakasi	48.58	0.95	2.59	1.30	41.31
Sattur	51.44	2.23	8.25	0.95	36.76
Vembakottai	55.04	3.04	7.71	0.89	39.09
Virudhunagar	45.23	1.75	4.54	0.89	32.93
Aruppukottai	45.23	3.35	7.14	3.46	27.79
Kariapatti	50.84	6.50	15.84	0.92	20.11
Thiruchuli	54.40	9.31	19.20	0.58	16.40
Narikudi	54.86	11.09	21.45	0.48	11.49
District	49.02	2.87	10.53	1.65	30.82

Source: Census 2011

The total work force of the district is 49.02 per cent. Some of the blocks are witnessed with the total workforce higher than the district average. Cultivators are the backbone of our country. The percentage of people engaged in farming activities is 2.87 per cent. Among the blocks in the district, the highest percentage of cultivators is witnessed in Narikudi block. Agricultural labourers constitute 10.53 per cent of total workforce. People employed in household industries are 1.65 per cent and other workers constitute 30.82 per cent.

## Registrations and Placement

Placement of people in different occupations will provide income to the people and hence by that one can reduce poverty. In this regard, we have made a comparison of number of people registered for employment and number of people placed in the district. During 2007, the percentage of people placed was 0.013 and it had increased to 0.016 in 2008 and 2009 and further, it had decreased to 0.013 in 2011. In the recent past, Tamil Nadu Government is recruiting employees for different departments by conducting examinations like Group I, Group II, Group IV, VAO *etc.* The appointment of persons through employment office is restricted. Hence, the data shows a low level. Apart from the Government appointment in the district, many private industrial concerns created a large amount of employment opportunities. The total number of people registered for employment and placed in the district is provided in Table 3.4.

TABLE 3.4 REGISTRATIONS AND PLACEMENT

Year	Registration	Placement
2007	21942	286
2008	23645	377
2009	26324	412
2011	25438	348
2012	18701	124
2013	23757	424
2014	47800	270

Source: District Employment Exchange, Virudhunagar

The percentage of placement compared to registration is very low in the district. There are ups and down movement in the placement of the district. Considering 2007, the percentage of placement is 0.013, it was lower than 2009. The highest percentage of placement is attained in 2013 with 1.780 again the percentage declined to 0.560 in 2014.

# **BOX 3.2 MGNREGA -EMPLOYMENT AND INCOME**

When compared to urban blocks, rural blocks provided more jobs to the households registered under MGNREGA. Kariyapatti is the only block in the district which provided with 100 per cent job to the registered households under MGNREGA. Next comes Virudhunagar (98 per cent) and Narikudi (94 per cent). The least is witnessed in Sattur block with only 32 per cent. Household provided with job cards *i.e.*, 2.02 lakh. Total man days generated was 1.70 crore. Total cumulative expenditure made was 136.45 crore. Type of works undertaken includes deepening of village ponds, construction of village roads, renovation of traditional water bodies, water conservation and water harvesting, micro irrigation works, land development, drought proofing *etc*.

### Income

## Per capita Income

The real development of an individual is determined by the per capita income. Table 3.5 exhibits the per capita income of Virudhunagar district and Tamil Nadu State.

TABLE 3.5 PER CAPITA INCOME (at Constant Price - 2004 - 2005)

Year	Virudhunagar District	Tamil Nadu
2007 – 2008	62038	46293
2008 - 2009	63783	48473
2009 – 2010	73811	53359
2010 – 2011	82890	59967
2011 – 2012	87361	63996

Source: Statistical Handbook of Tamil Nadu

Per capita income is one of the important indicators of development. Table 3.5 clearly explains the trend of per capita income of Virudhunagar district. The per capita income of the district has gradually increased from Rs. 62038 in 2008 – 2009 to Rs. 87361 in 2011 – 2012. By comparing per capita income of the district with the State, per capita income of the district is better than that of the State.

## **Block-Wise Poverty Level**

The block-wise families live below poverty line in the district is presented in Table 3.6.

TABLE 3.6 BLOCK-WISE POVERTY LEVEL

(2013 - 2014)

Block	Percentage of BPL Families
Rajapalayam	29.48
Srivilliputhur	62.00
Watrap	30.00
Vembakottai	65.00
Sivakasi	33.00
Sattur	61.00
Virudhunagar	05.00
Aruppukkottai	10.80
Kariyapatti	42.00
Thiruchuli	53.00
Narikudi	76.00
District Total	42.48

Source: DRDA, Virudhunagar

It is evident from Table 3.6 that the percentage of families living below poverty line in the district is 42.48 per cent. It means that out of 10 families, four families are below poverty line. Considering the block-wise details, the highest percentage is witnessed in Narikudi block with 76. Even though the work force in the block is high but the work force is getting only seasonal employment and that is also low due to monsoon failure and other natural factors. In Narikudi block, people are not having assured employment due to that poverty level in family is high in the district. Next comes Vembakkottai (65 per cent), Srivilipputhur (62 per cent) and Sattur blocks (61 per cent). Least percentage is witnessed in Virudhunagar (5.00 per cent) Aruppukkottai (11 per cent) and Rajapalayam blocks (29.49 per cent). The reasons behind this is that, lack of agricultural activities due to lack of monsoon, lack of employment generation programmes in the district, lavious and unwanted spending habit of the people.

## **BOX 3.3 CASE STUDY – VEMBAKKOTTAI BLOCK**

Vembakkottai block is one of the 11 blocks in Virudhunagar district. This block is low in all the indices (HDI, CDI, GII and MDPI). The main occupation of the people is agriculture. Only a few local based industries are located in this block. The people of Vembakkottai block are not having adequate income to run their life, because of failure of agricultural occupation and lack of alternative employment opportunities. This lead to poverty, further the social and economic infrastructure is also not good. A case study was conducted in Vembakkotai with the objective to identify the reasons for backwardness of the block and to provide measures to uplift the block from backwardness to a better position. The study reveals that the people in the block are not having alternative employment opportunities and they have to depend only on agricultural and animal rearing occupation. Agriculture is not giving adequate amount of income to the people involved in it. Even though the block is having a dam at Vembakkottai, there is little water and the dam is full of "Seemai Karuvel trees" (prosopis juliflora). The opinion of the village people regarding Seemai Karuvel reveals that, it not only takes more amount of water, but also its root will go up to more than 100 feet depth and take more amount of ground water. Further, the local farmers opined that, due to non - cultivation of land years together, their lands are occupied with Seemai Karuvel trees. The farmers felt that on the one side 'No water - No agriculture' and on the other hand 'no alternative employment' - ultimately no income to the people. The demand made by the Panchayat Presidents and local people is that, immediate steps should be taken by the authorities to remove the Seemai Karuvel trees. The drinking water facility available in the block is inadequate and also is not good for drinking. The sanitations facilities in the villages are not in good condition. This will cause severe health problems in this area. A few villages in the block, installed common water purification plant and maintained by the village panchayats, but many villages do not have this facility. Their demand is better and adequate drinking water and sanitation facilities are available. If the local authorities take steps to meet out their demand, the health related problems will be minimized.

# Family Card Holders

Under public distribution system, the Government has taken effective steps to distribute the essential commodities to the people, especially the down trodden people and under – privileged groups through fair price shops by using family cards. Because, poor people are not having affordability to purchase essential commodities like sugar, rice, wheat, kerosene *etc.*, in the open market due to higher price. Already people live below poverty line and if the essential commodities are not supplied by the Government at controlled price through fair price shops, it will aggravate the poverty level of the people. The total number of family cards distributed in the district is 48451.

**TABLE 3.7 FAMILY CARD HOLDERS** 

Taluk	No. of Ration Cards Alloted
Rajapalayam	6283
Srivilliputtur	8249
Sivakasi	5866
Sattur	4929
Virudhunagar	6497
Aruppukottai	7025
Kariyapatti	4278
Thiruchuli	5324
Total	48451

Source: District Supply Office, Virudhunagar

It is evident from Table 3.7 that out of 48451 family cards in the district, the highest number of family card holders is in Srivilliputhur Taluk (8249) and the lowest number of family card holders is in Kariyapatti Taluk.

### **BOX 3.4 SIVAKASI**

The economy of Sivakasi is dependent on three major industries: fire crackers, match manufacturing and printing. The town has 520 registered printing industries, 53 match factories, 32 chemical factories, seven soda factories, four flour mills and two rice and oil mills. The town is the nodal centre for firecracker manufacturing at the national level. In 2011, the industry employed over 25,000 people and some of the private enterprises had an annual turnover of Rs. 5 billion. In 2011, the combined estimated turnover of the firecracker, match making and printing industry in the town was around Rs. 20 billion. Approximately 70 per cent of the firecrackers and matches produced in India are from Sivakasi. In 2012, all the industries suffered 15 – 20 per cent production loss due to power shortage and escalating labour cost.

#### Major Industries of Sivakasi

The economic system of Sivakasi is primarily dependent on three industries and they are

#### Fireworks Factories of Sivakasi

The town of Sivakasi is widely looked at as India's fireworks hub as the region is the official address of more than 450 firecrackers manufacturing industries extending direct employment opportunities to over forty thousand people. Not just that as the massive base of fireworks industries in the town offers indirect work opportunities like box making, wire cutting and tube creating work to over one lakh people in the region. Furthermore, the fireworks factories in Sivakasi are growing at a magnificent rate of 10 per cent on a yearly basis. The yearly production of firecrackers is almost 50,000 tones and turnover at industry monetary value is approximated around Rs. 350 crore. The Government of Tamil Nadu gained almost Rs. 40 million through nuisance tax collected from the fireworks industries alone. Besides, firecrackers manufactured in Sivakasi are widely used across the airports located in the country to frighten away the birds to keep the birds from hitting the airplanes.

## Safety Matches Industries of Sivakasi

It was during the year 1922, when Shri. Shanmuga Nadar and Shri. Ayya Nadar was sent out from Sivakasi to Calcutta to get exposed to the various techniques involved in the safety matches production. Calcutta was the only urban centre in the country to manufacture safety matches those days as the city was the home of a Swedish based multinational safety matches company. As of now, Sivakasi manufactures about 60 per cent of country's demand of safety matches. Also, the town of Sivakasi houses more than 500 safety match companies in the region extending employment opportunities to more than 30,000 people.

#### **Offset Printing**

Sivakasi is India's printing hub. Sixty per cent of India's offset printing solutions is produced in Sivakasi. Sivakasi houses largest number of printing machines in the World next only to Guthenburg in Germany. All kinds of printing jobs are undertaken in Sivakasi including security jobs like printing bank cheque books, flight tickets and lottery tickets. Most of the leading presses are exporting children's books, note books, magazines, greeting card, calendars, trade labels and cartoon throughout the World. More than 50000 people engaged in printing and allied industries. The town has a school of printing technology. The printing industry in Sivakasi is worth about Rs. 1000 crore. The market for printing is growing at the rate of 10 per cent per annum.

#### Conclusion

The total workforce of the district is 48.92 per cent of the total population according to 2011 census. The trend of child labour identified has increased from 15 in 2012 to 70 in 2014. Out of 70 child labour identified 55 are admitted in schools and the remaining 15 are handed over to their parents for proper guidance and advice. Hence, the district is free from child labour problem. Households registered under MGNREGA up to March 2011 are 2.02 lakh in the District. Total cumulative expenditure made under MGNREGA is 136.45 crore. Works undertaken are deepening of village ponds, construction of village roads, renovation of traditional water bodies, water conservation and water harvesting, micro irrigation works, land development, drought proofing etc. The per capita income of the district for the year 2011 – 2012 is Rs. 87361. The per capita income of the district is better than that of the State. The percentage of families live below poverty line in the district is 42.48.

# CHAPTER 4 DEMOGRAPHY, HEALTH AND NUTRITION

# CHAPTER 4

# DEMOGRAPHY, HEALTH AND NUTRITION

#### Introduction

In the HDI calculation, among the three indicators, life expectancy plays a vital role. Life expectancy is determined by the health status of the people. The health indicators are fertility, morbidity, mortality and nutrition. Health status of a country not only depends upon the health care services provided but also health policies implemented by the Government. The individual's action and activity determines the health of an individual. This chapter documents the demographic, health and nutrition status of Virudhunagar district. It analyses the demographic trend, changes in health and nutritional indicators in the district, causes and effects, the steps taken by the Government in the form of policies and programmes and their effectiveness in influencing the health outcomes *etc.* 

# **Demographic Trends and Health Indicators**

The demographic trends and the health indicators of the district is discussed in this part.

# Population and Demographic Transition

The nature and development of the district is determined by its population growth and its structure. Trends in population growth will give us the clear cut picture about the awareness towards population growth and population policy. In this regard, the growth of population, sex ratio and density of population during 2001 and 2011 is given in Table 4.1.

**TABLE 4.1 DEMOGRAPHIC PROFILES** 

Block	Population		Sex Ratio		Density	
	2001	2011	2001	2011	2001	2011
Srivlliputhur	178575	193971	1008	1008	227	249
Watrap	109744	119600	1009	1007	291	456
Rajapalayam	288957	327306	1011	1003	517	586
Sivakasi	317440	368264	1001	1013	905	1071
Sattur	121128	129191	1048	1024	858	941
Vembakottai	112181	113529	1048	1023	266	301
Virudhunagar	218089	235473	1010	1001	832	898
Aruppukottai	172620	181148	1013	1006	505	565
Kariyapatti	91598	119200	1000	990	204	240
Thiruchuli	75806	85434	1011	993	178	201
Narikudi	65163	73022	1036	981	153	172
District	1751301	1942288	1012	1007	409	458
State	62405679	72147030	987	996	480	555
India	1028610328	1210569573	933	943	325	382

Source: Census 2001 and 2011

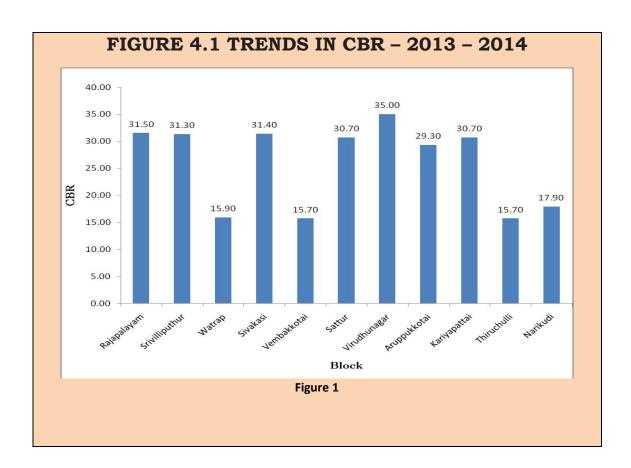
The decadal growth of population in the district from 2001 to 2011 is shown in Table 4.1 indicates that the population grows over 11 per cent during this period. This percentage was lower than the State and all India. This is due to the measures taken by the Government towards disease control and effective implementation of family planning measures. Considering the block-wise population, the highest percentage is witnessed in Kariyapatti block with 30 per cent and the lowest is witnessed in Vembakkottai block with 1.2 per cent.

There is a slight decrease in the sex ratio of the district. It has decreased from 1012 in 2001 census to 1007 in 2011 census. But it is greater than the State and all India average. Further, the density of population has increased in the district. But the district average is lower than the

State average and at the same time it is greater than the all India average. Density of population is greater in Sivakasi block followed by Sattur and Virudhunagar blocks. The density of population is less in Narikudi block followed by Thiruchuli and Kariyapatti blocks. Comparing the density of population of the district in 2001 with 2011, there is a sharp increase not only in district level but also at block level.

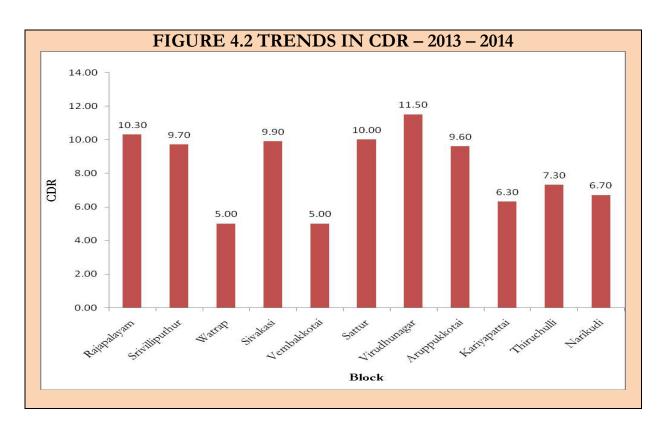
## Trends in Crude Birth Rate

Birth rate and Death rate plays a vital role in determining the size of population. Rate of growth of population is one of the important factors in determining the growth of the district. In Virudhunagar district the highest CBR is in Virudhunagar block with (35.0) followed by Rajapalayam (31.5), Sivakasi (31.4), Srivilliputhur (31.3) and Sattur blocks (30.7). The lowest value is witnessed in Thiruchuli and Vembakkottai with 15.7 followed by Watrap (15.9), Kariyapatti (17.6), Narikudi (17.9) and Aruppukkottai blocks (29.3). It is evident that the CBR value is low in rural blocks than the urban blocks. The CBR value of the district for the year 2013 – 2014 and 2014 – 2015 is 14.00 and 13.45 respectively.



## Trends in Crude Death Rate

Considering the CDR, the lowest value was witnessed in Watrap and Vembakkottai blocks with 5.0, followed by Kariyapatti (6.3), Narikudi (6.7), Thiruchuli (7.3), Aruppukkottai (9.6), Srivilliputhur (9.7) and Sivakasi (9.9) blocks. The highest value is in Virudhunagar block with 11.5 followed by Rajapalayam (10.3) and Sattur (10.0) blocks. Again the CDR value is high in urban blocks. The overall district CDR value is 5.65 and 5.55 for the year 2013 – 2014 and 2014 – 2015 respectively. The reason identified for low CDR in rural blocks is high institutional deliveries in rural areas. The number of institutional deliveries attended by the urban health care services is high. Government is providing mobile post neo-natal care services to the rural people. In case of complications occurring during delivery/sickness, patients would be shifted to urban centres where care is provided. This is one of the reasons for the CDR in urban blocks being high when compared to rural blocks. The other reasons being the higher accessibility to emergency care and the higher number of facilities and specialists available to address the issue.



#### Sex Ratio

Sex ratio of the State, District and various blocks of Virudhunagar district are shown in Table 4.2.

**TABLE 4.2 SEX RATIO** 

Die als	Gene	Increase or	
Block	2001	2011	Decrease
Srivlliputhur	1008	1008	0
Watrap	1009	1007	-2
Rajapalayam	1011	1003	-8
Sivakasi	1001	1013	12
Sattur	1048	1024	-24
Vembakottai	1048	1023	-25
Virudhunagar	1010	1001	-9
Aruppukottai	1013	1006	-7
Kariyapatti	1000	990	-10
Thiruchuli	1011	993	-18
Narikudi	1036	981	-55
District	1012	1007	-5
State	987	996	8
All India	933	943	7

Source: Census 2001 and 2011

The sex ratio of Tamil Nadu and India improved from 987 to 995 and 933 to 940 in 2001 and 2011 respectively. But the condition is worsened in Virudhunagar district. Virudhunagar district's sex ratio has declined from 1012 to 1007 in 2001 and 2011. Considering block-wise sex ratio, except in Sivakasi block, all the blocks have a declining trend. There is a positive change in Sivakasi block with an increase of 12. All the other blocks, have registered a decline in the sex ratio.

By comparing the sex ratio of Tamil Nadu with all India, Tamil Nadu State (996) is having high sex ratio than all in India (943) level in 2011 census. Considering the Virudhunagar District average, it is 1007 and it is greater than the State average of 996. Regarding the block wise sex ratio compared with the district level, 4 blocks namely Sattur (1024), Vembakkotai (1023), Sivakasi (1013) and Srivilliputhur (1008) had a sex ratio greater than the district average. The sex ratio of Watrab block is just equal to the district average and all other blocks had a sex ratio lower than the district average.

### **Child Sex Ratio**

Child sex ratio of the district is clearly depicted in Table 4.3.

**TABLE 4.3 CHILD SEX RATIO** 

Block		Population in the Age Group of 0-6 in 2011 Census		
	Male	Female	Sex Ratio	
Rajapalayam	16241	15303	942	
Srivilliputtur	9684	9287	959	
Sivakasi	19882	19419	977	
Virudhunagar	11916	11497	965	
Kariyapatti	6840	6527	954	
Thiruchuli	4845	4625	959	
Aruppukottai	9071	8507	938	
Sattur	6765	6322	935	
Watrap	5616	5359	954	
Vembakottai	6253	6041	966	
Narikudi	4184	3787	905	
Virudhunagar District	101297	96674	954	
Tamil Nadu			946	
India			914	

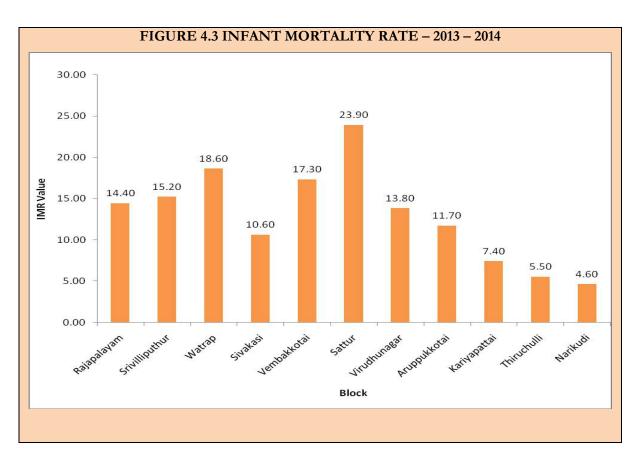
Source: Census 2001 and 2011

The child sex ratio of India according to 2011 census is 914. The Tamil Nadu State child sex ratio for the same period is 946. It is greater than the National average. By comparing the Virudhunagar district (954) the child sex ratio with the State average (946) according to 2011 census. It is evident that the child sex ratio of Virudhunagar district is far better than the Tamil Nadu State.

The overall child sex ratio in the district as well as blocks is good, when compared to the State and National average. But, the child sex ratio has a declining trend. According to 2011 census, the child sex ratio of Virudhunagar district is 954. It is higher than the State average. Among the 11 blocks, the child sex ratio is high in Sivakasi block (977), next comes Virudhunagar block (965). Narikudi block is having the least with 905. This declining child sex ratio has been attributed to a number of factors. They are: higher mortality during childhood because of lack of care and less nutrition, higher mortality during childbirth, lower status of women, poverty among the people especially in the rural areas, inadequate medical facilities, inadequate transport facilities *etc.* 

# **Infant Mortality Rate**

Infant Mortality Rate and Maternal Mortality Rate are the most important indicators in determining the health status of the district. Where the IMR and MMR values are low, the district is good in health and *vice versa*. In Virudhunagar district, Sattur block has a higher infant mortality with 23.90 followed by watrab (18.60), Vembakkottai (17.30), Srivilliputhur (15.20), Rajapalayam (14.40), Virudhunagar (13.80) and Aruppukkottai (11.70). Narikudi block possesses the lowest value with 4.60 followed by Thiruchulli (5.50), Kariyappatti (7.40) and Sivakasi (10.60). The IMR value for the district is 13.00 for the year 2013 – 2014. Comparing the IMR values of 11 blocks with the district value, six blocks are having higher IMR value than the district average.



## **Maternal Mortality Ratio**

If we take some precautionary measures during pregnancy, the MMR will be reduced. The MMR is mainly influenced by the socio, cultural and economic factors. Pregnant women in the district are not in a position to take nutritious food and exercise. The other factors are lack of transport and communication facilities, delay in accessing the available health facilities, lack of connectivity between rural and urban, inadequacy in terms of health services, poor and inadequate essential

and emergency obstetric services. Other major causes include pregnancy – induced hyper tension and eclampsia, rupturing of uterus on account of obstructed labour, puerperal sepsis and septicemia.

TABLE 4.4 MATERNAL MORTALITY RATIO (2013 – 2014)

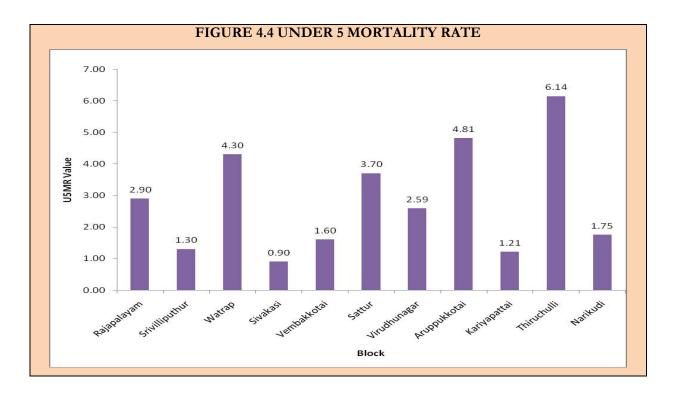
Block	MMR (Per 00000 live Birth)
Rajapalayam	80.00
Srivilliputhur	70.00
Watrap	140.00
Sivakasi	90.00
Vembakkotai	160.00
Sattur	180.00
Virudhunagar	100.00
Aruppukkotai	128.00
Kariyapattai	139.00
Thiruchulli	140.00
Narikudi	149.00
District	125.09

Source: Director of District Health Services

Regarding Maternal Mortality Ratio, the district average is 125.09 in 2013 – 2014. In the district, four blocks have low MMR value and others are having higher value than the district average. The lowest MMR value was witnessed in Srivilliputhur block with 70 followed by Rajapalayam (80), Sivakasi (90), Virudhunagar (100). The highest value is evidenced in Sattur block with 180 followed by Vembakkottai (160), Narikudi (149), Thiruchulli (140), Watrab (140), Kariyapatti (139) and Aruppurkkottai (128). The reasons for high IMR and MMR are early pregnancy, anemia, mal-nutrition, higher order birth *etc.* Hence, the health authorities should take efficient steps to minimize the IMR and MMR values in the district.

# **Under 5 Mortality Rate**

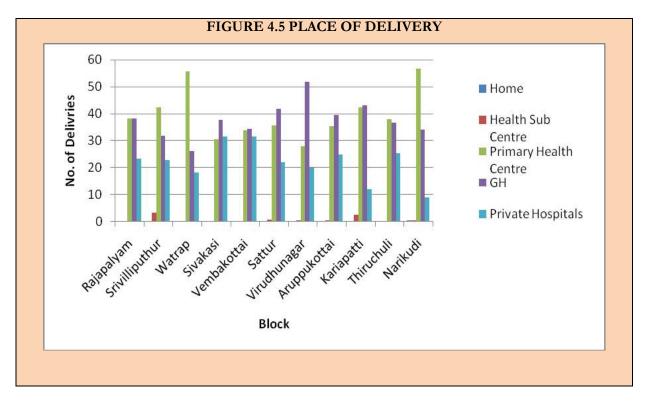
The Mortality rate of children below the age of 5 is represented in the form of bar diagram.



Under 5 Mortality Rate is low in Sivakasi block with 0.90. All other blocks have greater than one U5MR value. The highest value was witnessed in Thiruchulli with 6.14 followed by Aruppukkottai (4.81), Watrab (4.30) and Sattur (3.70) blocks. Futther, the U5MR value of the district was 2.84 in 2013 – 2014.

# Place of Delivery

The maternal mortality and infant mortality are closely related with place of delivery. In olden days, the MMR and IMR were high, which depended upon the place of delivery. Non-institutional deliveries are unsafe and they are done by untrained and uneducated persons. Now-a-days, the health workers in Tamil Nadu have created awareness and now people are taking institutional services either from Government or private health service providers. Non – institutional services are almost nil in many blocks. Less than one per cent of the deliveries take place at home in Sivakasi, Sattur and Narikudi blocks. Primary health centres and Government hospitals are doing wonderful service, but still percentage of deliveries in private hospitals is good in number. It is due to lack of confidence on public health services. Hence, the Government hospitals and primary health centres need to improve quality of services and present a patient friendly outlook.



### Still Birth Rate

Still birth rate occurs when a fetus dies in the uterus. Still birth is due to factorial infection, birth defects, chromosomal aberration, growth retardation, maternal diabetes, high pressure, contraindications of certain drugs, RH diseases *etc*.

TABLE 4.5 STILL BIRTH RATE

Block	2010	2011	2012	2013	2014
Rajapalyam	11.9	13.5	9.7	10.1	7.3
Srivilliputhur	16.7	9.9	13.4	9.7	7.5
Watrap	16.8	16.8	20.9	10.0	12.2
Sivakasi	13.7	12.3	12.4	19.7	15.0
Vembakottai	13.6	13.7	17.6	10.2	12.1
Sattur	18.1	11.5	19.4	11.5	4.8
Virudhunagar	13.9	11.7	11.0	13.0	10.3
Aruppukottai	20.4	15.0	17.5	15.0	12.5
Kariyapatti	13.2	15.5	12.9	13.0	13.7
Thiruchuli	18.0	16.1	18.0	18.0	13.8
Narikudi	16.2	22.6	20.8	18.0	13.4
District	15.7	14.4	15.8	13.5	11.2

Source: Director of District Health Services

Still Birth Rate in the district seems to be fluctuating. During 2010, the still birth rate of the district was 15.7 and it increased to 15.8 in 2012 and it declined to 11.2 in 2014. Considering the

still birth rate of 2014, seven blocks had a rate higher than the district average. The highest still birth rate is witnessed in Sivakasi (15.0) and the lowest was in Sattur with 4.8.

Still birth is a dangerous problem. Unless we reduce the still birth rate in the district, it will accelerate the MMR. Hence, the health authorities should identify the reasons and take necessary measures to control it.

#### **Immunization**

Immunization is the process by which an individual's immune system becomes fortified against an agent. Strengthening of immune system makes our body free from diseases and this will help the child to grow better.

**TABLE 4.6 IMMUNIZATION** 

(2013 - 2014)

Block	Total No. of Children below 5 years	Total No. of Children Immunised	% of Children Immunised
Virudhunagar	3874	4015	103.6
Kariyapatti	1696	1835	108.2
Narikudi	1166	1219	104.5
Thiruchuli	1265	1299	102.7
Aruppukottai	2799	2836	101.3
Sattur	1993	1993	100
Sivakasi	5818	5818	100
Vembakottai	1997	1997	100
Rajapalyam	4129	4129	100
Srivilliputhur	3002	3002	100
Watrap	1796	1796	100

Source: Director of District Health Services

The district possesses two HUDs namely Virudhunagar and Sivakasi. The total number of children below five years in Virudhunagar HUD is 10800. The total number of children immunized in Virudhunagar HUD is 11204 *i.e.*, it achieved 103.70 per cent immunization. Considering the Sivakasi HUD, 100 per cent immunization was achieved. In Virudhunagar district, the health authorities are vigilant and perform well in immunization programmes in all the blocks.

#### Female Infanticide

Female infanticide is the deliberate killing of new born female children. Reduction of female infanticide is essential to improve the sex ratio of the country in general and the district in particular. In India, there is a strong son preference. Increase in female infanticide will cause many social problems in the economy. According to 2011 census, there are 914 girls per thousand boys between the age of 0 to 6 in India. But in Virudhunagar district, the sex ratio is 954 female for thousand male. The situation is better than the National level.

#### **Nutritional Status**

Nutritional status plays a vital role in the development of children and young child. Nutritional programmes undertaken by the Government is to reduce malnourishment among children. Table 4.7 clearly explains the block wise nutritional status of the district.

**TABLE 4.7 NUTRITIONAL STATUS** 

(2013 - 2014)

Block	No. of AWC	Weighted Children (0-5 Years)	Normal Children (0-5 Years)	SUW	MUW	Total
Rajapalyam	198	18917	13271	84	5562	5646
Srivilliputhur	151	10310	7910	41	2359	2400
Watrap	102	7174	5169	25	1980	2005
Sivakasi	183	16542	10999	47	5496	5543
Vembakottai	112	8497	6468	58	1971	2029
Sattur	142	9723	6335	42	3346	3388
Virudhunagar	200	13209	8985	5	4219	4224
Aruppukottai	108	6263	4825	15	1423	1438
Kariyapatti	104	6971	5064	38	1869	1907
Thiruchuli	94	5850	4360	35	1455	1490
Narikudi	91	4849	3406	6	1437	1443
District	1485	108305	76792	396	3117	31513

Source: District Project Officer, 2014

It is observed from Table 4.7 that, 71 per cent of the children between the age 0 and 5 years in the district have come under the normal weight. The highest percentage of normal weight children is witnessed in Srivilliputhur and Aruppukottai blocks with 77 per cent followed by Vembakkottai (76), Thiruchulli (75), Watrab (72). The least percentage is witnessed in Sattur with 65 followed by Sivakasi (66) and Virudhunagar (68). Considering the severely underweight children, Aruppukkottai block is having highest percentage with 0.74 followed by Vembakkottai (0.68), Thiruchulli (0.60) and Kariyapatti (0.55). The least percentage is witnessed in Virudhunagar with 0.04 followed by Narikudi (0.12) and Sivakasi (0.28). By comparing the block wise severely underweight children with the district only 4 blocks out of 11 are having the

Regarding moderately underweight children, the district average is 28.73. Sattur block is having the highest percentage of moderately underweight children with 34.41 per cent followed by Sivakasi (33.25), Virudhunagar (31.94) and Narikudi (29.63). The least percentage is witnessed in Aruppukkottai block with 22.72 followed by Srivilliputhur (22.88) and Vembakkottai (23.20). The Nutritional status of the children should be taken care off by the *Aunganwadi* Centres. In rural areas to increase the nutritional status, the Government should start more number of *Aunganwadi* centres and provide nutritional facilities to the children and pregnant women.

#### **Provision of IFA Tablets**

Iron deficiency is a prevalent nutritional problem. It is highest among pregnant women, infants, preterm and low birth weight babies. Iron deficiency is compensated by taking Iron Folic Acid (IFA) tablets. The IFA tablets control Anemia, maintaining hemoglobin level in the blood. Indian women are anemic and having low hemoglobin in general and this is true in Virudhunagar district also. Hence, to remove this deficiency, the Government of India is supplying IFA tablets to the girl child and women free of cost.

TABLE 4.8 PROVISION OF IFA TABLETS

(2013 - 2014)

Block	% of Women took IFA tablets	% of Children took IFA tablets	% of Adoloscent Girls took IFA tablets
Virudhunagar	149.3	9.2	50.2
Kariyapatti	102.5	11.0	86.4
Narikudi	103.8	30.8	72.5
Thiruchuli	99.0	16.3	90.7
Aruppukottai	159.2	18.6	83.7
Sattur	94.9	34.2	100
Sivakasi	75	77.8	99.9
Vembakottai	98	31.9	100
Rajapalyam	82	28.2	100
Srivilliputhur	102	30.3	100
Watrap	111	37	99.9

Source: Director of District Health Services

Out of 11 blocks, the percentage of women who took IFA tablets was low in Sivakasi block (75) and high in Aruppukkottai (159.2). Considering the percentage of adolescent girls who took IFA tablets, Virudhunagar block possesses the lowest percentage (50.2). The rural blocks had the lower percentage, when compared to urban blocks, except in Virudhunagar and

Aruppukkottai blocks. Further, the percentage of children who took IFA tablets was very low in all the blocks in the district. The highest percentage was witnessed in Sivakasi block (77.8) and the lowest was in Virudhunagar block (9.2).

## IFA Tablets are used for:

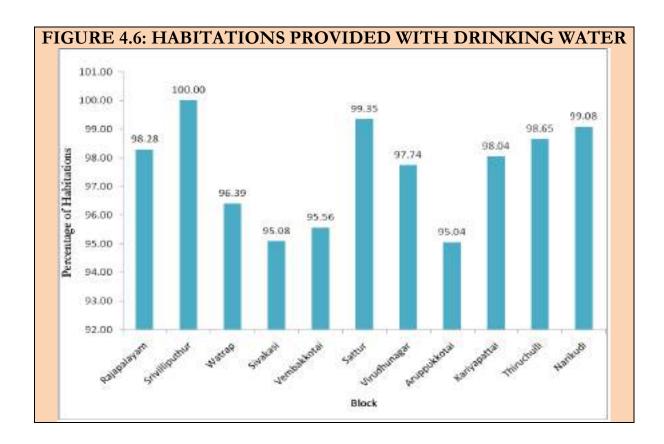
- \* Anemia, maintaining hemoglobin level
- **★** Iron deficiency nutritional problem
- **★** Highest among infants with low birth weights.

### **BOX 4.1 NUTRITIONAL PROGRAMMES OF THE GOVERNMENT**

- Applied Nutrition Programme
- ➤ Integrated Child Development Services Scheme
- Balwadi Nutrition Programme
- > Special Nutrition Programme
- National Nutrtional Anemia Prophylaxis Programme
- National Prophylaxis Programme for Prevention of Blindess
- National Prophylaxis Programme for Prevention of Blindness Due to Vitamin 'A' Deficiency
- National Iodine Deficiency Disorder Control Programme
- ➤ Mid Day Meal Programme

### Non –nutritional Factors and their Impact on Nutrition

Many non- nutrition factors like safe drinking water, provision of toilet *etc.*, require very little effort on the part of the individuals. Most of them are under the jurisdiction of the State. Even though most of the blocks in the district are provided with adequate water, still a majority of the people in the rural areas were practicing open defecation.



The total number of habitations in the district according to the records of District Rural Development of Virdhunagar is 1775, total number of households provided with drinking water was 32771 in the district. The lowest number of households provided with drinking water is in Vembakkotai block with only 301 households.

#### Sanitation

Water pollution and improper sanitation facilities have its own negative impact on health of the people. Diarrhoeal diseases are a major cause of death among adults. It is due to lack of safe drinking water and bad sanitation. Lack of good drainage is another possible cause contributing to water-borne diseases. In the district, both rural and urban areas have a predominance of open kutcha drainage system with poor maintenance. It causes diarrhoeal and malarial diseases.

TABLE 4.9 PROVISION OF TOILET

Block	Total Number of HHs	Number of HHs with Toilet Facilities	% of HHs Provided with Toilet Facilities
Rajapalayam	94776	47553	50.17
Srivilliputhur	55358	36294	65.56
Watrap	33087	17488	52.85
Sivakasi	101323	69988	69.07
Vembakkotai	31369	21608	68.88
Sattur	36606	26491	72.37
Virudhunagar	64593	35550	55.04
Aruppukkotai	52172	40303	77.25
Kariyapattai	28257	14768	52.26
Thiruchulli	21999	16005	72.75
Narikudi	18208	9740	53.49

Source: Census 2011

Provision of toilet facilities is one the important factors which help in improving the health and standard of living of the people. Table 4.9 illustrates the number of households provided with toilet facilities in the district. The highest percentage of households provided with toilets is witnessed in Aruppukkottai block and least is in Rajapalayam block. The rural and urban households come forward to construct latrine in their houses due to the implementation of Bharath Nirmal Yojana Programme. Further, still in the rural areas due to old believes and habits, the people do not come forward to construct and use toilets in home for defecation. They follow open defecation and this attitude should be changed by creating awareness and brining about behaviour change both in rural and urban areas.

Open defecation causes many problems. It will affect the health condition of the people. There is need for behaviour change. Community should come forward for changing the practice of open defecation. Government is also providing financial facilities to the individual households who come forward to construct toilets. Further, the Government is constructing common toilet facilities in the rural and urban areas. But the usage of these facilities is questionable in the rural areas. The reasons behind are, people are not ready to change their old customs, lack of water facilities, people won't feel comport in using toilets in the rural areas *etc.* Out of 11 blocks, five blocks are covered with nearing fifty per cent toilet facilities and the remaining blocks are covered with 60 to 80 per cent toilet facilities. Among 11 blocks, Rajapalayam block is having the lowest percentage of 50.17 and the Aruppukkottai block covers the highest percentage with 77.25.

• Total Number of Government Hospitals – 9
• Total Number of Primary Health Centres – 45
• Total Number of Health Sub Centres – 245
• Total Number of Out Patients Taking Treatment Per-day - 1405
• Total Number of In Patients Taking Treatment Per-Month – 542
● Beds in Hospitals, Dispensaries and PHCs — 1202
• Total Number of Doctors – 178
• Total Number of Nurses – 266
Total Number of Hospitals Providing Indian Medicine
Total Number of PHCs Providing Indian Medicine – 19
• Total Number of Doctors Practicing Indian Medicine – 33

#### Public Health and Preventive Medicine

Public health and preventive medicine facilities available in the district on the basis of different blocks in the districts is given in Table 4.10.

TABLE 4.10 PUBLIC HEALTH AND PREVENTIVE MEDICINE

Name of the	No.	No. of	No. of HSC	Patient Details					
Block	of	PHC		2012	- 2013	2013 - 2014			
DIOCK	GH	PHC	пзс	OP/Day	OP/Day	OP/Day	IP/Month		
Virudhunagar	1	6	29	138	138	121	61		
Kariyapatti	1	4	20	137	137	119	42		
Narikudi	-	4	24	166	166	161	70		
Thiruchuli	1	3	23	134	134	116	42		
Aruppukottai	1	5	18	170	170	161	49		
Sattur	1	4	16	129	129	467	59		
Sivakasi	1	4	35	137	137	519	152		
Vembakkotai	-	3	18	118	118	325	92		
Rajapalayam	1	5	25	159	159	941	219		
Srivillipuhtur	1	3	16	106	106	364	231		
Watrab	1	4	21	159	159	685	244		

Source: District Health Authorities, Virudhunagar

Except Vembakkotai and Narikudi bocks, all the blocks having Government Hospitals in the district. Block-wise number of PHCs in the district is ranging from 3 to 6. Highest number of primary health centres is located in Virudhunagar block and the least number is in Vembakkottai and Srivilliputhur blocks. Health sub-centres are ranging from 16 to 35. The number of outpatients taking treatment is highest in Aruppukkottai block with 170 and the least is in Srivilliputhur block with 106 during 2012 – 2013 and there was increasing trend in 2013 – 2014. The number of inpatient taking treatment in different blocks was ranging from 53 to 106 during 2012 – 2013 and 42 to 244 during 2013 – 2014.

#### Other Health Services

#### **MCH Services**

- Antenatal Mother Registration
- Antenatal Care
- Antenatal Immunization
- Delivery Services
- Postnatal Care
- Infant Immunization and
- Family Welfare Services

#### **Child Care Services**

- Infant Immunization
- School Children Health Camp
- School Children Dental Care Services

#### Other Programmes

- Vector born Disease Control Programme
- Epidemic Control Programme and
- Epidemic Diseaster Management
- Blindness Control Programme
- Dental Programme
- Tuberclocusis Control Programme

#### Other Services Provided By the Health Authorities

Apart from the regular medical services, the district health authorities conduct some special camps and programmes to improve the health of the people. It is clearly depicted in Table 4.11

TABLE 4.11 OTHER SERVICES PROVIDED BY THE HEALTH
AUTHORITIES

Details of Services	Total No. of Beneficiary				
Details of Services	2012 – 2013	2013 - 2014			
Blindness Control Programme	14104	14664			
Tuberclocusis Control Programme	1087	1185			
Leprosy Eradication Programme					
MCR Cheppal and	35	39			
Blankete	35	39			
School Children Health Camp	211258	183603			
Special Medical Camp	3725	16521			

Source: District Health Authorities, Virudhunagar

The major programmes organized are blindness control programme, TB, Leprosy eradication programmes and medical camps to the school students and the public.

# **Special Progammes - AIDS Control**

The HIV positive cases identified in the district in the year 2013 and 2014 were given in Table 4.12.

**TABLE 4.12 HIV POSITIVE CASES** 

Ago	Positive C	ases in 2013	Positive Cases in 2014		
Age	Male	Female	Male	Female	
0- 14	1	1	1	1	
15-19	1	0	0	2	
20-24	10	7	9	9	
25-29	29	23	30	9	
30-39	64	60	59	42	
40-49	75	36	50	40	
50 & above	34	30	47	26	
Total	214	157	196	129	

Source: Deputy Director of Health Services, Virudhunagar & Sivakasi

The HIV positive cases identified in the district in the year 2013 was 214 male and 157 female. In 2014, the HIV cases identified was 196 male and 129 female. But the age group affecting HIV were changed and it is in alarming situation. In 2013, male and female affected with HIV is high in the age group of 30 – 39 and 40 – 49 years. But in 2014, 20 – 24 years male (9) and 25 – 29 years male (30) are identified with HIV cases. Considering the men, more number of women with HIV in the age group of 30 – 39 and 40 – 49 are 42 and 410 respectively. It should be taken care off. Awareness should be created among young men and women on the prevention of HIV/AIDS and following of safe sexual practices.

# **Tuberculosis and Leprosy Cases**

The block wise TB and Leprosy cases of the district are given in Table 4.13.

TABLE 4.13 TB AND LEPROSY CASES

Block	Positive	TB cases	Lepro	osy
DIOCK	2013	2014	2013	2014
Rajapalyam	126	130	1	2
Srivilliputhur	204	172	2	0
Watrap	106	133	0	0
Sivakasi	120	239	5	2
Vembakottai	189	118	2	5
Sattur	13	11	4	6
Virudhunagar	91	98	4	4
Aruppukottai	100	83	5	6
Kariyapatti	52	73	3	4
Thiruchuli	46	63	4	3
Narikudi	40	65	5	7

Source: Deputy Director of Health Services, Virudhunagar & Sivakasi

The total number of TB cases identified in the district during 2013 was 1087 and it had increased to 1185 in the year 2014. TB cases were more in number in the industrialized blocks.

More number of cases were identified in Rajapalayam, Srivilliputhur, Sivakasi, Vembakkottai and Aruppukkottai blocks. More number of textile brick units and Gauze and bandage units were in Rajapalayam and Srivilliputhur blocks. It creates dust pollution and people were affected by TB. During 2013, 189 cases were identified in Vembakkottai block and it is reduced to 118 during the 2014. Increased efforts of the health officials have reduced the extent of TB in the district.

### **Leprosy Cases**

The number of leprosy cases has increased from 35 to 39 between 2013 and 2014. At present, Srivilliputhur and Watrap blocks in Virudhunagar district are free from leprosy. In other blocks, the health authorities should take efficient efforts to reduce leprosy cases and make the district as leprosy free.

#### Conclusion

Sex ratio of the district was 1007 according to 2011 census. It is much greater than the State and National average. Density of population of the district is 458 per sq. km. The sex ratio of Sivakasi block has an increasing trend and all other blocks were having declining trend. The child sex ratio of the district was 954. Among the 11 blocks, the child sex ratio was high in Sivakasi block (977) and Narikudi was having the least with 905. The average Maternal Mortality Ratio of the district is 5.62. The highest value is evident in Narikudi with 14.90 and the lowest is witnessed in Srivilliputhur with 0.7. Place of delivery in the district is high in private hospitals rather than PHCs and Government hospitals. The average still birth rate of the district during 2014 is 11.15. Percentage of women who took IFA tablets in the district is 88.15. Safe drinking water is provided in the district for 32771 households according to 2011 census. The percentage of households provided with toilet facilities in the district ranging from 50.17 to 77.25. The total number of PHCs in the district was 45 and the number of sub-centres located in the district is 245. The total number of Government Hospitals in the district is 9. The total number of HIV positive cases identified in the district during 2014 was 196 male and 129 female. The total number of TB cases identified in the district during 2013 was 1048 and it had increased to 1185 cases in the year 2014. The number of leprosy cases had increased from 35 to 39 between 2013 and 2014. At present, Srivilliputhur and Watrap blocks in Virudhunagar district were free from leprosy.

# CHAPTER 5 LITERACY AND EDUCATION

#### **CHAPTER**

5

#### LITERACY AND EDUCATION

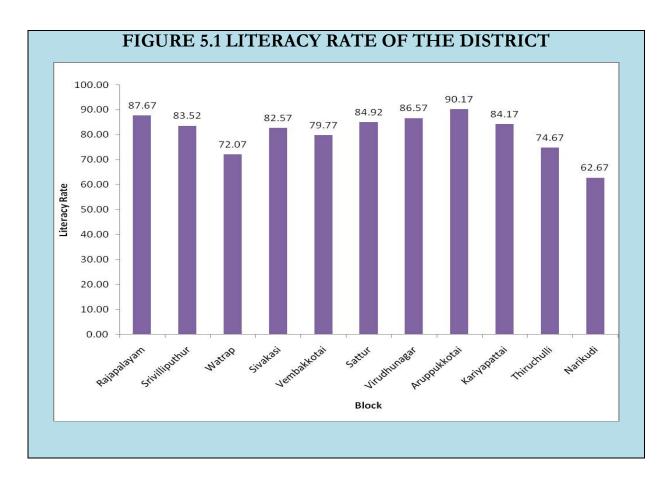
#### Introduction

Education plays a vital role in shaping the body and mind of human beings. Education along with physical exercise will make the man fit both physically and mentally. "Education for All" is the mantra of State authorities and it has taken much effort in enhancing the educational attainment of the people.

# Literacy Performance of Virudhunagar District

The overall literacy performance of India is 73 according to 2011 census. The male literacy rate is 82.14 and the female literacy rate is 65.46. Comparing the literacy performance of Tamil Nadu State with all India level, the total literacy rate is 80.09. It is greater than the national average. By comparing male and female literacy of the State with all India level, the performance of State is good. By comparing the district average with the State, the overall literacy performance and female literacy performance are not having much difference. Comparing the male literacy rate, the district average is greater than the State average.

Virudhunagar district is one of the districts in the State performing well in education. Comparing the literacy performance of the district, the overall performance has increased from 73.70 per cent to 80.20 per cent between 2001 and 2011. Both the male and female literacy were increasing trend between 2001 and 2011. Considering the block-wise performance, comparing 2001 and 2011 census, all the blocks have done a better performance in overall, male and female literacy. Considering 2011 census, the lowest was witnessed in Narikudi block with 62.67 per cent. The male literacy rate was 72.86 per cent and the female literacy rate was only 52.48 per cent.



The district's progress is good in education. Out of 11 blocks in the district, the literacy status of Narikudi block was very low, when compared to other blocks. The overall literacy rate of Narikudi block is 62.67 per cent. The highest literacy rate was witnessed in Aruppukottai block with 90.17 per cent. Considering the male literacy rate, it was high in Rajapalayam and Aruppukkottai blocks with 95.86 per cent.

Even though the male literacy rate is same in these two blocks, the female literacy rate varied. The female literacy rate in Aruppukottai block is 84.48 and it is 79.48 in Rajapalayam. The female literacy rate is low in Narikudi block (52.48), followed by Watrap with 64.28. The average percentage of overall district literacy average is 80.20. The male and female average is 88.50 and 73.10 respectively. It is evident that, female literacy is low in the district. Further, awareness is to be created in the minds of the parents to send their children to schools rather than worksheds. Moreover, the transition rate from primary school to upper primary (middle school) and upper primary to secondary/ higher secondary schools should be encouraged more by way of giving free education, scholarship, noon meal, free books, bus facilities *etc*.

# BOX – 5.1 REASONS FOR LOW LITERACY RATE IN NARIKUDI BLOCK

- ➤ The way of life of the people in Narikudi block depends on agriculture it is seasonal in character. During off season the family members migrate from Narikudi block to some other blocks for seeking employment opportunities.
- People in Narikudi block engage their children in agricultural work, cooking food, taking food to agricultural field and collecting cattle feed and collection of firewood.
- Lack of transport facilities during school hours.
- No adequate amount of hostel facilities in the block.
- Frequent transfer of teachers in Narikudi block.
- Inadequate appointment of teachers and many posts are not filled for the entire year.

# **Elementary Education**

Elementary education is mandatory for all children between the age group of 5 and 14 years. It is the base line education and it should be given to all with quality. The success in achieving this can be based on the parameters like enrolment of children, retention, repetition rate and attainment of basic numerical and language skills.

#### Gross Enrolment Rate in Primary School Education

Table 5.1 presents the gross enrolment rate in primary school education of the district.

TABLE 5.1 GROSS ENROLMENT RATE IN PRIMARY EDUCATION

Block	Primary
Rajapalayam	99.88
Srivilliputhur	99.84
Watrap	99.67
Sivakasi	99.36
Vembakkotai	99.90
Sattur	99.92
Virudhunagar	99.82
Aruppukkotai	99.84
Kariyapattai	98.84
Thiruchulli	99.46
Narikudi	99.66
District	99.56

Source: School Education Department, Virudhunagar

It is evident from Table 5.1 that according to 2013 - 2014 data, the GER at primary school education in the district is 99.56. Comparing the district rate with block level, four blocks viz., Kariyapatti, Sivakasi, Thiruchuli and Vembakkottai are having lower GER with 98.84, 99.36, 99.46 and 98.90 respectively. It is inferred that the overall GER at primary level is good in the district. The highest rate was witnessed in Sattur block (99.92) and the Kariyapatti block shows the least value with 98.84.

# Completion Rate and Dropout Rate in Primary School Education

The completion and dropout rate in primary school education determine not only the literacy performance, but also the rate of enrolment in upper primary classes. The completion rate and dropout rate of the district is depicted in Table 5.2.

TABLE 5.2 COMPLETION RATE AND DROPOUT RATE IN PRIMARY SCHOOL EDUCATION

	Completion Rate						Dropout Rate						
Block	Во	oys	Gi	Girls		Total		Boys		Girls		Total	
Brock	2012-13	2013-14	2012-13	2013-14	2012-13	2013-14	2012-	2013-	2012-	2013-	2012-	2013-	
Aruppukkottai	103.34	97.49	101.21	96.65	102.28	97.07	0.65	0.65	0.70	0.70	0.68	0.68	
Kariyapatti	94.45	97.27	94.05	97.07	94.25	97.17	1.45	0.99	0.96	1.43	1.21	1.21	
Narikudi	95.32	97.26	93.09	96.85	94.21	97.055	0.05	0.22	0.43	0.26	0.24	0.24	
Rajapalayam	97.49	88.28	97.77	84.27	97.63	86.275	1.05	1.00	1.00	1.05	1.03	1.03	
Sattur	95.99	97.82	95.77	95.22	95.88	96.52	1.00	0.97	0.96	0.99	0.98	0.98	
Sivakasi	98.63	97.54	98.47	96.35	98.55	96.945	1.05	0.98	1.00	1.08	1.03	1.03	
Srivilliputhur	97.89	101.61	99.49	100.78	98.69	101.195	1.00	0.99	0.98	0.99	0.99	0.99	
Thiruchuli	94.27	99.86	93.51	99.80	93.89	99.83	1.00	0.99	0.96	0.97	0.98	0.98	
Vembakkottai	97.57	96.87	96.97	95.09	97.27	95.98	0.98	1.02	0.94	0.90	0.96	0.96	
Virudhunagar	95.63	94.67	97.47	92.02	96.55	93.345	0.80	0.84	0.81	0.78	0.81	0.81	
Watrap	96.17	97.85	97.04	97.24	96.61	97.545	1.55	1.23	1.57	1.89	1.56	1.56	
District	96.62	96.96	96.98	95.58	96.80	96.27	0.96	0.90	0.94	1.00	0.95	0.95	

Source: School Education Department, Virudhunagar

It is understood from Table 5.2 that, in Virudhunagar district, the completion rate at primary school level during 2012 - 2013 was 96.80. It has decreased to 96.27 in 2013 – 2014. By comparing the block-wise completion rate at primary level during 2013 - 2014, three blocks namely Rajapalayam, Vembakkottai and Virudhunagar were having completion rate lower than the district average. Among these three blocks the lowest rate is witnessed in Rajapalayam block with 86.28. The highest completion rate was witnessed in Srivilliputhur with 101.20 and it was greater than the district average. Except the above mentioned three blocks, all blocks are having the highest completion rate compared to the district average.

It is clear that there is not much difference in the dropout rate between 2012 - 2013 and 2013 - 2014 in primary school education. The dropout rate of the district during 2012 – 2013 and 2013 – 2014 are one and the same with 0.95. Considering the block-wise analysis, there is a considerable reduction in the dropout rate during the above said period, but still dropout rate is high in Watrap block with 1.56, next comes Kariyapatti block. The lowest rate is witnessed in Aruppukkottai (0.68) and Virudhunagar (0.81) blocks.

# Upper Primary/Middle School Education

Enrolment of students in upper primary school education explains the willingness of the parents to make their children educated. Table 5.3 provides the status of upper primary school education of the district.

TABLE 5.3 ENROLMENT OF STUDENTS IN UPPER PRIMARY SCHOOL EDUCATION OF THE DISTRICT

Block	Во	oys	G	irls
DIOCK	2012-13	2013-14	2012-13	2013-14
Aruppukkottai	98.63	99.42	97.81	99.49
Kariyapatti	98.63	97.46	98.81	98.79
Narikudi	98.63	99.75	98.83	99.64
Rajapalayam	98.63	99.24	98.85	99.54
Sattur	99.53	99.60	98.81	99.91
Sivakasi	99.53	99.36	98.82	99.72
Srivilliputhur	99.53	99.28	98.81	99.52
Thiruchuli	97.58	98.25	98.81	98.44
Vembakkottai	97.68	97.94	98.81	98.98
Virudhunagar	99.63	98.90	98.81	99.25
Watrap	99.63	98.66	98.81	99.29
District	98.96	99.05	98.75	99.43

Source: School Education Department, Virudhunagar

The district average of enrolment of male children in upper primary school has an increase trend from 98.96 in 2012 - 2013 to 99.05 in 2013 - 2014. Many blocks in the district have achieved around 100 per cent enrolment in upper primary school education. The highest is witnessed in Narikudi block and the lowest is in Kariyapatti block. Average enrolment of girls in upper primary school education in the district has an increasing trend i.e., 98.75 in 2012 – 2013 to 99.43 in 2013 – 2014. The highest rate is witnessed in Sattur (99.91) and the lowest is in Thiruchuli with 98.44.

#### Achievement

The educational achievements of the district in terms of different blocks are discussed as follows:

# Transition Rate from Primary School to Upper Primary School

The Transition Rate from Primary School to Upper Primary School is discussed in Table 5.4.

TABLE 5.4 TRANSITION RATE FROM PRIMARY SCHOOL TO UPPER PRIMARY SCHOOL

Block wise/District	Во	Gi	rls	Total		
DIOCK WISE/ DISTRICT	2012-13	2013-14	2012-13	2013-14	2012-13	2013-14
Aruppukkottai	98.63	96.78	97.81	97.25	98.22	97.02
Kariyapatti	98.63	97.77	98.81	97.25	98.72	97.51
Narikudi	98.63	97.79	98.83	97.25	98.73	97.52
Rajapalayam	98.63	97.81	98.85	97.25	98.74	97.53
Sattur	99.53	97.77	98.81	98.14	99.17	97.96
Sivakasi	99.53	97.78	98.82	98.14	99.18	97.96
Srivilliputhur	99.53	97.77	98.81	98.14	99.17	97.96
Thiruchuli	97.58	97.77	98.81	96.22	98.20	97.00
Vembakkottai	97.68	97.77	98.81	96.32	98.25	97.05
Virudhunagar	99.63	97.77	98.81	98.24	99.22	98.01
Watrap	99.63	97.77	98.81	98.24	99.22	98.01
District	98.96	97.70	98.75	97.50	98.86	97.60

Source: School Education Department, Virudhunagar

It is observed from Table 5.4 that the overall transition rate from primary to upper primary in the district is 97.60 during 2013 – 2014. Comparing this with the previous year, there is a decline over 1.26 per cent in 2013 – 2014. Considering the gender-wise transition, the transition rate of boys has a declining trend in the district from 98.96 in 2012 – 2013 to 97.70 in 2013 – 2014. Comparing the block wise rate, except Aruppukkottai, all the blocks were having a rate greater than the district average. Regarding girls, here also a declining trend was witnessed in the district level. The transition rate for girls during the year 2012 – 2013 is 98.75 and it had declined to 97.50 during 2013 – 2014. By comparing the overall transition rate of the district, the transition rate of boys was better than the girls.

# Gender – wise Transition Rate from Upper Primary School to Secondary School

The Table 5.5 clearly explains the Gender – wise Transition rate from Upper Primary School to Secondary School.

TABLE 5.5 GENDER – WISE TRANSITION RATE FROM UPPER PRIMARY SCHOOL TO SECONDARY SCHOOL

Block wise/District	Во	oys	Girls			
	2012-13	2013-14	2012-13	2013-14		
Aruppukkottai	98.07	98.50	97.67	98.00		
Kariyapatti	95.07	95.40	97.67	98.00		
Narikudi	99.07	99.50	95.67	96.00		
Rajapalayam	97.07	97.50	98.67	99.00		
Sattur	98.07	98.50	98.67	99.00		
Sivakasi	97.07	97.50	98.67	99.00		
Srivilliputhur	98.07	98.50	98.67	99.00		
Thiruchuli	99.07	99.50	97.67	98.00		
Vembakkottai	96.07	96.50	96.67	97.00		
Virudhunagar	99.07	99.50	97.67	98.00		
Watrap	98.07	98.50	95.67	96.00		
District	97.71	98.10	97.58	98.00		

Source: School Education Department, Virudhunagar

It is clear from Table 5.5 that the overall transition rate of the district from upper primary to secondary school during 2013 – 2014 was 98.05. The transition rate for boys and girls during the same period was 98.10 and 98.00 respectively. Comparing the transition rate of 2012 – 2013 with 2013 – 2014, there was an increasing trend witnessed. Regarding boys, the highest value was witnessed in Narikudi, Thiruchuli and Virudhunagar with 99.50 and the lowest is in Kariyapatti with 95.40. For girls, the highest was witnessed in Rajapalayam, Sattur, Sivakasi and Srivilliputhur with 99.00 per cent and the lowest is in Narikudi and Watrap with 96.00 per cent.

# Completion Rate and Dropout Rate in Upper Primary/Middle School Education

The completion rate and dropout rate at upper primary school levels of the district is shown in Table 5.6

TABLE 5.6 COMPLETION RATE AND DROPOUT RATE IN UPPER PRIMARY/MIDDLE SCHOOL EDUCATION

Block	Completion Rate						Dropout Rate					
wise/District	Boys		Girls		Total		Boys	Boys Girls				
	2012-	2013-	2012-	2013-	2012-	2013-	2012-	2013-	2012-	2013-	2012-	2013-
	13	14	13	14	13	14	13	14	13	14	13	14
Aruppukkottai	98.31	97.82	95.18	97.54	96.75	97.68	0.04	1.82	0.20	1.88	0.12	1.85
Kariyapatti	91.77	94.21	94.78	94.14	93.28	94.18	1.98	1.77	2.12	1.79	2.05	1.78
Narikudi	92.27	94.57	94.28	93.78	93.28	94.18	0.82	1.75	0.90	1.87	0.86	1.78
Rajapalayam	94.52	96.25	96.03	96.15	95.28	96.20	1.68	1.80	1.78	1.83	1.73	1.82
Sattur	88.52	91.20	92.03	91.10	90.28	91.15	2.78	1.70	2.92	1.73	2.85	1.72
Sivakasi	94.77	96.19	95.78	96.20	95.28	96.20	1.19	1.82	1.33	1.82	1.26	1.82
Srivilliputhur	90.67	93.22	91.88	91.09	91.28	92.16	2.70	1.76	2.86	1.72	2.78	1.74
Thiruchuli	92.07	94.00	92.48	92.33	92.28	93.17	1.45	1.76	1.61	1.76	1.53	1.76
Vembakkottai	89.37	92.14	91.18	90.15	90.28	91.15	2.78	1.73	3.08	1.70	2.93	1.72
Virudhunagar	96.37	98.01	983.18	98.43	97.28	98.22	0.93	1.83	0.95	1.88	0.94	1.86
Watrap	90.51	93.82	91.68	90.14	91.10	91.98	2.58	1.72	2.54	1.75	2.56	1.74
DISTRICT	92.65	94.68	93.95	93.73	93.30	94.20	1.72	1.77	1.84	1.79	1.78	1.78

Source: School Education Department, Virudhunagar

From Table 5.6, it is clear that completion rate at upper primary level the district average during 2012 – 2013 was 93.30. It has increased to 94.20 during 2013 – 2014. There was approximately one per cent increase in the district average. Block-wise comparison revealed that only four blocks were having higher completion rate compared to the district average. Among the four, highest was witnessed in Virudhunagar block with 98.22. The lowest value was witnessed in two blocks naming Sattur and Vembakkottai with 91.15. It is concluded that during

2013 – 2014, completion rate of boys was higher than the girls in both primary and upper primary levels.

Even though the dropout rate of the district is equal with 1.78 during 2012 – 2013 and 2013 – 2014, there is a drastic change at the block level. During 2012 – 2013, the rural blocks had the dropout rate compared to the urban blocks but in 2013 – 2014 the reverse had happened in the dropout rate. The rural blocks like Kariyapatti, Vembakkottai and Watrap have reduced to a remarkable extent the dropout. The urban blocks like, Aruppukkottai, Rajapalayam, Sivakasi and Virudhunagar, the dropout rate has increased during 2013 – 2014. Among these blocks, tremendous increase was witnessed in Aruppukkotai. The dropout rate of Aruppukkottai during 2012 – 2013 was 0.12 and it had increased to 1.85 during 2013 – 2014. Considering the genderwise dropout ratio, the dropout was high among girls than boys. The highest dropout rate at upper primary school level was witnessed in Virudhunagar block with 1.86 followed by Aruppukkottai (1.85), Rajapalayam (1.82) and Sivakasi (1.82) blocks. The lowest was in Sattur and Vembakkottai blocks with 1.72 followed by Srivilliputhur and Watrap with 1.74.

There is no difference in the overall dropout of the district. The district dropout rate was 1.78 both during 2012 – 2013 and 2013 – 2014. Considering the gender wise dropout rate among girls in the district, there was a declining trend that was witnessed during 2013 – 2014 when compared to 2012 – 2013. The lowest dropout rate was witnessed in Sattur and Vembakkottai with 1.72 per cent and the highest is witnessed in Virudhunagar block with 1.86 per cent.

#### **Secondary Education**

The status of secondary school education of Virudhunagar district is discussed here under.

# **Enrolment in Secondary School Education**

The block wise enrolment in secondary education of the district is picturised in Table 5.7.

TABLE 5.7 ENROLMENT IN SECONDARY SCHOOL EDUCATION
(2013 – 2014)

Name of the Block	Boys	Girls	Total	Rate
	1000	1000		00.00
Rajapalayam	13924	13286	27210	99.39
Srivilliputhur	8412	7924	16336	99.40
Watrab	4018	3920	7938	98.97
Sivakasi	15896	15583	31479	99.54
Vembakottai	4731	4605	9336	98.46
Sattur	5460	5560	11020	99.74
Virudhunagar	10210	9676	19886	99.08
Aruppukottai	9378	8960	18338	99.46
Kariyapatti	4505	4348	8853	98.12
Thiruchuli	3512	3367	6879	98.34
Narikudi	2618	2592	5210	98.70
District	82664	79821	162485	99.02

Source: School Education Department, Virudhunagar

It is clear from Table 5.7 that enrolment in secondary education is low in rural blocks like Narikudi, Thiruchuli, Kariyapatti, Watrab and Vembakkottai. The highest number of student enrolment was witnessed in Sivakasi block with 31429 during 2013 – 2014. The least number of student enrolments is in Narikudi with 5210 during 2013 – 2014. The reason behind this was, there were less number of secondary schools and lack of access to schools in rural blocks like Narikudi. Sattur was the only block having more number of girls' enrollment than boys.

Block-wise GER analysis revealed that six blocks have a value greater than the district average. Among the blocks, the highest value was in Sattur block with 99.76. The least GER was witnessed in Kariyapatti block with 98.12. Comparing the GER of primary and secondary school level, except Narikudi and Sivakasi blocks all the blocks were low in secondary level GER. The GER of secondary level education of the district in 2013 – 2014 is 99.02.

# Dropout at Secondary School Level

The secondary school dropout of the district both in number and rate is discussed under Table 5.8.

TABLE 5.8 DROPOUT AT SECONDARY SCHOOL LEVEL

2013 - 2014

Name of the Block	Boys	Girls	Total	Rate
Rajapalayam	89	63	152	0.61
Srivilliputhur	99	31	130	0.60
Watrab	83	29	112	1.03
Sivakasi	81	96	177	0.46
Vembakottai	75	34	109	1.54
Sattur	39	11	50	0.26
Virudhunagar	71	46	117	0.92
Aruppukottai	84	17	101	0.54
Kariyapatti	20	14	34	1.88
Thiruchuli	48	34	82	1.66
Narikudi	20	14	34	1.30
District	709	389	1098	0.98

Source: School Education Department, Virudhunagar

It is evident from Table 5.8 that the total dropout of the District at secondary school level during the year 2013 – 2014 was 1098. Out of this, 709 are boys and remaining 389 are girls. By comparing the block wise details, the highest number of students dropout from secondary school level was witnessed in Sivakasi with 177 students followed by Rajapalayam (152), Srivilliputhur (130). The least dropout of students was witnessed in Narikudi and Kariyapatti with 34 students followed by Sattur (50) and Thiruchulli (82).

By considering the dropout ratio of the district, it is 0.98. By comparing the block wise dropout rate, the highest rate was witnessed in Kariyapatti with 1.88 followed by Thiruchulli (1.66) and Vembakkottai (1.54). The lowest dropout rate is evident in Sattur with 0.26 followed by Sivakasi (0.46) and Aruppukkottai (0.54). The urban blocks have more enrolment than rural blocks.

#### **Incentives for Enrolment**

To enhance the enrolment of students in primary, upper primary and secondary school education, the State Government is implementing many incentive programmes and the district is doing an excellent job in executing the programme and achieves more number of enrolments in schools. The main reason behind the dropout and non-enrolment of students in school education is poverty among the people. Education is the birth right of each and every child. It should not be denied due to poverty.

#### **BOX-5.2 INCENTIVES FOR ENROLMENT**

To increase the enrolment of children in primary and upper primary schools in Tamil Nadu in general and Virudhunagar district in particular, the Government has introduced and implemented many incentives and remarkable achievements have been made the district and the State. Some of the important incentive schemes are Noon-meal scheme, free books and note books to Government and Government- aided schools, free bus pass to Government school students, free uniform, free bags, free cycle to both boys and girls, free dictionary, atlas, geometry box *etc.* free boarding and lodging facilities to SC\ST and BC students, Scholarship to the students (cash), sanitary napkins to girl students.

### **Scholarships**

Scholarships distributed to the students of different communities are given in Table 5.9.

TABLE 5.9 SCHOLARSHIPS TO STUDENTS BY COMMUNITY

Year	Scheduled Caste/ Scheduled Tribe  Backward Classes  Communities / Backward Classes					s / Most
	No. of	Amount	No. of	Amount	No. of	Amount
	Beneficiaries	(Rs. Cr)	Beneficiaries	(Rs. Cr)	Beneficiaries	(Rs. Cr)
2012 - 2013	32409	8.48	9987	2.11	5951	1.07
2013 - 2014	52359	16.82	9093	2.94	12106	1.84

Source: Dist. Adidravidar Welfare Department & Dist. Backward Class Welfare Department

The total number of SC/ST beneficiaries is 32409 and the amount distributed to them is Rs. 8.48 cr. A sum of Rs. 2.11 crore is distributed to 9987 backward class students as scholarship. Regarding MBC/DNC, the total number of students benefited is 5951 and the amount distributed is Rs. 1.07 cr. During 2013 – 2014, the number of SC/ST student beneficiaries is 52359 and the amount distributed is Rs. 16.82 cr. It has doubled by the period 2012 – 2013. Considering BC beneficiaries, the number of beneficiaries has declined to 9093 and the amount distributed is Rs. 2.94 cr. in 2013 – 2014. Regarding MBC the number of beneficiaries has doubled but the amount distributed is only Rs. 1.84 cr.

# Access to Schools

Educational attainment of the district depends upon the availability of number of primary, middle, high and higher secondary schools in the district, pupil-teacher ratio, infrastructural facilities available *etc.*, Table 5.10 shows the availability of schools in the district in a clear way.

TABLE 5.10 AVAILABILITY OF SCHOOLS

(2013 - 2014)

Block	No. of Primary School	No. of Upper Primary / Middle School	No. of High Schools	No. of Higher Secondary School
Aruppukottai	66	21	09	17
Kariyapatti	82	27	14	10
Narikudi	79	22	09	7
Rajapalayam	136	20	11	2
Sattur	86	16	12	12
Sivakasi	94	21	18	20
Srivilliputhur	98	24	09	15
Tiruchuli	87	12	11	09
Vembakottai	85	20	10	09
Virudhunagar	107	29	09	18
Watrap	54	17	06	08
District	974	229	118	146

Source: School Education Department, Virudhunagar

The total number of primary schools in the district is 974. Primary education is the base for any other education. Hence, the Government gives importance to setting up of primary schools within a radius of one km in the district and there are nearly thousand primary schools both in rural and urban areas. Regarding middle schools, there are about 229 schools in the district. Considering the high and higher secondary schools, the district has 118 and 146 respectively.

Comparing the block wise primary schools the highest number was witnessed in Rajapalayam block with 136 schools followed by Virudhunagar (107), Srivilliputhur (98) and Sivakasi (94). The lowest number of primary schools was witnessed in Watrab (54) followed by Aruppukkottai (66) and Narikudi (79).

Regarding the status of upper primary schools, the highest number was in Virudhunagar district with 29 followed by Kariyapatti (27), Srivilliputhur (24) and Narikudi (22). The lowest number was witnessed in Thiruchulli with 12 followed by Sattur 16 and Watrab (17). Considering the high school status Sivakasi had18 schools followed by Kariyapatti (14), Sattur (12), Rajapalayam and Thiruchulli with 11 each. The lowest number was in Watrab with 6 followed by Virudhunagar, Srivilliputhur, Narikudi and Aruppukkottai each with 9.

Considering the status of higher secondary school, Rajapalayam possess 21 schools followed by Sivakasi (20) Virudhunagar (18) and Aruppukkottai (17). The least number of higher

secondary school were located in Narikudi block with 7 followed by Watrab (8) and Thiruchuli and Vembakkottai each with 9. It can be concluded from table 5.11 that the rural blocks were having less number of schools compared to urban blocks.

# Pupil-Teacher Ratio in Primary and Upper Primary Schools

The quality of education depends upon the pupil teacher ratio, especially in primary and upper primary school level, the pupil – teacher ratio plays a vital role. There is an inverse relationship between these two. The details of the pupil teacher ratio in the district are shown in Table 5.11.

**TABLE 5.11 PUPIL TEACHER RATIO** 

(2013 - 2014)

D11-	Primary School -	Upper Primary School -
Block	Pupil -Teacher Raito	Pupil - Teacher Raito
Aruppukkottai	29:1	29:1
Kariyapatti	26:1	27:1
Narikudi	28:1	29:1
Rajapalayam	30:1	31:1
Sattur	28:1	29:1
Sivakasi	29:1	28:1
Srivilliputhur	27:1	30:1
Thiruchuli	26:1	26:1
Vembakkottai	29:1	29:1
Virudhunagar	30:1	30:1
Watrap	29:1	29:1

Source: School Education Department, Virudhunagar

Considering the pupil - teacher ratio of the district, it ranges from 26:1 to 30:1 at primary level and 26:1 to 31:1 at upper primary level.

# Access to Higher Secondary Schools

Highest level in school education is higher secondary. After completing higher secondary school education, the students will enter into college education. Hence, higher secondary school education is the base for collegiate education. The completion rate from primary to higher secondary school level goes on declining. There are many reasons for this. One of the main reasons is lack of access to higher secondary school education. Mainly the higher secondary

schools are located in urban areas and very few schools are in rural areas. Due to lack of access many students do not get a chance to enter into higher secondary school education. School infrastructural facilities are very much essential for higher secondary school level. In this regard, Table 5.12 clearly depicts the infrastructural facilities available in the schools in the district.

**TABLE 5.12 INFRASTRUCTURE** 

(2013 - 2014)

Block	Total No. of Schools	with 3 Class Rooms	More than 3 Class Rooms	Without Toilet	Without Electricity	Without Compound Wall
Aruppukkottai	57	32	26	2	1	32
Kariyapatti	118	71	47	11	1	25
Narikudi	104	55	52	3	2	9
Rajapalayam	71	41	30	8	2	14
Sattur	91	55	31	4	5	43
Sivakasi	111	49	41	2	1	19
Srivilliputhur	91	54	36	1	2	46
Thiruchuli	93	59	24	1	2	33
Vembakkottai	83	42	37	1	0	28
Virudhunagar	109	50	57	1	1	22
Watrap	49	20	29	1	2	5
District	977	528	410	35	22	322

Source: School Education Department, Virudhunagar

Schools in Virudhunagar district are having good infrastructural facilities. The educational authorities of the district are giving importance in providing infrastructural facilities in the district. All the schools in the district are having more than three class rooms, toilet facilities that too with girl's toilet, drinking water and desk with chairs. Even though adequate amount of infrastructural facilities are provided and available in schools in Virudhunagar district, 22 schools are not having electricity facility and 322 schools are not having compound walls.

#### **Hostel Facilities**

Provision of hostel facilities will enhance the enrolment of students in upper primary schools

and other levels of education. Table 5.13 clearly presents the hostel facilities available block-wise and the number of students staying in hostels.

TABLE 5.13 HOSTELS

(2013 - 2014)

Block	No. of Hostels	No. of Students in Hostels
Aruppukottai	11	757
Kariyapatti	11	654
Thiruchuli	7	454
Narikkudi	3	150
Virudhunagar	1	56
Sattur	2	117
Sivakasi	3	156
Srivilliputhur	4	236
Rajapalayam	5	286
Vembakottai	0	0
Watrap	0	0
District	47	2866

Source: Dist. Adidravidar Welfare Department & Dist. Backward Class Welfare Department

Total number of hostels in Virudhunagar district is 47 and the total number of students staying in the hostel is 2866. Out of 11 blocks, two blocks namely Vembakottai and Watrap did not have hostel facilities. The hostels are mostly concentrated in rural areas of the blocks. Because, continuing higher studies in rural areas are a problem because of lack of transport facilities. Hence, to give chance for higher education to the rural students, Government should establish hostel facilities in rural areas. Shri. K. Kamaraj, Former Chief Minister of Tamil Nadu had introduced the scheme of noon-meals during his regime to encourage the rural people to continue their studies. He was the first man who felt food should not be a hurdle for education and hence introduced the noon-meal scheme throughout Tamil Nadu. Later on it was changed into Nutritional Scheme during Puratchi Thalaivar M. G. Ramachandran's regime. Hostel students were getting more benefits than the day scholar students. Now, the students residing in hostels get hygienic food with mutton, chicken and egg. Really, it is one of the wonderful schemes introduced by the government and there is no doubt it will enhance the quantity and quality of education.

#### **Hostels and Inmates**

In order to enhance the enrollment of children in schools especially the deprived class, the Government is providing free boarding and lodging facilities. The total number of hostels for various communities and the number of inmates getting benefit are shown in Table 5.14.

TABLE 5.14 HOSTELS AND INMATES BY COMMUNITY

(2013-2014)

Item		No. of Hostels & Inmates										
Ittili	S.C. & S.		T.	M.B.	.C. & 1	D.C.	B.C				OC	
	M	F	T	M	F	Т	M	F	T		OC	
Hostels	43	13	56	10	5	15	18	14	32			
Inmates	2750	989	3739	574	338	912	1039	866	1905			

Source: Dist. Adidravidar Welfare Department & Dist. Backward Class Welfare Department

It is clear from Table 5.14 that, total number of SC/ST hostels in the district is 56. Out of this, 13 are specially made for female children. The total number of inmates residing in SC/ST hostel is 3739. Out of this, 2750 are male and the remaining 989 are girls. Regarding, MBC/DC communities, the total number of hostels are 15, out of this, five for female and 10 for male. Totally, 912 students had benefited through this facility. Considering, BC hostels, the total number was 32, 14 are for female and the remaining 18 were male. The total number of male and female children benefited were 1039 and 866 respectively.

#### HIGHER EDUCATION

The enrolment in higher education declined when compared with the pass out of higher secondary education. In India, we were not having adequate number of universities, colleges both Arts and Science, Engineering and technical education institutions compared to our population. Table 5.15 gives the number of higher educational institutions available in the district.

TABLE 5.15 ARTS AND SCIENCE COLLEGES

Block wise	Arts / Science		I	Engg.	Poly	technics		ther tution	7	Γotal
District State	No.	Students	No.	Students	No.	Students	No.	Students	No.	Students
District	12	26416	10	18039	14	1408	36	2305	72	48168
State	668	811517	508	161154	464	121685-	-	-	1640	1094356

Source: IOB-LBO, Virudhunagar

Total number of Arts and Science Colleges in the district is 12 and the number of engineering and other technical educational institutions was low in the district. Government institutions are very less. Government aided and private institutions were more in number in the district. Education is a State subject hence, Government should establish more number of colleges for providing higher education to the rural people.

#### Conclusion

The overall literacy performance of the district according to 2011 census was 80.20. The completion rate at primary level is 96.27 in 2013 – 2014. The completion rate at upper primary level is 94.20. The dropout rate of the district at primary and upper primary level during 2013 – 2014 was 0.95 and 1.78 respectively. The highest dropout rate was evidenced in Virudhunagar block with 1.86 at upper primary level and the lowest was witnessed in Vembakkottai and Sattur blocks with 1.72. Scholarship to the students during 2013 – 2014 was given in Table 5.9. The total number of primary schools in the district is 974. The highest pupil – teacher ratio was witnessed in Virudhunagar and Rajapalayam blocks with 30:1 and least is witnessed in Kariyapatti and Thiruchuli blocks with 26:1 regarding primary level. The number of schools having more than 3 class rooms in the district is 410. Twenty two schools had no electricity facility and 322 schools did not have compound wall. Total number of hostels in Virudhunagar district was 47 and the total number of students staying in the hostel was 2866. Total number of arts and science colleges in the district was 12 and the number of engineering colleges in the district was 10.

# CHAPTER 6 GENDER

#### **CHAPTER**

6

#### **GENDER**

"You can tell the condition of a nation by looking at the status of its women"

- Jawaharlal Nehru

#### Status of Women

Gender is the range of characteristics pertaining to, and differentiating between masculinity and femininity. According to Food and Drug Administration (FDA), gender means, "a person's self representation as male or female or how that person is responded to by social institutions based on the individual's gender presentation". Gender inequality is one of the hurdles for human development. Gender discrimination impedes growth; with lower female-to-male workers ratios significantly reducing total output in both agricultural and non-agricultural sector. In olden days, there were large disparities on the basis of gender. Even among their own children, there were differential treatments between male and female children in terms of education, food, preferences towards socio-cultural activities etc. But now-a-days, this gap is narrowing by giving equal importance and weightage to women. Societal developments depend upon response and respect given to women. Now after the introduction of many projects and programmes for the upliftment of women, women are equally participating in economic, social, cultural and political activities. This chapter discusses the female literacy, sex ratio, MMR, SHGs and devolvement of women in politics in Virudhunagar district.

**TABLE 6.1 STATUS OF WOMEN** 

Particulars	District
Female Population	974579
Percentage in Total population	50.179
Sex-ratio	1007
Female literacy rate	72.70
MMR	125.09
% of women worker in agriculture sector	19.756
% of women in non-agri. Sector	57.03

Source: Census 2011

Status of women reflects the development of the district. In Virudhunagar district, the women population to total population is 50.20 per cent. It means the female population in the district is greater by 0.20 per cent than male. The sex ratio in the district is 1007. Considering female literacy, it was 72.70 per cent. Compared with other districts, Virudhunagar is far better in MMR, which was 126. Women engaged in agricultural and industrial occupations are

approximately 20 per cent and 57 per cent respectively. Women workers in non-agricultural sector is more in number than agricultural sector because, the district has more number of small scale and MSMEs which are able to provide employment.

# BOX 6.1 STATUS OF GENDER INEQUALITY INDEX IN THE DISTRICT

Women is the companion of man, gifted with equal capacity"

- Mahatma Gandhi

# **GENDER INEQUALITY INDEX (GII)**

Gender inequality index for the district and different blocks in the district are calculated and the same is presented in box 6.1. The Gender Inequality Index for the district is 0.61. The best performing five blocks in GII are Sivakasi, Narikudi, Kariyapatti, Watrap and Vembakottai and the worst performing five blocks are Virudhunagar, Sattur, Thiruhulli, Aruppukottai and Rajapalayam. Considering GII of different blocks in the district, the rural blocks are having better performance than the urban blocks.

#### Access and Control over Resources

The concept of formation of Self Help Groups (SHGs) is the brainchild of Grameen Bank of Bangladesh, which was founded by Mohammed Yunas in the year 1975. The SHGs plays a vital role in the development of women. Forming a group among likeminded persons to undertake small entrepreneurial activities help the members to develop themselves and their family. Women engaged in the SHG activities will enhance their family income, provide better education to their children, decision making skill *etc.* It will shape the women's personality and lead the family and society. In Tamil Nadu, the SHGs approach was started in small way in Denkanikkotta block of Dharmapuri district in the year 1989 by the assistance of International Fund for Agricultural Development. Virudhunagar district is one of the districts which had more number of SHGs.

#### **BOX 6.2 SELF HELP GROUPS**

The SHGs in the district were not only more in quantitatively but had also shown qualitative performance. More number of successful SHGs is functioning in the district. The total number of SHGs in the district was 12338. Considering the block wise details, Sivakasi stood first with 1971 groups, next comes Virudhunagar and Rajapalayam with 1517 and 1200 respectively. Urban areas had more numbers of SHGs than the rural areas. The total number of women as members in SHGs was 209746. The total credit availed SHGs amount of by the in the district was Rs.6109/- lakh.

#### **EMPLOYMENT**

"Progress of our land cannot be achieved without active participation of our mothers, sisters and daughters"

- Dr. S. Radha Krishnan

# Trends in Female Employment in Different Sectors

Table 6.2 clearly explains the trend in female employment in different sectors of the district.

Table 6.2 Trends in Female Employment in Different Sectors

Category	Number of Male	Number of Female	% of Female Participation
State Government	314899	231689	42.39
Central Government	180126	34276	15.99
Local Bodies	73456	100751	57.83
Private Companies	NA	NA	NA

Source: Deputy Director of Statistics, Virudhunagar.

The income earning capacity of women depends upon the employment opportunities created in different sectors. Virudhunagar district seems more women being employed in the organized sector. Nearly 42 per cent of the employed in the State Government sector are women. Similarly, local bodies seem nearly 58 per cent posts being filled by women and in the Central Government approximately 16 per cent post were filled by women.

#### Trends in Political Participation

The concept of 'Bharat Nirman', 'Shinning India', 'Feel Good', 'Rainbow', 'Socio Economic Development', 'Main Stream', 'National Building Process', 'Grass Root Administration' and 'Good Governance' is not possible without the active participation and empowerment of rural down trodden women.

### Membership in State Assembly and Local Bodies

Female representation in State Assembly and local bodies are clearly presented in Table 6.3.

TABLE 6.3 MEMBERSHIP IN STATE ASSEMBLY AND LOCAL BODIES

Block						
	Membership of Women in State Assembly and Local Bodies					
	Male	Female	Total			
Rajapalayam	229 (61.89)	141 (38.11)	370 (100)			
Srivilliputhur	167 (57.39)	124 (42.61)	291 (100)			
Watrap	157 (63.31)	91 (36.69)	248 (100)			
Vembakottai	259 (60.37)	170 (39.63)	429 (100)			
Sivakasi	307 (59.61)	208 (40.39)	515 (100)			
Sattur	227 (59.11)	157 (40.89)	384 (100)			
Virudhunagar	292 (56.70)	223 (43.30)	515 (100)			
Aruppukkottai	178 (60.54)	116 (39.46)	294 (100)			
Kariyapatti	182 (60.67)	118 (39.33)	300 (100)			
Thiruchuli	205 (60.65)	133 (39.35)	338 (100)			
Narikudi	191 (55.52)	153 (44.48)	344 (100)			
Total	2394 (59.43)	1634 (40.57)	4028 (100)			

Source: DPO, Virudhunagar, (

(Values in Parentheses are percentage to horizontal total)

From Table 6.4 it is evident that the total number of members elected for different bodies in Virudhunagar district is 4028. Out of this, 1634 (40.57) are female and 2394 (59.43) are male. By comparing political participation of male and female participation, 41 per cent of the seats were occupied by women representatives. The Government is adopting 33 per cent reservation policy for women, but in Virudhunagar district the percentage is greater. By comparing inter – block comparison, the female representation is high in Narikudi block followed by Virudhunagar, Srivilliputhur, Sattur and Sivakasi blocks. The least percentage is witnessed in Watrap blocks but the representation is greater than 33 per cent. Narikudi being the rural block, but it gives more female representation in the local body elections.

#### Conclusion

Female population in the district is 974579. Female literacy rate in the district is 72.70. Percentage of women workers in agricultural sector in the district is 19.76. Percentage of women workers in non-agricultural sector is 57.03. The average female work participation rate of Virudhunagar district is 40.74 per cent. Total number of women SHGs in the district is 12338. Total number of women as members in SHGs is 209746. The total amount of credit availed by the SHGs in the district is Rs. 6109 lakh. The total number of women members elected for different bodies in the district is 1634.

# CHAPTER 7 SOCIAL SECURITY

#### **CHAPTER**

#### 7

#### SOCIAL SECURITY

#### Introduction

The Directive Principles of Indian Constitution states that the State shall make, "effective provision of securing the right to public assistance in case of unemployment, old age, sickness and disablement and in other cases of underserved want". Many advanced countries have a set of series of social insurance methods by which every citizen is "protected from cradle to grave". Such type of social security measures are not possible in India, due to lack of social-political set up.

Provision of social security has both social and economic effects. Social effect in the sense, it will improve the quality of the life of the people. Economic effect is to redistribute the income through promotional and protective measures. The main / major social security benefits given by the State Government are:

- Pension benefits for retired Government employees
- > ESI facilities
- > Unemployment relief to the educated unemployed
- ➤ Old age pension to the persons who have no caretaker
- Marriage and maternity benefits
- Farmer's scholarship
- Scholarship for BC, MBC, SC and ST
- Provident Fund
- Workmen's compensation benefit

# Demographic Profile of the Aged

The demographic profile of the aged people of the district and State is given in Table 7.1.

TABLE 7.1 DEMOGRAPHIC PROFILE OF THE AGED

Block	Population A	Total	
	Male	Female	
DISTRICT	73379	78430	151809
STATE	2735800	2771600	5507400

Source: Census 2011

Total population of Tamil Nadu State is 5507400. Out of this, the population aged above 60 is 5507400. Among the old age people women are more in number when compared to men. Considering the total old age population of the district as per 2011 census was 151809. Like the State, Virudhunagar district has more female aged people than the male.

# **Old Age Pension**

Productivity of the people is lost after certain age. But, it is our duty to safeguard the aged people, physically challenged, widows *etc*. The taluk-wise such beneficiaries in the district are given in Table 7.2.

**TABLE 7.2 OLD AGE PENSION SCHEME** 

(2012-2013)

Taluks	Aged Above 65	Physically Handi- capped	Desitute Widow	Destitute Agri. Labour	Destitute Deserted Wives	Total
Rajapalayam	NA	181	263	187	82	713
Virudhunagar	NA	254	400	0	47	701
Aruppukottai	NA	280	97	219	100	696
Thiruchuli	NA	146	386	299	26	857
Sattur	NA	103	53	147	38	341
Srivilliputhur	NA	334	387	172	60	953
Sivakasi	NA	260	39	108	51	458
Kariyapatti	NA	99	172	100	60	431
Total	NA	1657	1797	1232	464	5150

Source: District Revenue Department, Virudhunagar

NA – Not Available

During 2012 – 2013, 5150 beneficiaries benefited under old age pension scheme. Out of this, the physically challenged were 1657. Another 1797, 1232 and 464 were destitute widow, destitute agricultural labour and destitute deserted wives respectively. Among the eight taluks, more number of beneficiaries were identified in Srivilliputhur taluk (953) followed by Thiruchili (857).

#### Disabled Person

Disabilities is an umbrella term, covering impairments, activity limitations and participation restrictions. An impairment is a problem in body function or structure; an activity limitations is a difficulty encountered by an individual in executing a task or action; while a participation restriction is a problem experienced by an individual in involvement in life situations visibility is thus just a health

problem. It is a complex phenomenon reflection the interaction between features of the society in which he or she lives" - WHO

#### **BOX - 7.1: PERSONS WITH DISABILITY**

The total number of disabled persons recorded in the records of the Virudhunagar district authorities during the year 2012 – 2013 is 1657. The maximum number of entries is from Srivilliputhur block with 334 persons. Next comes Aruppukkottai (280), Sivakasi (260) and Virudhunagar (254). The least number of entries from Kariyapatti (99) and Sattur (103). There are many reasons behind the disability. It may be due to hereditary or by accident and so on. Polio was completely eradicated and if one or two incidents occurs means that should be taken care off. Disability due to manmade disaster should be avoided by giving awareness and self consciousness.

# **Financial Security**

The financial assistance given to old age people in the district under various schemes was shown in Table 7.3.

TABLE 7. 3 FINANCIAL ASSISTANCE TO OLD AGE PEOPLE

(2012 - 2013)

Category	Coverage
IGNOAP	39585
IGNWPS	16317
IGNDPS	3060
Destitute Widow	1897
Physically Handicapped	1913
Agricultural Labourers	1043
Deserted Destitute Widow	1794
Unmarried Women (Above 50 Age)	540
Total	66149

Source: Special Deputy Collector (SSS), Virudhunagar.

Virudhunagar district authorities identified 66149 eligible people for old age persons and distributed financial security to them through different schemes. Under OAP scheme, 39585 people are benefited in the district. It is eight per cent more than the target. Destitute widows physically challenged, agricultural labourers, deserted destitute women, unmarried women, above the age of 50 were identified and the money is distributed to them by the district authorities.

BOX-7.2 MATERNITY ASSISTANCE PROGRAMME							
S1.	Category	No. of women		Total	Amount		Total
No		assisted			Utilisation		
		JSY	MRMBS		JSY	MRMBS	
1	Maternity Assistance	8665	7397	16062	227378	1720000	1947378

The Janani Suraksha Yojana (JSY) is a 100 per cent centrally sponsored scheme implemented in all the States with the objective to reduce maternal and neonatal mortality by promoting institutional delivery among poor pregnant women. The total number of women assisted under JSY is 8665 in the district and the total money distributed to them is Rs. 227378.

Another maternity benefit scheme introduced by the Tamil Nadu State is Muthulakshmi Reddy Maternity Benefit Scheme (MRMBS). Through this scheme, the financial support given by the State is Rs. 1720000 and the total number of beneficiaries is 7397. In total, nearly Rs. 1947378 has been distributed to pregnant women, who are below poverty line as maternity benefits.

# Marriage Assistance Scheme

The total number of beneficiaries and the amount distributed under various schemes are presented in Table 7.4.

TABLE 7.4 MARRIAGE ASSISTANCE SCHEME

(2013 - 2014)

	No. of Beneficiary	Fund
Details of Scheme	140. of Beneficiary	Released
Moovalur Ramamirtham		
Ammaiyar Ninaivu Marriage Assistance Scheme	4169	144125000
Dr. Dharmambal Ammaiyar Ninaivu Widow Remarriage		
Assistance Scheme	7	200000
E.V.R. Maniammaiyar Ninaivu Marriage Assistance		
Scheme for Daughter of Poor Widows	150	4425000
Annai Therasa Ninaivu Marriage Assistance Scheme for		
Orphan Girls	34	925000
Dr. Muthulakshmi Reddy Ninaivu Inter-caste Marriage		
Assistance Scheme	56	2025000
Chief Minister's Girls Child Protection Scheme	2429	54546200

Source: District Social Welfare Office, Virudhunagar

Under marriage assistance scheme, the maximum number of beneficiaries is identified

through Moovalur Ramamirtham Ammaiyar Memorial Marriage Assistance Scheme. Totally, 4169 beneficiaries had benefited under this scheme and the total money sanctioned through this scheme was Rs. 14.41 cr. One hundred and sixty one of them benefited through E.V.R, Maniammiar Widow Daughter Marriage Assistance Scheme and the money distributed were Rs. 44.25 lakh.

# Crime against Women

Violence against women may be categorized as:

#### Criminal violence

Rape, abduction, murder

#### Domestic violence

Dowry deaths, wife battering, sexual abuse, maltreatment of widows and/or elderly women etc.

#### Social violence

Forcing the wife/daughter-in-law to go for female feticide, eve-teasing, refusing to give a share to women in property, forcing a young widow to sati and harassing the wife/daughter-in-law to bring more dowries.

# Crimes against Women

The crime against women in the district is shown in Table 7.5.

#### TABLE 7.5 CRIMES AGAINST WOMEN

(2013 - 2014)

Category	No. of Cases Reported
Rape	19
Molestation	25
Kidnapping and Abduction of Women and Girls	49
Dowry Deaths	1
Cruelty by Husband and his relatives	58
Importation of Girls	0
Dowry Prohibition Act	0
Total	152

Source: Deputy Director of Statistics, Virudhunagar.

Criminal violence mainly consists of rape, abduction and murder. Crime against women is one of the social evils. It will retard the social development. Many anti – women activities are

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not reported, because of many reasons. The total number of crimes against women reported in the district is 152. Out of this, rape cases 19, molestation 25 and kidnapping and abduction of women and girl were 49. Only one dowry death was reported. Cruelty by husband and his relatives were higher in number with 58. Crimes against women should be taken care of and possible protection should be given to the girl child and women.

#### Conclusion

According to 2011 census, the total population under above 60 years of age was 151809. Out of this 78430 were female and the remaining 73379 were male. During 2012 – 2013, 5150 beneficiaries benefited under old age pension scheme in the district. Out of this, 1657 were physically challenged. The eligible persons for getting old age pension in the district were identified as 66149. Under OAP Scheme, 39585 people benefited in the district. Under Marriage Assistance Scheme, the maximum number of beneficiaries was identified through Moovalur Ramamirtham Ammaiyar Memorial Marriage Assistance Scheme. Totally 4169 beneficiaries had benefited and the amount disbursed was Rs. 14.41 crore. The total number of crimes against women reported in the district was 152.

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# CHAPTER 8 INFRASTRUCTURE

#### **CHAPTER**

8

#### **INFRASTRUCTURE**

#### Introduction

Economic development of any country depends upon its infrastructural development. Infrastructure includes transport, communications, banking *etc.* Prosperity of a nation depends on the prosperity of primary sector, secondary sector and service sector. Different sectoral development is only based on the need and availability of infrastructural facilities in the economy. The same will be applicable to the district too. In this regard, this chapter deals with the different infrastructural facilities available in the district.

#### Roads

Roads generate the basic infrastructure necessary for building up of an economy. Roads are indispensable for both agricultural and industrial development. Unless markets are made easily accessible to the farmers, they will not get proper reward for their commodities. Further, expansion of road transport contributes in a big way to employment potential of the economy. Roads only create a good link between the rural areas and the urban areas. Movement of men, material *etc.*, from one area to another is possible only by the development of road transport. Table 8.1 clearly depicts the distribution of road length and types of road in the district by different blocks.

TABLE 8.1 DISTRIBUTION OF TOTAL ROAD LENGTH (in km)

(2013 - 2014)

Block	Total Road Length	MUD	WBM	ВТ	СС	Saralai Road	Total
Rajapalayam	212.85	12.20	46.40	119.25	-	35.00	212.85
Srivilliputtur	250.58	23.43	56.00	104.89	16.25	50.01	250.58
Sivakasi	189.87	3.20	11.07	128.90	6.20	40.50	189.87
Virudhunagar	246.86	32.70	15.67	173.54	-	24.95	246.86
Kariyapatti	545.44	38.55	64.61	339.66	16.93	85.69	545.44
Thiruchuli	269.58	72.47	34.16	138.30	-	24.65	269.58
Aruppukottai	125.75	4.35	18.71	96.29	-	6.40	125.75
Sattur	222.15	100.45	6.20	115.50	-	-	222.15
Watrap	146.89	21.40	23.72	66.72	1.85	33.20	146.89
Narikudi	242.21	-	37.09	111.65	-	93.47	242.21
Vembakottai	166.98	19.50	13.15	124.34	0.20	9.80	166.98
District	2619.16	328.25	326.78	1519.04	41.43	403.67	2619.16

Source: Deputy Director of Statistics, Virudhunagar

The total road length of the district is 2943 km. Fifteen per cent of the roads are saralai road. Water Bound Macadam roads are about 12 per cent. Mud roads occupied 13 per cent and less than two per cent of the roads are cement concrete roads. In the urban areas of the district, the roads are in the type of BT but the village roads are Mud, WBM or saralai in character. But now-a-days, the State authorities and District authorities take effort to convert the mud and saralai roads as either BT or CC roads. There is a positive sign in the district regarding road development. In Virudhunagar district, even the village streets roads are either BT road or CC roads. Now, the District authorities have created a good road infrastructure which link village roads with the town and city roads and to pave way for the development of the district.

# Electricity

Lenin said, "Give me workers' councils and electricity and I will give you revolution". Prosperity follows electric power. It has been recognized by the planners that increasing productivity in rural sector is crucially dependent on rural electrification programme. From the Third five year plan onwards, emphasis was given to extending power supply to the rural areas, before that attention was paid to power generation for industrial purposes.

TABLE 8.2 STATUS OF ELECTRIFICATION

(2013 - 2014)

Block	Revenue Village	Hamlets	Towns	Population Covered	No. of Street Lights
Rajapalayam	35	156	2	130267	6207
Srivilliputtur	31	138	1	90126	4044
Sivakasi	29	224	1	180616	657
Virudhunagar	59	178	1	128920	6851
Kariyapatti	108	104	2	91598	4988
Thiruchuli	100	68	-	75806	3878
Aruppukottai	40	63	-	88591	4802
Sattur	47	77	1	121128	4784
Watrap	23	81	4	111350	3457
Narikudi	92	169	-	65163	3568
Vembakottai	36	48	-	115591	4186
District	600	1306	12	1199156	47422

Source: Superintendenting Engineer, T.N.E.B., Virudhunagar

In Virudhunagar district, all the villages are electrified. All the hamlets in all 11 blocks are having adequate amount of electricity connections. No single house is without power. Hence,

electrification is not a problem in the district. Even the village streets and the roads which connect the villages and towns are having street light facilities. Main towns are facilitated with high powered lights. In some areas, the green electricity called solar lamps is also installed by the local body authorities.

# Communication System

Communication systems were minimal in India earlier and economic development was restricted to within the villages and accessible areas. Communication facilities like, post and telegraphs, telecommunications, broadcasting, television and other information services are vital for the economic development of a country.

Considering Virudhunagar district, the communication facilities are in sound position. All the blocks have well developed postal system and many villages within each and every block possess sub-post offices and doing better service to the society. Now-a-days, due to technological development and private participation in the field of communication services, many courier services are opened throughout the district and they are giving a tough competition to the Government owned postal services.

Considering telecommunication, there is a good structured telecom department functioning in each and every block. Apart from this, a variety of private mobile communication services are also available. Both the BSNL authorities and the private mobile communication services providers have installed the mobile phone towers in both rural and urban areas and render a very good service. Almost all the households are having either one or more than one communication device to communicate with others. The BSNL authorities provide broad band service too.

#### **Postal Service**

Indian postal system is one of the oldest systems in the World. Even though tough competition from private courier and parcel service, the work done by the postal department is a remarkable one and it has expanded its services considerably. The total number of post offices available in the district is given in Table 8.3.

TABLE 8.3 POST OFFICES DOING POSTAL BUSINESS ONLY

(2013 - 2014)

Name of the Taluks	Post office doing postal business only
Rajapalayam	52
Srivilliputhur	17
Sivakasi	54
Sattur	37
Virudhunagar	35
Aruppukottai	25
Kariyapatti	20
Tiruchuli	39
Total	279

Source: Superintendent of Post Offices, Virudhunagar

The total number of post offices in the district is 279. Out of this, maximum number of offices is located in Sivakasi Taluk (54) followed by Rajapalayam Taluk (52). The least is in Srivilliputhur Taluk (17).

# Telephone

The detail is regarding telephone exchanges in the district are given in Table 8.4.

TABLE 8.4 NUMBER OF TELEPHONE EXCHANGES,
CAPACITY AND NUMBER IN USE

Item	Numbers
Number of Telephone Exchanges	64
Number of Equiped Capacity	97028
Number of Direct Exchange Lines	45140
Number of Junction Lines	7099
Number of Telephones in Use	45140

Source: District Telecommunication Office, Virudhunagar

It is evident that from Table 8.4, the total number of telephone exchange in the district is 64. The total equipped capacity is 97028. The number of district exchange lines is 45140 and the number of junction lines available is 7099.

#### **Financial Institutions**

Originally, India has indigenous banking system. The indigenous banking system and money lenders have taken away the fruits earned by the rural artisans and farming communities. To control the activities of the above, banking practices were introduced in India. Now –a-days, the commercial banks and co-operative banks play an important role in mobilizing savings of both rural and urban mass and also gives loans and advances to the needs of people for various

purposes. Majority of the nationalized banks have their rural branches in all the blocks of Virudhunagar district except Narikudi, Kariyapatti and Vembakkottai. Apart from the nationalized commercial banks, private commercial banks are also having their branches. Virudhunagar district is one of the industrially developed districts in the State of Tamil Nadu and it attracts more number of banks in the district.

Indian Overseas Bank (IOB) acts as a Lead Bank in the district. Pandiyan Grama Bank acts as a Regional Rural Bank in the district. It will come under the control of IOB. The Pandiyan Grama Bank has opened branches in the rural areas with the aim to tap the rural resources. The commercial banks in the district provide agricultural loans, industrial loans, commercial loans, housing loans *etc.* to the people in the district.

Apart from commercial banks, co-operative banks also had their own network and perform financial activities in the district. Virudhunagar District Central Co-operative Bank had its own branches in the district. Agricultural co-operative society bank, co-operative banks were present both in the rural and urban areas. Co-operative credit societies concentrate on agricultural credit, supply fertilizer, pesticides and other agricultural implements at a subsidized rate to the rural farmers to perform their farming activities in an efficient manner.

# Commercial and co-operative Banks in the District

Virudhunagar district is one of the industrially developing districts in Tamil Nadu. The development of industrial sectors depends upon the availability of infrastructure. Commercial and co-operative banks play a vital role in providing financial facilities to the entrepreneurs in the district. Table 8.5 provides the number of commercial and co-operative banks in the district.

TABLE 8.5 COMMERCIAL AND CO-OPERATIVE BANKS
IN THE DISTRICT

Rural	Semi-	Urban	Total
	Urban		
42	64	25	131
24	6	1	31
17	9	3	29
-	3	2	5
1	4	-	5
-	2	-	2
-	1	-	1
84	89	31	204
	42 24 17 - 1	Urban           42         64           24         6           17         9           -         3           1         4           -         2           -         1	Urban           42         64         25           24         6         1           17         9         3           -         3         2           1         4         -           -         2         -           -         1         -

Source: Annual Credit Plan 2011 – 2012- IOB – LBO – Virudhunagar.

It is evident from table 8.5 that, totally 204 commercial and other co-operative banks are located in the district. Out of this, 84 branches are in the rural areas, 89 and 31 are in the semi-urban and urban areas respectively. The total number of commercial bank branches is 131. Pandian Grama Bank is the rural bank of the district. It has 31 branches in the district and most of them are concentrated in the rural areas.

#### Black-wise Commercial Banks' Service Area

The total number of commercial banks' service area in the district is 450. The maximum number of service area is witnessed in Virudhunagar block (58) followed by Sivakasi block (54), Vembakkottai block (48), The last witnessed in Watrap block (27) followed by Srivilliputhur block (29).

TABLE 8.6 BLOCK-WISE COMMERCIAL BANKS' SERVICE AREA

Name of the Block	Number of Service Area
Aruppukkottai	32
Kariyapatti	36
Narikudi	44
Rajapalayam	36
Sattur	46
Sivakasi	54
Srivilliputhur	29
Thiruchuli	40
Vembakkottai	48
Virudhunagar	58
Watrap	27
Total	450

Source: Annual Credit Plan 2011 – 2012- IOB – LBO – Virudhunagar

#### Insurance

Future is uncertain and unpredictable. Insurance companies play a key role in safes guarding the life and wealth of the people. The Life Insurance Corporation (LIC) is the only institution having many branches and gives a varity of policies to the people. The LIC is has its branches in all the major towns of the district. It has introduced many policies like general life courage, mediclaim, children's policy, money bank policy *etc.* The LIC appoints a team of agents both in the rural and urban areas and enhance awareness of the people and motivate them to take LIC policy. The role played by the LIC in the district is appreciable and is given in Table 8.7.

#### TABLE 8.7 INSURANCE SCHEMES

(2012-2013)

Name of the Insurance	No. of Branches	Policies Issued	Premium Collected (Rs. in Lakh)	No. of Beneficiaries	Amount Paid as Compensation (Rs in Lakh)
L.I.C	6	56523	3735.49	14331	7464.26
National Insurance	4	42830	2102.03	1433	922.52
New India Assurance	4	50561	2128.00	1199	940.00
Oriental Insurance	2	22921	885.21	582	496.66
United India Insurance	5	20800	1359	NA	488.00

Source: Annual Credit Plan 2011 – 2012- IOB – LBO – Virudhunagar

There are five different insurance companies that operate in the district. They are LIC, National Insurance, New India Assurance, Oriental Insurance and United India Insurance. The LIC has 6 branches all over the district and the policy issued during 2012 – 2013 are 56523 and the amount of compensation given is Rs. 7464.26 lakh. The other private insurance companies are also providing insurance to vehicles and other properties.

# Transport and Communication Facilities

The district has a road length of 2943 k.m. of metalled roads. The Government owned transport facility *i.e.*, TNSTC buses are running across the district. It has its own branches in all the eight taluks of the district and provides good service. Apart from Government owned transport services, many private transport companies like, Jayaram transport, Jayavillas and Srinivasa *etc.*, which have their bus routes and provide a wonderful service. Further, minibus services are also available to people to move from one place to another. Further, the government is providing free passes to school going children and concession pass to the college students. Special bus services are offered by the transport authorities during local festivals and other important occasions in the district.

#### TABLE 8.8 NATURE OF TRANSPORT

(2013 - 2014)

Nature of Transport Facilities	Kilo meter
Railways (Length of rail line)	167.87
Roadways	2943.00
National Highways	147.60
State Highways	307.44
Major District Roads	332.64
Other District and Rural Roads	4618.76
Municipal Roads	623.06

Source: Deputy Director of Statistics, Virudhunagar.

Transport and communication facilities are the most important infrastructure for the development of industries and other sectors. The district is well equipped with roadways and railways. The total length of rail line covering the district is 167.87 km. The district has the national highways of 147.60 km. and State Highways of 307.44 km. The rural areas of the district are also well connected.

# Irrigation

Agricultural occupation is equally important in the district. The way of life of the people in the rural blocks of the district is based on agricultural activities. But agriculture is monsoon – based. Failures of monsoon not only affect the production of agriculture, but also it affects the life of the people. In this regard, providing irrigation facilities to the district the Government has constructed many dams and store water during rainy season. The dams available in the district are Annaikuttam, Golwarpatti, Irrukkankudi, Kullursandhai, Pilavakkal and Vembakkottai. Among this, Vembakkottai is the biggest one.

**TABLE 8.9 IRRIGATION** 

Name of the Dam	Year of Establishment	River	Height	Length	Purpose
			(mt.)	(mt.)	
Annaikuttam	1989	Arjuna	9.50	2940	Irrigation
Golwarpatti					
Irukkankudi	2009	Vaippar & Arjuna	8.85	1850	Irrigation
Kullursandhai	1984	Vaippar	8.00	3207	Irrigation
Flowerkal Periyar					
Vembekkottai	1985		9.70	3216	Irrigation
Sastha Kovil					
Ayyanar Kovil					

Source: Deputy Director of Statistics, Virudhunagar

#### **Industrial Estates**

To encourage young and energetic entrepreneurs to undertake entrepreneurial activity, the Government constructed industrial estates in different parts of the country. Industrial estates provide all sorts of infrastructure which is inevitable for starting industries. Two industrial estates are functioning at Virudhunagar and Rajapalayam. A Co-operative Industrial Estate is also functioning at Sivakasi. The details of the number of plots and sheds are given in Table 8.10 SIDCO has also constructed tiny industrial sheds at Watrap, Kariyapatti and Thiruchuli.

# TABLE 8.10 TOTAL NUMBER OF SHEDS IN INDUSTRIAL ESTATES IN VIRUDHUNAGAR DISTRICT

(2013 - 2014)

Location	Total Number of Sheds
Virudhunagar	54
Watrap	5
Thiruchuli	5
Kariyapatti	20
Rajapalayam	21
Sivakasi	159

Source: GoI, Ministry of MSME

It is evident from Table 8.10 that, all the 159 sheds available in all the industrial estates are occupied and involved in the production of various types of products. Sivakasi is the only block in the district having co-operative industrial estates with large number of sheds.

# Micro, Small and Medium Enterprises (MSMEs)

Creation of employment opportunities to growing population is the foremost task of the authorities. Setting up of large scale industries requires a huge amount of capital, technology and long gestation period. When an industry is based on capital intensive technology, the creation of employment opportunities are less. In this regard, the Government concentrates on the setting up of micro, small and medium enterprises. Table 8.11 clearly shows the block-wise data regarding the MSMEs in the district.

TABLE 8.11 BLOCK – WISE MSM ENTERPRISES

(2013 - 2014)

Block		Micro			Small			Mediur	n
DIOCK	No.	Invest	Emply	No.	Invest	Emply	No.	Invest	Emply
Aruppukkottai	1468	1395	4715	2	3031	474			
Kariyapatti	312	74	716		55	54		1	
Narikudi	67	44	224	233	1			1	
Rajapalayam	1916	1395	5754	137	5971	894	1	836	175
Sattur	2663	1123	7511	384	3461	1551		1	
Sivakasi	3630	11419	1011	113	9677	2757	3	2428	266
Srivilliputhur	914	921	2311	2	2855	315	1	789	194
Thiruchuli	179	69	376	2	54	26		1	
Vembakkottai	115	349	1254	16	60	24			
Virudhunagar	2669	1036	6754	6	418	64			
Watrap	201	120	475		-		5	-	
Total	14134	17945	402	1016	25580	6159	10	4053	635

Soucre: GoI, Ministry of MSME

It is understood from Table 8.11 that the district possesses a more number of micro and small industries. Medium scale industries are lesser in number. The total number of micro industries available in the district is 14134. Out of this, maximum number of industries are located in Sivakasi (3630), followed by Virudhunagar, Sattur and Rajapalayam. The rural blocks did not have adequate amount of industries. The least number is in Narikudi block (67), followed by Vembakkottai (115), Thiruchuli (179) and Watrap (201) blocks. The total number of registered small scale industries in the district is 1016. The small scale industries are mainly concentrated in Sivakasi, Sattur, Narikudi and Rajapalayam. The reasons for this are lack of entrepreneurial ability, lack of motivation, lack of finance, lack of infrastructural facilities etc. Hence, the Government should take necessary steps to construct industrial estates, giving training to the people to take up entrepreneurial activities, financial facilities and other infrastructure should be provided to set up more number of industries in these blocks.

# **Veterinary Institutions**

In the rural areas animals like cow, buffelow, coat, sheep *etc.*, are the assets of their family. They are rearing animals for milk and meat purposes. To maintain the health of animals, breeding and other activities, we need veterinary hospitals and animals treated in the district.

# TABLE 8.12 VETERINARY INSTITUTIONS AND ANIMALS TREATED

(2012-2013)

	Veterinar	y Institutions		Animals
District	Hospitals	Dispensaries	Sub Centres	Treated
Virudhunagar	5	64	33	590493

Source: Joint Director of Animal Husbandry, Virudhunagar

The total number of veterinary hospitals in the district is only five. Out of 11 blocks, only five blocks are having this facility. In the rural blocks where animal breeding and rearing is more, few veterinary hospitals are only available. Considering the veterinary dispensaries, the total number in the district is 64. The block is having dispensaries ranging from 3 to 9. Maximum number of dispensaries is in Rajapalaym block and the least is in Virudhunagar block. The total number of animals treated in the district is 590493 during 2012 - 2013.

#### **BOX 8.1 CASE STUDY - NARIKUDI**

Narikudi is one of the 11 blocks of Virudhunagar district. All the four indices (HDI, CDI, GII and MDPI) of this block are backward. The block is located in the Northern most tip of Virudhunagar district. The block is characterized by agriculture. No industry is located in the block. It is because of lack of infrastructural facilities in the block. Agriculture is the only way of life of the people. There are no alternate employment opportunities in the block. Hence, most of the people are below poverty line. Agriculture is characterized by the vagaries of monsoon. Due to monsoon failure, the water bodies in the block are in dry condition. Because of lack of agricultural facilities, many farmers won't cultivate their lands. The farmers who are cultivating their lands are with inadequate water incur loss. This will frustrate the famers and they lose confidence and won't come forward to undertake agricultural activities. A Case study was conducted in Narikudi block with the objectives of identifying the reason for poor income or poverty in the rural block of Narikudi and to provide solution to enhance the income of the people of Narikudi block. The study reveals the following findings during our visit to Kuravakudi, a small hamlet in Narikudi block, we witnessed no water in the water bodies and the wells were in dried condition. One experienced and old farmer namely Murugiah said that just five years back, they had cultivated two to three crops in a year and the water bodies were full of water. But now, for getting one crop, the farmers struggled. He is continuing his farm activities by bore-well water. He is having 200 ft bore-well in his own land and it gives irrigation for one acre. Further, he said that, there is lot of ground water in the area, but the farmers, are not financially well off to tap the water resources and he requested the Government authorities to make two bore-well inside the water bodies (Kanmai area) and the farmers in the village will share the water without any problem. Already they are having their own water sharing technique and it will give a new life to them.

Another farmer in the same village namely Karuppasamy said 10, 15 years back, they get bore-well water within 40 feet. Now, the ground water level had come down to 200 ft. He had 3 acre of land and were mainly depend on Kanmai irrigation. Now, there was no water in the Kanmai. He had a bore-well of 200 ft. in his own land, but he was not using it, because of no motor connection. Due to lack of finance he was unable to purchase motor and other accessories. Hence, the requirement of the famers of Kuravakkudi village is water to cultivate their land and it will make their life better.

Another reason, we found for the poverty of the people in Narikudi block was a vast amount of middlemen present in the block. We had a meeting with local body authorities and village people at Narikudi Block Development Office, one villager naming Balamurugan said that there is no warehousing facility in the block. The farmers invest money and do hard work. But the fruits are taken by the middle-men, because of high cost of transport and lack of warehousing facilities. The nearest market place available to the farmers of Narikudi block is either Aruppukkotai or Virudhunagar. In order to sell the agricultural products, the farmers have to travel more than 50 to 60 km. During the time of harvest, due to heavy supply, the farmers do not get a reasonable price for their produce. These will lead to loss. Further, he said that the farmer's loss more than Rs. 100/- per bag of paddy. If the Government could provide warehousing facilities and loans at a cheaper rate of interest, Rs. 100/- per bag will be saved by the farmers and it will increase their income and they can cross the poverty line.

#### IMPORTANT PLACES TO VISIT IN THE DISTRICT

The important places to visit in district are as follows:

# Holy Places of the District

- Andal Kovil at Srivilliputhur
- Srinivasaperumal temple at Thiruvannamalai in Srivilliputhur
- Nintra Narayana Perumal Kovil at Thiruthangal
- Mahalingam Hills near Watrap
- Sanjeevi Hills at Rajapalayam
- Arulmigu Thirumeni Nadha Swamy Temple, Parthipanur
- Bhoominathaswamy Temple at Thiruchuli
- Guhanparai at Kalugumalai
- Irrukankudi Mariamman Temple
- Pallimadam near Thiruchuli
- Parasakthi Mariamman Koil
- Saverier Church

# **Tourist Spots**

- Ramana Maharishi Ashram
- Shenbagathop Grizzled Squirel Wildlife
- Vembakottai Reservoir
- Pilavakkal Dam
- Kullursandai Reservoir
- Ayyanar falls
- Sastha falls

#### Conclusion

The total road length of the district is 2619.16 km. In the district all the villages are electrified and all hamlets in all 11 blocks are having adequate amount of electricity connections. All the blocks have well developed postal system and many villages within each and every block possess sub-post offices and doing better services to the society. Considering telecommunication, there is a good structured telecom department functioning in each and every block. Total number of post offices in the district is 279. Total number of telephone exchange in the district is 64. Total number of commercial banks in the district is 131. Total number of commercial bank service area in the district is 450. Total number of insurance companies' in the district is 21. Total railway length of the district 167 km. National highways length is 147.60 km. State highways length is 307.44 km. The dams available in the district are Annaikuttam, Golwarpatti, Irrukkankudi, Kullursandhai, Pilavakkal and Vembakkottai. Among this Vembakkottai is the biggest one. Two Industrial Estates are functioning at Virudhunagar and Rajapalayam. A Cooperative Industrial Estate is also functioning in Sivakasi. The total number of micro industries

# <u>DISTRICT HUMAN DEVELOPMENT REPORT - VIRUDHUNAGAR</u>

available in the district is 14134. Out of this, maximum number of industries are located in Sivakasi (3630) followed by Virudhunagar, Sattur and Rajapalayam. The total number of veterinary hospitals in the district is five. The total number of animals treated in the district is 590493 during 2012 – 2013.

# CHAPTER 9 SUMMARY AND WAY FORWARD

#### **CHAPTER**

9

#### SUMMARY AND WAY FORWARD

#### Introduction

This chapter gives the bird's eye view of the Human Development Report (HDR) of the District. The summary, major findings and the suggestions to improve the status of the district in all parameters and all spheres are described in this chapter.

#### STATUS OF HUMAN DEVELOPMENT

# **Human Development Index**

For estimating HDI, three dimensions like standard for living, health and education are taken into account. Regarding standard of living, access to cooking fuel, toilet facilities, drinking water, electricity and pucca houses are included. The IMR, MMR and U5MR are included in health and for education, literacy rate, Gross Enrolment Ratio (GER) at primary and secondary schools are taken as indicators. The HDI values ranges from 0 to 1. Zero indicates worst performance and 1 indicates the best performance. The HDI value ranges from 0 to 0.5 explains low HDI; between 0.5 to 0.8 medium HDI and above 0.8 high HDI. The HDI value for Virudhunagar district is 0.625. This value ranges from 0.456 to 0.871 at the block level. Among 11 blocks in Virudhunagar district, Sivakasi block stood first in HDI with 0.871. Sivakasi is one of the industrially developed blocks in the district and creates more employment opportunities. People from nearby villages have migrated to Sivakasi for seeking employment. Due to employment and income, the standard of living of the people is high, when compared to other blocks. Sivakasi stood first in all the three dimensions, namely, standard of living, health and education.

# **Gender Inequality Index**

To identify the extent of GII in the district and intra – district, the GII is calculated. The indicators used for calculation are women empowerment, health and labour market. Under Gender Inequality Index the least value indicates good performance and the highest value indicates worst performance. Once again Sivakasi is placed as the best and Arupukkottai followed by Watrab are the worst performing blocks.

#### Child Development Index

The CDI for various blocks in Virudhungar district was calculated taking health and education as parameters. Under, health parameter, the dimensions included is U5MR, Juvenile sex ratio and malnourishment in the age between 0 and 5. Regarding education, the dimensions included are

enrolment at primary and secondary school level, child never enrolled and transition rate in primary and secondary school levels.

The CDI for the district is 0.494. Some blocks in Virudhunagar district have higher CDI value than the district average. Six blocks are of this nature, among this six the highest CDI was in Srivilliputhur block with the value of 0.691 followed by Rajapalayam, Narikudi, Sattur, Sivakasi, and Aruppukkottai. The block which is worst in CDI is Vembakkottai with the very low value of 0.276 followed by Thiruchuli, Kariyappatti and Virudhunagar. It is concluded from this index that, the CDI is better in urban blocks, when compared to rural blocks. The transition rate from primary to upper primary school is low in rural blocks, when compared to urban blocks. The reason for this is, lack of access to higher education, poverty *etc*.

# **Multidimensional Poverty Index**

Health, education and standard of living are taken as parameters to estimate the multidimensional poverty index. The rural blocks are low in all the parameters, when compared to urban blocks. Considering health, IMR and malnourishment are high in blocks like Rajapalayam, Watrap, Virudhungar, Narikudi and Aruppukkottai. This is because of inadequate medical facilities, lack of access to health services *etc.* Regarding education, the district is performing well. Further, it should be enhanced. Considering the standard of living, the status of rural blocks is in pathetic condition. The LPG usage is very low in rural areas. Still people depend on fuel wood and agricultural waste for their energy need. Open defection is common in rural areas. People in the rural areas do not come forward to construct and use latrine for defection. Availability and accessibility of water is inadequate in both rural and urban areas.

The district average value of MDPI is 0.434. Six out of eleven blocks have value less than the district average. It means the poverty level is low in six blocks and the remaining five blocks are having high MDPI value than the district average. The best performance is witnessed again in Sivakasi with the value of 0.275. Next comes Vembakkottai, Srivilliputhur and Rajapalayam blocks. The worst performance is witnessed in Kariyapatti block with the MDPI value of 0.615, followed by Watrab, Narikudi and Thiruchuli blocks.

# EMPLOYMENT, INCOME AND POVERTY

# Summary

- ❖ Workers participation rate is low in the district (48.92 per cent).
- The way of life of the people is mainly dependent on agriculture.
- . Child labour is not much in the district.
- There is a wide gap between the registration and placement. The placement is less than one per cent.
- ❖ The per capita income of the district is better than the State average.
- ❖ Poverty level in the district is 42.48. Poverty levels in the rural blocks are higher than the urban blocks.

# Suggestions

- ✓ Workers participation rate should be increased.
- ✓ People should be motivated to take employment opportunities in the secondary sector. Government should take necessary steps to start agro based industries in the rural areas.
- ✓ To enhance the income of the people, self employment should be encouraged. For that training and financial arrangements should be given by the authorities.
- ✓ Additional Rural employment programmes should be initiated in the district. District authorities should take steps to tap the rural resources in terms of men and materials and give way to increase income and reduce poverty.

# DEMOGRAPHY, HEALTH AND NUTRITION

# Summary

- ❖ Population of the district goes on increasing. Increase in the population is the root cause for all problems. Health and nutrition of the people is questioned, while the population is increasing continuously.
- ❖ Sex ratio of the district is better than the State average. But many blocks have low sex ratio in 2011 compared to 2001 census.
- The industrialised blocks have high density than the rural blocks.
- ❖ The CBR and CDR are high in the district.
- The average IMR in the district is 13.
- ❖ The MMR of the district is 125.09.
- ❖ The PHCs and GHs are doing wonderful services, but still the percentage of deliveries in private hospitals sizeable.

- Still birth rate has a declining trend in the district.
- Nutritional status of the rural blocks in the district is very low.
- \* Access to safe drinking water is not commendable in the district.
- Open defecation practices are high in the district, that too rural block.
- On an average, only 55 percentage of the houses has latrine facilities.
- ❖ The HIV cases identified in the district were very low. Among the identified cases, HIV affected age group were 30 − 49 years.
- Number of TB Cases identified has increased from 1087 in 2013 to 1185 during 2014. More number of TB cases were in the industrially developed blocks due to pollution and improper work environment.
- ❖ Many blocks were free from leprosy cases. Other blocks were also taken care off.
- The district did not record any female infanticide.

# Suggestions

- ✓ Population control awareness should be created among the rural masses and Government should continue to give incentives to the people who come forward to adopt family planning measures.
- ✓ Health services and healthcare programmes should be extended to all the people to reduce the CDR and other health related deaths.
- ✓ Prenatal and post-natal health facilities should be expanded considerably to reduce the IMR.
- ✓ To control MMR, IFA tablets, nutritional advice, maternal care *etc.*, should be provided by the GHs and PHCs and the people should be motivated to utilize the services available in the Government side.
- ✓ Health authorities should have confidence to admit pregnant ladies for deliveries to take delivery in Government hospitals. Further, steps needs to be taken by health authorities to reduce still birth rate.
- ✓ Availability of water in the district is low. Hence, rain water harvesting techniques should be initiated more in the district. Regarding safe drinking water, the local bodies have initiated to take up common water purification plant in each and every village.
- ✓ Governments should motivate people to use toilets for defecation.
- ✓ Government is also providing financial facilities to the individual households who come forward to construct toilets.
- ✓ Awareness should be created in the minds of young men and women for safe sex to avoid HIV.

#### LITERACY AND EDUCATION

#### **Summary**

- ❖ The overall literacy rate of the district has increased from 73.70 per cent in 2001 census to 80.20 per cent in 2011 census. But this level is low in rural blocks.
- Quantitatively the educational performance of the district is good, but qualitatively it is questionable.
- The GER at primary school level is high but at secondary school level it is low.
- Completion rate of primary and upper primary school levels is not bad, but it should be taken care to improve the levels.
- Dropout rate is very low in the district.
- ❖ Pupil teacher ratio in the rural blocks of the district should be taken care off.
- The steps taken by the educational authorities in the district to increase enrolment in secondary school education are appreciable.
- Arts and science college in the district is inadequate to absorb the growing needs of higher education.

# Suggestions

- ✓ Literacy performance of the rural blocks should be improved by providing adequate number of school facilities and other infrastructure.
- ✓ The distance of travel to get higher education in the rural areas is high. Students have to travel a long distance without proper road and adequate bus facilities. Hence, authorities should take steps to provide road facilities; increase the frequency of bus trip, free bus passes etc., to the rural students.
- ✓ Adequate number of teachers should be appointed in schools. Providing technical assistance, use of modern teaching materials will improve the quality of education.
- ✓ Arts and science colleges should be opened in the needed blocks by the Government to give access to higher education in the district.
- ✓ Technical institutions should be started by the Government to provide job oriented and employment generating courses to the rural students who are not having the opportunities to go for professional and other courses.

#### **GENDER**

# Summary

- Female literacy rate in the district is low (72.70), when compared to male literacy.
- More number of SHGs is functioning and engaged in numerous productive activities in the district. Formation of women SHGs in the district improved the status of women in the district.
- ❖ Political participation of women in rural areas is good in number when compared to urban areas.

# Suggestions

- ✓ Conservative thoughts of the people should be removed and encouraged more women should be encouraged to take part in the election and give freedom to act independently.
- ✓ To enhance the female literacy rate, awareness should be created among the rural parents to motivate them to send their girl children to school and make them not to drop out.
- ✓ Motivate the women to start SHGs. The commercial institutions should come forward to provide financial assistance and DIC authorities should provide training to them to undertake self-employment activities.

#### **SOCIAL SECURITY**

# Summary

- ❖ The total age old people in the district are 151809. Among this, female constitute 78430 and the remaining are male.
- ❖ The district authorities have taken efficient steps to identify the beneficiaries and distributed adequate financial facilities to the needy people in the district.
- ❖ The schemes of the State Government like Moovalur Ramamirtham Ammaiyar Ninaivu Marriage Assistance, Dr. Dharmambal Ammaiyar Ninaivu Widow Re-marriage Assistance, E.V.R. Maniammaiyar Ninaivu Marriage Assistance for Daughters of Poor Widows, Chief Minister's Girl Child Protection Scheme etc., are properly utilized by the people of the district. The district authorities also identify and disburse the funds in time to the needy.
- No major crime against women is witnessed in the district. The cases identified are less in number.

# Suggestions

- ✓ The marriage assistance, maternity assistance, widow benefit girl child scheme, pension for the age old people etc., should be extended and in many areas people are not having the awareness about the schemes. Hence, it is the duty of the authorities to propaganda about the schemes and appoint staff in the rural areas to identify the beneficiaries and give them assistance.
- ✓ Women should be given due respect in the society. Hence, crime against women like rape, molestation, kidnapping, dowry deaths, cruelly by husband and his relatives etc., are stopped by law. Police authorities should be vigilant in this regard and safeguard the women.

#### **INFRASTRUCTURE**

# Summary

- ❖ Urban roads are in better condition when compared to rural roads. Road extension activities are going on in the district. It is a welcome sign for its development.
- Almost all the houses in the villages are benefited with electricity in the district. Village streets are electrified with tube lights and the town roads are electrified with sodium lamps.
- ❖ The communication facilities are in sound position. All the blocks are having well developed postal system and many villages within each block possess sub-post offices and doing better service to the society.
- Considering telecommunication, there is a good structured telecom department functioning in each block. Apart from this, a variety of private mobile communication services are also available.

# Suggestions

- ✓ The authorities should concentrate on rural roads. Funds should be allocated to link all the villages with main town with pucca roads. Further, maintenance activity should be undertaken with regard intervals with separate staff.
- ✓ Shortage of electricity is witnessed in the district. Hence, electricity conservation awareness should be created to motivate the people to use CFL and LED bulbs.
- ✓ The State authorities should take steps to open bank branches in the rural areas. Especially in the rural blocks in the district namely, Narikudi, Kariyapatti, Vembakkotai, more bank branches are needed to tap the rural resources and also to provide financial resources for agriculture and industrial purposes.

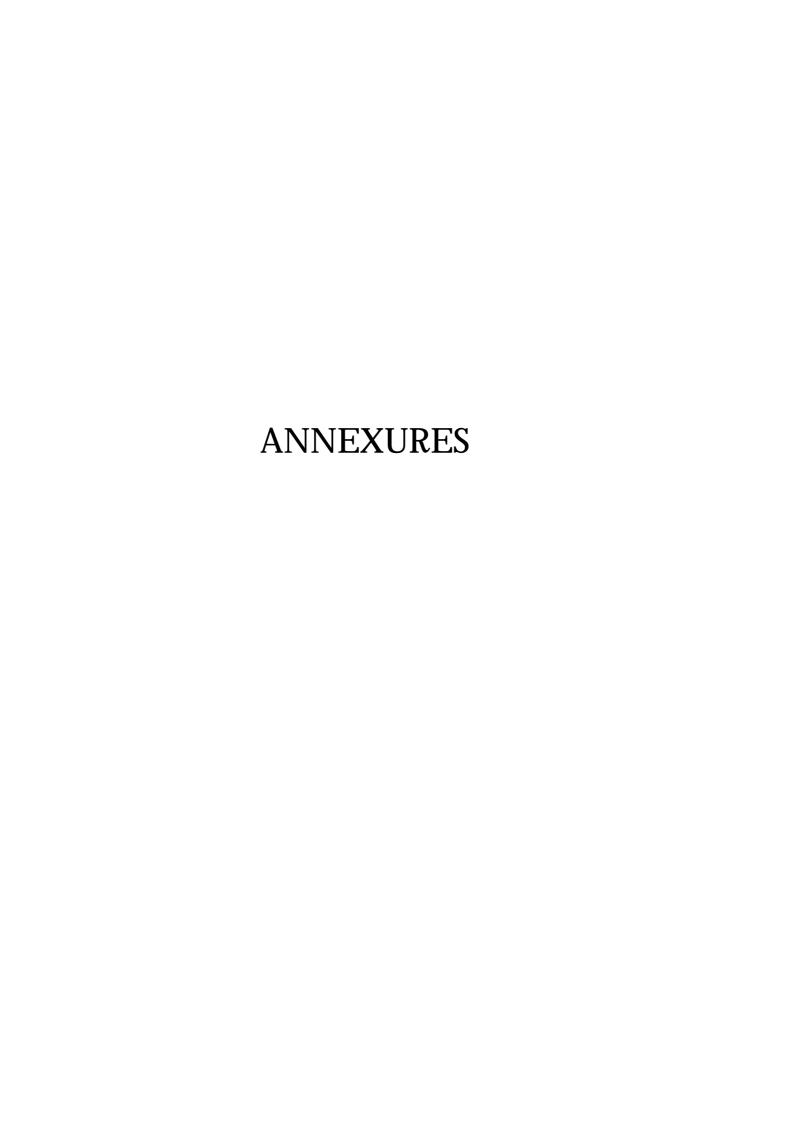
- ✓ Many industrial estates should be established and to create an environment to take up entrepreneurial activities in each and every block in the district.
- ✓ Rural blocks are not having easy access to healthcare services. Hence, the health authorities should establish health care centres, PHCs and GHs in the rural areas and extend the activities by the existing centres to avoid health problems.
- ✓ Veterinary hospitals and dispensaries are less in number in general in the district and blocks in particular. Steps should be taken to open veterinary dispensaries in the rural blocks with all facilities.
- ✓ Many important tourists' spots are located in the district. They should be developed by the tourism departments authorities and create an environment to attract tourists not only in and around the district but also from other districts.

#### CONCLUSION

The indices calculated for the district namely HDI, GII, CDI and MDPI are tools which not only reveal the level of human development in the district but also serve as a measuring scale to compare the performance of the blocks and to identify intra-block disparities. The disparities in education, health and income across the blocks of the district are distinctly captured by the indices. It is observed that certain blocks that fared well in terms of certain indices, failed to fare well in other indices. This has pulled down the overall human development index of these blocks.

There is no one to one relationship among, health, education, income and other indicators among the blocks. After analysing the ground level realities of each block, it could be concluded that the priorities and needs of the people vary significantly among the blocks and specify policy prescriptions are needed in achieving a well planning is not enough to achieve the goals. Proper allocation and distribution of funds, active participation of the people in all stages and very good administration and supervision are essential to achieve the targets and goals.

\*\*\*\*\*\*



# HUMAN DEVELOPMENT INDICATOR: VALUES

Block	Access to Cooking Fuel	Access to Toilet Facilities	Access to Drinking Water	Access to Electricity	Access to Pucca Houses	IMR	MMR	U5MR	Literacy Rate	GER Primary	GER Secondary
Rajapalayam	84.639	50.174	98.280	94.513	66.394	14.400	80.00	2.900	87.670	99.880	99.390
Srivilliputhur	42.928	65.562	100.000	92.255	62.582	15.200	70.00	1.300	83.520	99.840	99.400
Watrap	29.942	52.855	96.390	92.255	77.759	18.600	140.00	4.300	72.070	99.670	98.970
Sivakasi	95.347	69.074	95.080	95.693	82.841	10.600	90.00	0.900	82.570	99.360	99.540
Vembakkotai	4.479	68.883	95.560	95.693	79.167	17.300	160.00	1.600	79.770	98.900	98.460
Sattur	61.676	72.368	99.350	95.131	56.783	23.900	180.00	3.700	84.920	99.920	99.760
Virudhunagar	91.332	55.037	97.740	95.150	50.366	13.800	100.00	2.590	86.570	99.820	99.080
Aruppukkotai	28.711	77.250	95.040	93.673	60.021	11.700	128.00	4.810	90.170	99.840	99.460
Kariyapattai	35.428	52.263	98.040	88.807	40.071	7.400	139.00	1.210	84.170	98.840	98.120
Thiruchulli	19.624	72.753	98.650	84.550	39.788	5.500	140.00	6.140	74.670	99.460	98.340
Narikudi	8.837	53.493	99.080	84.550	69.997	4.600	149.00	1.750	62.670	99.660	99.700

Source: Calculated Value

# **HUMAN DEVELOPMENT INDICATOR: INDICES**

		Sta	andard of Livi	ing			Health						
Block	Access to Cooking Fuel	Access to Toilet Facilities	Access to Drinking Water	Access to Electricity	Access to Pucca Houses	IMR	MMR	U5MR	Literacy Rate		GER Secondary		
Rajapalayam	0.88	0.16	0.88	0.94	0.65	0.55	0.92	0.66	0.93	1.00	0.97		
Srivilliputhur	0.43	0.64	1.00	0.82	0.57	0.51	1.00	0.93	0.80	0.99	0.97		
Watrap	0.28	0.24	0.75	0.82	0.89	0.35	0.45	0.42	0.46	0.98	0.93		
Sivakasi	1.00	0.75	0.66	1.00	1.00	0.72	0.84	1.00	0.77	0.95	0.98		
Vembakkotai	0.00	0.74	0.69	1.00	0.92	0.41	0.30	0.88	0.69	0.91	0.89		
Sattur	0.63	0.85	0.96	0.97	0.45	0.11	0.14	0.52	0.84	1.00	1.00		
Virudhunagar	0.96	0.31	0.84	0.97	0.31	0.58	0.77	0.71	0.89	0.99	0.94		
Aruppukkotai	0.27	1.00	0.66	0.90	0.51	0.67	0.55	0.33	1.00	0.99	0.97		
Kariyapattai	0.34	0.22	0.86	0.65	0.09	0.87	0.46	0.95	0.82	0.90	0.86		
Thiruchulli	0.17	0.86	0.91	0.43	0.08	0.96	0.45	0.10	0.54	0.96	0.88		
Narikudi	0.05	0.26	0.94	0.43	0.73	1.00	0.38	0.85	0.19	0.98	0.99		

Source: Calculated Value

# HUMAN DEVELOPMENT INDICATOR: INDICES AND RANK

Block	Standard of Living Index	Health Index	Education Index	Overall Index	Rank
Rajapalayam	0.59	0.69	0.96	0.735	3
Srivilliputhur	0.66	0.78	0.92	0.780	2
Watrap	0.52	0.41	0.75	0.541	7
Sivakasi	0.87	0.85	0.90	0.871	1
Vembakkotai	0.30	0.48	0.82	0.488	10
Sattur	0.74	0.20	0.95	0.520	8
Virudhunagar	0.60	0.68	0.94	0.725	4
Aruppukkotai	0.61	0.50	0.99	0.668	5
Kariyapattai	0.33	0.72	0.86	0.590	6
Thiruchulli	0.34	0.36	0.77	0.456	11
Narikudi	0.33	0.69	0.56	0.505	9

Source: Calculated Value

# GENDER INEQUALITY INDEX: VALUES

		Health				Emp	owerme	ent				La	bour		
Block	MMR	Share of Institutional Deliveries	Share of Ante Natal Coverage	Female Literacy	Male Literacy	Share of female Children (0-6) vears	Share of male Children (0-6) years	Share of Female Elected Representativies in RLBs and III.Bs		Female Worker Participation Rate	Male Worker Participation Rate	Female Worker Participation Rate in Non-Agri Sector	Male Worker Participation Rate in Non-Agri Sector	Female Agri. Wage rate	Male Agri. Wage rate
Rajapalayam	80.00	100.00	91.27	79.48	95.86	48.51	51.49	39.73	60.27	33.59	60.55	68.05	81.51	106.50	200.00
Srivilliputhur	70.00	100.00	92.62	75.18	91.86	48.95	51.05	40.49	59.51	36.58	58.52	65.42	79.39	114.70	225.00
Watrap	140.00	100.00	92.61	64.28	79.86	48.83	51.17	36.84	63.16	45.66	58.19	37.51	47.70	109.70	200.00
Sivakasi	90.00	99.98	91.68	75.28	89.86	49.41	50.59	38.31	61.69	36.62	60.69	89.80	92.96	127.20	200.00
Vembakkotai	160.00	100.00	92.43	71.68	87.86	49.14	50.86	39.02	60.98	49.80	60.40	75.63	80.38	121.70	185.00
Sattur	180.00	99.94	93.36	77.98	91.86	48.31	51.69	40.44	59.56	42.98	60.11	73.72	80.84	117.20	185.00
Virudhunagar	100.00	99.92	95.00	78.28	94.86	49.11	50.89	41.37	58.63	31.11	59.36	74.02	86.56	128.10	257.14
Aruppukkotai	128.00	99.96	95.00	84.48	95.86	48.57	51.43	39.09	60.91	32.70	59.45	63.46	82.10	113.30	250.00
Kariyapattai	139.00	99.94	100.30	77.48	90.86	48.94	51.06	39.87	60.13	42.06	58.72	35.93	58.41	120.60	225.00
Thiruchulli	140.00	99.68	97.30	67.48	81.86	48.84	51.16	38.46	61.54	48.62	60.14	25.00	43.10	122.90	187.50
Narikudi	149.00	99.92	103.82	52.48	72.86	47.51	52.49	44.44	55.56	48.44	61.16	18.83	31.10	117.90	178.50

Source: Calculated Value

# GENDER INEQUALITY INDEX: INDICES

		Health	1			En	npowern	nent				Labo	our		
Block	MMR	Share of Institutional Deliveries	Share of Ante Natal Coverage	Female Literacy	Male Literacy	Share of female Children (0-6) years	Share of male Children (0-	Share of Female Elected Representat ivies in	Share of Male Elected Representat	Female Worker Participatio	Male Worker Participatio	Female Worker Participatio n Rate in	Male Worker Participatio n Rate in	Female Agri. Wage	Male Agri. Wage rate
Rajapalayam	0.13	1.00	0.91	0.79	0.96	0.49	0.51	0.40	0.60	0.34	0.61	0.68	0.82	0.33	0.41
Srivilliputhur	0.14	1.00	0.93	0.75	0.92	0.49	0.51	0.40	0.60	0.37	0.59	0.65	0.79	0.58	0.67
Watrap	0.07	1.00	0.93	0.64	0.80	0.49	0.51	0.37	0.63	0.46	0.58	0.38	0.48	0.43	0.41
Sivakasi	0.11	1.00	0.92	0.75	0.90	0.49	0.51	0.38	0.62	0.37	0.61	0.90	0.93	0.97	0.41
Vembakkotai	0.06	1.00	0.92	0.72	0.88	0.49	0.51	0.39	0.61	0.50	0.60	0.76	0.80	0.80	0.25
Sattur	0.06	1.00	0.93	0.78	0.92	0.48	0.52	0.40	0.60	0.43	0.60	0.74	0.81	0.66	0.25
Virudhunagar	0.10	1.00	0.95	0.78	0.95	0.49	0.51	0.41	0.59	0.31	0.59	0.74	0.87	1.00	1.00
Aruppukkotai	0.08	1.00	0.95	0.84	0.96	0.49	0.51	0.39	0.61	0.33	0.59	0.63	0.82	0.54	0.93
Kariyapattai	0.07	1.00	1.00	0.77	0.91	0.49	0.51	0.40	0.60	0.42	0.59	0.36	0.58	0.77	0.67
Thiruchulli	0.07	1.00	0.97	0.67	0.82	0.49	0.51	0.38	0.62	0.49	0.60	0.25	0.43	0.84	0.28
Narikudi	0.07	1.00	1.04	0.52	0.73	0.48	0.52	0.44	0.56	0.48	0.61	0.19	0.31	0.68	0.18

Source: Calculated Value

# GENDER INEQUALITY INDEX: INDICES AND RANK

Block	Female Health Indices	Male Health Indices	Female Emp Indices	Male Emp Indices	Female LF Indices	Male LF Indices	GF	GM	GFM	Health Bar	Emp. Bar	LF Bar	GFM Bar	GII	Rank
Rajapalayam	0.48	1	0.54	0.76	0.42	0.59	0.48	0.76	0.59	0.74	0.65	0.50	0.62	0.056	7
Srivilliputhur	0.51	1	0.55	0.74	0.52	0.68	0.53	0.79	0.63	0.75	0.65	0.60	0.66	0.045	2
Watrap	0.40	1	0.49	0.71	0.42	0.48	0.44	0.70	0.54	0.70	0.60	0.45	0.57	0.066	10
Sivakasi	0.47	1	0.54	0.74	0.68	0.61	0.56	0.77	0.65	0.73	0.64	0.65	0.67	0.041	1
Vembakkotai	0.39	1	0.53	0.73	0.67	0.50	0.52	0.71	0.60	0.69	0.63	0.58	0.63	0.056	6
Sattur	0.37	1	0.56	0.74	0.59	0.50	0.50	0.72	0.59	0.69	0.65	0.55	0.62	0.058	8
Virudhunagar	0.46	1	0.57	0.75	0.61	0.80	0.54	0.84	0.66	0.73	0.66	0.71	0.70	0.054	5
Aruppukkotai	0.42	1	0.57	0.76	0.48	0.77	0.49	0.84	0.62	0.71	0.67	0.62	0.67	0.076	11
Kariyapattai	0.42	1	0.56	0.74	0.49	0.61	0.48	0.77	0.59	0.71	0.65	0.55	0.63	0.061	9
Thiruchulli	0.41	1	0.51	0.71	0.47	0.42	0.46	0.67	0.54	0.71	0.61	0.44	0.57	0.053	4
Narikudi	0.41	1	0.48	0.64	0.40	0.33	0.43	0.59	0.50	0.71	0.56	0.36	0.52	0.048	3

Source: Calculated Value

# MULTI DIMENSIONAL POVERTY INDEX: VALUES

Virudhunagar										
District	Health		Education	Std of living						
Block	IMR	НОВ	Mal-nuri 0-5	Droup - P	Droup - Sec	LPG	Toil	Water	Pucca House	Electricity
Rajapalayam	14.400	6.300	8.161	1.030	1.820	84.639	50.174	98.280	66.394	94.513
Srivilliputhur	15.200	5.200	16.520	0.990	1.740	42.928	65.562	100.000	62.582	92.255
Watrap	18.600	4.600	24.225	1.560	1.740	29.942	52.855	9.390	77.759	92.255
Sivakasi	10.600	4.500	27.194	1.030	1.820	95.347	69.074	98.080	82.841	95.693
Vembakkotai	17.300	9.400	17.546	0.960	1.720	4.479	68.883	95.560	79.167	95.693
Sattur	23.900	7.900	24.292	0.980	1.720	61.676	72.368	99.350	56.783	95.131
Virudhunagar	13.800	7.178	24.601	0.810	1.860	91.332	55.037	97.740	50.366	95.150
Aruppukkotai	11.700	6.135	22.541	0.680	1.850	28.711	77.250	95.040	60.021	93.673
Kariyapattai	7.400	14.835	27.912	1.210	1.780	35.428	52.263	98.040	40.071	88.807
Thiruchulli	5.500	14.559	20.652	0.980	1.760	19.624	72.753	98.650	39.788	84.550
Narikudi	4.600	17.565	31.949	0.240	1.780	8.837	53.493	99.080	69.997	84.550

Source: Calculated Value

## MULTIDIMENSTIONAL POVERTY INDEX: INDICES AND RANK

		Health		Education				Sto	d of living			
Block	IMR	НОВ	Mal-nuri 0-5	Droup - P	Droup - Sec	LPG	Toil	Water	Pucca House	Electricity	Average	Rank
Rajapalayam	0.492	0.862	1.000	0.402	0.286	0.882	0.000	0.981	0.618	0.894	0.358	4
Srivilliputhur	0.451	0.946	0.649	0.432	0.857	0.423	0.568	1.000	0.529	0.691	0.345	3
Watrap	0.275	0.992	0.325	0.000	0.857	0.280	0.099	0.000	0.882	0.691	0.560	10
Sivakasi	0.689	1.000	0.200	0.402	0.286	1.000	0.698	0.979	1.000	1.000	0.275	1
Vembakkotai	0.342	0.625	0.605	0.455	1.000	0.000	0.691	0.951	0.915	1.000	0.342	2
Sattur	0.000	0.740	0.322	0.439	1.000	0.629	0.820	0.993	0.395	0.950	0.371	5
Virudhunagar	0.523	0.795	0.309	0.568	0.000	0.956	0.180	0.975	0.246	0.951	0.450	7
Aruppukkotai	0.632	0.875	0.395	0.667	0.071	0.267	1.000	0.945	0.470	0.819	0.386	6
Kariyapattai	0.855	0.209	0.170	0.265	0.571	0.341	0.077	0.978	0.007	0.382	0.615	11
Thiruchulli	0.953	0.230	0.475	0.439	0.714	0.167	0.834	0.985	0.000	0.000	0.520	8
Narikudi	1.000	0.000	0.000	1.000	0.571	0.048	0.123	0.990	0.702	0.000	0.557	9

Source: Calculated Value

# CHILD DEVELOPMENT INDEX: VALUES

Block		Health			Education						
DIOCK	U5MR	Juvenile 0-6	Mal-nuri 0-5	Primary	Secondary	Chil Never enroll	Transi Rate p up	Transi U - sec			
Rajapalayam	29.000	942.245	8.161	99.880	99.390	0.000	97.530	98.250			
Srivilliputhur	13.000	959.005	16.520	99.840	99.400	0.000	97.960	98.750			
Watrap	43.000	954.238	24.225	99.670	98.970	0.000	98.010	97.250			
Sivakasi	9.000	976.713	27.194	99.360	99.540	0.000	97.960	98.250			
Vembakkotai	16.000	966.096	17.546	98.900	98.460	0.000	97.050	96.750			
Sattur	37.000	934.516	24.292	98.920	99.760	0.000	97.960	98.750			
Virudhunagar	25.900	964.837	24.601	99.820	99.080	0.000	96.510	98.750			
Aruppukkotai	48.100	944.205	22.541	99.840	99.460	0.000	97.020	98.250			
Kariyapattai	12.100	958.421	27.912	99.840	98.120	0.000	97.510	96.700			
Thiruchulli	61.400	954.592	20.652	99.460	98.340	0.000	97.000	98.750			
Narikudi	17.500	905.115	31.949	99.660	99.700	0.000	97.520	97.750			

Source: Calculated Value

## CHILD DEVELOPMENT INDEX: INDICES AND RANK

		Health				Educatio	n		AVG	Rank
Block	U5MR	Juvenile 0-6	Mal-nuri 0-5	Primary	Secondary	Chil Never enroll	Transi Rate p up	Transi U – sec	AVG	Kalik
Rajapalayam	0.618	0.481	1.000	1.000	0.774	0.000	0.680	0.756	0.664	2
Srivilliputhur	0.924	0.247	0.649	0.959	0.780	0.000	0.967	1.000	0.691	1
Watrap	0.351	0.314	0.325	0.786	0.518	0.000	1.000	0.268	0.445	8
Sivakasi	1.000	0.000	0.200	0.469	0.866	0.000	0.967	0.756	0.532	5
Vembakkotai	0.866	0.148	0.605	0.000	0.207	0.000	0.360	0.024	0.276	11
Sattur	0.466	0.589	0.322	0.020	1.000	0.000	0.967	1.000	0.545	4
Virudhunagar	0.677	0.166	0.309	0.939	0.585	0.000	0.000	1.000	0.460	7
Aruppukkotai	0.254	0.454	0.395	0.959	0.817	0.000	0.340	0.756	0.497	6
Kariyapattai	0.941	0.255	0.170	0.959	0.000	0.000	0.667	0.000	0.374	9
Thiruchulli	0.000	0.309	0.475	0.571	0.134	0.000	0.327	1.000	0.352	10
Narikudi	0.838	1.000	0.000	0.776	0.963	0.000	0.673	0.512	0.595	3

Source: Calculated Value

# STATUS OF CHILD LABOUR IN THE DISTRICT

Details	2012	2013	2014
No. of children identified and rescued from employment	15	65	70
No. of children admitted in School	5	45	55
No. of children handed over to their parents with necessary advice	10	20	15
Total	30	130	140

Source: Deputy Director of Statistics, Virudhunagar (National Child Labour Project, virudhunagar)

# PERCENTAGE OF HH PROVIDED EMPLOYMENT UNDER MGNREGA

(2012 - 2013)

D1 1	Total No.of	HH Provided Jobs	of HH Provided
Blocks	нн	Under MGNREGA	With Jobs
Rajapalayam	42755	29754	69.59
Srivilliputhur	29413	25231	80
Watrap	25399	14662	58
Vembakottai	45157	27686	61
Sivakasi	67129	40739	60
Sattur	35822	11393	32
Virudhunagar	30568	29887	98
Aruppukkottai	25649	21937	86
Kariyapatti	23109	23054	100
Thiruchuli	29176	25049	86
Narikudi	23004	21624	94

Source: Concern Panchayat Unions

# **CBR AND CDR**

Diods / Matri		CBR		CDR			
Block / Mpty	2009	2010	2011	2009	2010	2011	
Virudhunagar	36.1	35.3	35.0	11.0	10.2	11.5	
Kariapatti	17.4	17.2	17.6	6.2	5.8	6.3	
Narikudi	16.8	18.3	17.9	7.2	6.8	6.7	
Thiruchuli	15.7	15.5	15.7	8.1	7.3	7.3	
Aruppukottai	31.3	29.7	29.3	9.4	11.4	9.6	
HUD Total	16.5	16.3	16.2	6.0	6.0	5.9	
Sattur	31.4	30.9	30.7	9.8	10.6	10.0	
Sivakasi	32.0	31.6	31.4	9.6	10.8	9.9	
Vembakottai	15.9	15.8	15.7	5.0	5.0	5.0	
Rajapalyam	32.0	31.7	31.5	9.9	10.0	10.3	
Srivilliputhur	32.8	31.5	31.3	9.9	10.0	9.7	
Watrap	16.5	16.0	15.9	4.7	5.0	5.0	
HUD Total	16.6	15.8	15.7	5.0	5.1	5.0	

Source: Deputy Director of Health Services, Virudhunagar & Sivakasi

# UNDER 5 MR

Block / MPTY wise	2012	2013	2014
Sattur	3.6	2.9	3.7
Sivakasi	1.0	1.2	0.9
Vembakottai	1.5	1.6	1.6
Rajapalyam	2.1	2.5	2.9
Srivilliputhur	2.5	1.9	1.3
Watrap	3.6	4.3	4.3
Virudhunagar	1.2	2.9	2.6
Kariapatti	1.1	4.2	1.2
Narikudi	4.3	4.1	1.8
Thiruchuli	7.2	8.1	6.1
Aruppukkottai	7.0	2.3	4.8

Source: Deputy Director of Statistics, Virudhunagar.

# **PLACE OF DELIVERY**

(2013 - 2014)

Block			Primary	GH	Private
			Health Centre		Hospitals
Rajapalyam	0.000	0.103	38.190	38.258	23.449
Srivilliputhur	0.000	3.215	42.188	31.867	22.730
Watrap	0.000	0.000	55.590	26.205	18.205
Sivakasi	0.023	0.113	30.529	37.741	31.594
Vembakottai	0.000	0.052	33.904	34.476	31.568
Sattur	0.070	0.556	35.540	41.720	22.114
Virudhunagar	0.000	0.300	28.000	51.700	20.000
Aruppukottai	0.000	0.300	35.300	39.400	25.000
Kariapatti	0.000	2.300	42.400	43.200	12.100
Thiruchuli	0.000	0.100	38.000	36.700	25.200
Narikudi	0.200	0.200	56.400	34.200	9.000

Source: Deputy Director of Statistics, Virudhunagar

# HABITATIONS PROVIDED WITH DRINKING WATER

Block	No. of Habitation	Total No. of Households	Number of HHs Provided with Drinking Water
Rajapalayam	196	60380	6334
Srivilliputtur	190	35346	2745
Watrap	75	27640	5767
Sivakasi	324	78352	4380
Vembakottai	159	46090	301
Sattur	133	41763	2154
Virudhunagar	188	51655	2581
Aruppukottai	63	40988	2189
Kariyapatti	137	25800	1199
Thiruchuli	135	28988	3158
Narikudi	175	25932	1963
Total	1775	472934	32771

Source: Census 2011

# LITERACY RATE OF THE DISTRICT

Block/District/		2001		2011			
State/Country	Male	Female	Total	Male	Female	Total	
Aruppukkottai	91.00	75.00	83.00	95.86	84.48	90.17	
Kariyapatti	86.00	68.00	77.00	90.86	77.48	84.17	
Narikudi	68.00	43.00	55.50	72.86	52.48	62.67	
Rajapalayam	91.00	70.00	80.50	95.86	79.48	87.67	
Sattur	87.00	68.50	77.80	91.86	77.98	84.92	
Sivakasi	85.00	65.80	75.40	89.86	75.28	82.57	
Srivilliputhur	87.00	65.70	76.40	91.86	75.18	83.52	
Thiruchuli	77.00	58.00	67.50	81.86	67.48	74.67	
Vembakkottai	83.00	62.20	72.60	87.86	71.68	79.77	
Virudhunagar	90.00	68.80	79.40	94.86	78.28	86.57	
Watrap	75.00	54.80	64.90	79.86	64.28	72.07	
Virudhunagar District	84.00	63.60	73.70	88.50	73.10	80.70	
Tamil Nadu				86.77	73.14	80.09	
India				82.14	65.46	74.04	

Source: Census 2011

# PUBLIC DISTRIBUTION SYSTEM

(2012 - 2013)

	Total No. of
Taluk	Family Cards
Rajapalayam	6283
Srivilliputtur	8249
Sivakasi	5866
Sattur	4929
Virudhunagar	6497
Aruppukottai	7025
Kariapatti	4278
Thiruchuli	5324
Total	48451

Source: District Supply Officer, Virudhunagar

# **INFANT MORTALITY RATE**

Blocks	2012	2013	2014
Virudhunagar	14.0	13.0	13.8
Kariapatti	19.0	12.1	7.4
Narikudi	16.0	17.1	4.6
Thiruchuli	20.0	21.0	5.5
Aruppukottai	12.0	10.9	11.7
Sattur	13.6	24.7	23.9
Sivakasi	9.6	4.7	10.6
Vembakottai	18.4	18.0	17.3
Rajapalyam	13.9	14.2	14.4
Srivilliputhur	18.4	15.3	15.2
Watrap	16.2	14.5	18.6

# MATERNAL MORTALITY RATIO

Blocks	2012	2013	2014
Virudhunagar	1.0	1.0	1.0
Kariapatti	2.0	1.0	1.4
Narikudi	1.0	0.8	1.5
Thiruchuli	2.0	2.4	1.4
Aruppukottai	1.0	2.3	1.3
Sattur	0.7	0.8	0.8
Sivakasi	0.2	1.0	0.9
Vembakottai	1.0	1.0	1.6
Rajapalyam	0.4	1.1	0.8
Srivilliputhur	1	1.0	0.7
Watrap	1.2	0.7	1.4

Source: Census 2011

# MAHALIR THITTAM, VIRUDHUNAGAR DISTRICT ACCESS OVER RESOURCE AND CREDIT

(2012 - 2013)

Blockss	Number of Self Help	Number of Members	Credit Availed (Rs. in Lakhs)
Aruppukottai	1170	19890	585.00
Rajapalayam	1200	20400	600.00
Virudhunagar	1517	25789	758.50
Sivakasi	1971	33507	985.50
Srivilliputhur	1061	18037	530.50
Tiruchuli	1019	17323	509.50
Kariapati	789	13413	394.50
Sub Total	8727	148359	4363.50
PVP Block			
Vembakottai	1054	17918	527.00
Sattur	997	16949	498.50
Watrap	851	14467	425.50
Narikudi	709	12053	354.50
Sub Total	3611	61387	1805.50
Grand Total	12338	209746	6169.00

Source: Deputy Director of Statistics, Virudhunagar.

## TECHNICAL NOTES

#### **Construction of Indices**

#### Introduction

The latest UNDP Report-2010 on HDI continues to adopt the same basic three indicators of education, health and standard of living/income for the calculation of HDI. Simultaneously, an effort was also made to arrive at Gender Inequality Index. To compute HDI, 10 indicators were used covering the area of living standard, education and health.

HDI presents information on the human development in three dimensions while GII provides information gender differentials in achievements.

## Indicators for HDI

The indicators that may be used for deriving HDI at the block level are as follows:

### Indicators for measuring HDI

Dimensions	Indicators			
	Percentage of HHs having			
	access to Cooking fuel			
	Percentage of HHs having			
	access to Toilet			
Living standards	Percentage of habitations having			
Living standards	access to Drinking Water			
	Percentage of HHs having			
	access to Electricity			
	Percentage of HHs having			
	access to Pucca house			
Health	Infant Mortality rate			
Health	Maternal Mortality Ratio			
	Under 5 Mortality Rate			
	Literacy Rate			
Education	Gross Enrolment Rate (Primary			
	And Gross enrollment in			
	secondary) Schools			

There are three indicators for measuring health, three for education and five for standard of living. All these indicators reflect human development.

#### Method of Estimating HDI

For the estimation of the HDI, the following steps may be followed:

1. All computations would be done at two stages. The first computation would help in understanding the relative positions of different blocks within the district. The second set of computation would relate to the position of a block with reference to other blocks. As a first step, a minimum and maximum value has to be set for each of the above 11 indicators to transform them into indices lying between zero and one. For this purpose, the observed minimum and maximum figures for each of the indicators will be taken. Since the Geometric Mean has to be calculated, in the case of a positive indicator, the minimum value would be taken as 10 per cent less than the observed minimum value would be taken as 10 per cent more than the observed maximum value.

2. The index value (in the case of a positive indicator) can be calculated using the formula – Index Value = (Actual Value – Min. Value) / (Max.Value – Min.Value)

Eg.: calculations will be based on highest values being assigned highest ranking

3. The index value (in the case of a negative indicator) can be calculated by using the formula –

# Index Value = (Max. Value – Actual Value) / (Max. Value – Min. Value)

.For Computing sectoral indices (health, education and standard of living) geometric mean is to be used and the method of calculation is as below. Thus there will be three indices one for Standard of living, another for health and the last for education.

Sectoral Index = If  $I_1$ .  $I_2$ .....  $I_n$  are the n indices for a particular sector, then the Geometric mean for the sector =  $(I_1 \times ... I_p)^{(1/n)}$ .

4. To compute HDI, aggregate the three sectoral indices using geometric mean with the following formula.

HDI=  $(SI_1 \times SI_h \times SI_e)^{(1/3)}$ ; where  $SI_1$  is the sectoral index for living standard,  $SI_h$  is the sectoral index for health and  $SI_e$  is the sectoral index for education.

## Construction of Gender Inequality Index (GII)

#### Introduction

GII measures the loss in potential of human development due to inequality between female and male achievements. As it reflects an inequality situation, a value of zero represents no inequality and a value of one represents highest level of inequality in the society. The UNDP report of 2010 has brought out the GII index for all the countries.

### Indicators considered for measuring GII

Dimensions	Indicators
	Maternal Mortality Rate (MMR)
Health	Share of Institutional deliveries (ID)
	Ante-natal coverage
	Share of female and male elected
Empowerment	representatives in Urban and Rural
	Local Bodies (PR <sub>F</sub> and PR <sub>M</sub> )
	Share of female and male literacy
	$(LIT_{F}, LIT_{M})$
	Share of Female and Male Children
	(0-6) years
	Share of female and male Work
	Participation Rate (WPR <sub>F</sub> , WPR <sub>M</sub> )
	Share of female and male workers in
Labour market	the non agricultural sector (NAG <sub>F</sub> ,
	$NAG_{M}$
	Female and male Agricultural wage
	rate (WAGE <sub>F</sub> , WAGE <sub>M</sub> )

#### Method

1. Aggregating across dimensions within each gender group using geometric mean.

For females

$$G_F = \sqrt[3]{\left(\frac{1}{MMR}\right) \times ID \times ANE} \left[ {^{1/3}} * \left[ PR_F \times CHLD_F \times LIT_F \right]^{1/3} * \left[ WPR_F \times NAG_F \times WAGE_F \right]^{1/3} }$$

For Males

$$G_{M} = \sqrt[3]{1*\left[PR_{M} \times CHLD_{M} \times LIT_{M}\right]^{1/3}*\left[WPR_{M} \times NAG_{M} \times WAGE_{M}\right]^{1/3}}$$

2. Aggregating across gender group using a Harmonic mean.

$$HARM(G_F, G_M) = \left[\frac{(G_F)^{-1} + (G_M)^{-1}}{2}\right]^{-1}$$

3. Calculate the geometric mean of the Arithmetic means of the each indicator

$$G_{\overline{F},\overline{M}} = \sqrt[3]{\overline{health.empowerment.LFPR}}$$

Where 
$$\overline{health} = \left[ \frac{\left[ \left( \frac{1}{MMR} \times ID \times ANE \right)^{1/3} + 1 \right]}{2} \right]$$

$$\overline{empowerment} = \frac{\left[PR_F \times CHLD_F \times LIT_F\right]^{1/3} + \left[PR_M \times CHLD_M \times LIT_M\right]^{1/3}}{2}$$

$$\overline{LFPR} = \frac{\left[WPR_F \times NAG_F \times WAGE_F\right]^{1/3} + \left[WPR_M \times NAG_M \times WAGE_M\right]^{1/3}}{2}$$

4. Calculating the GII by comparing the equally distributed gender index to the reference standard. The GII value ranges from zero (no gender inequality across dimensions) to one (total inequality across dimensions)

$$GII = 1 - \frac{HARM(G_F, G_M)}{G_{\overline{F}, \overline{M}}}$$

#### Construction of Child Development Index (CDI)

## Introduction

Child Development Index (CDI) is an index combining performance measures specific to children - education, health and nutrition - to produce a score on a scale of 0 to 100. A zero score would be the best. The higher the score, the worse children are faring.

The Child Development Index (CDI) was developed by the campaign in UK, "Save the Children" in 2008 through the contributions of Terry McKinley, Director of the Centre for

Development Policy and Research at the School of Oriental and African Studies (SOAS), University of London, with support from Katerina Kyrili.

The indicators which make up the index are chosen because they are easily available, commonly understood, and clearly indicative of child well-being. At the international level, the three indicators used for measuring child development index are.

### **Indicators for Child Development**

In the preparation of District Human Development reports , the following indicators would be used to measure the CDI:

Dimension	Indicator		
Health	U5MR		
	Child Sex Ratio(0-6)		
Nutrition	Percentage of Malnourished Children		
	Enrollment in Primary and Secondary		
Education	Children never enrolled in schools		
	Transition rate from Primary to Upper Primary and Upper Primary to Secondary		

## Computation of Child Development Index

- The indicators have been broadly categorised under the 3 parameters that influence the HDI.
- All the above indicators are negative and positive in nature.

The index value (in the case of a positive indicator) can be calculated using the formula –

Eg.: calculations will be based on highest values being assigned highest ranking

The index value (in the case of a negative indicator) can be calculated by using the formula –

# Index Value = (Max. Value – Actual Value) / (Max. Value – Min. Value)

- The index values for each of the indicators would range between 0 and 1 0 indicating the lowest ranking for the blocks and 1 indicating highest ranking of the block
- The Child Development Index would be the average of the index values of the three indicators with highest value indicating better child development.
- The composite index is the average of the consolidated index values of all sectors and this is to be used to assign the ranks for the blocks within the district.

## **Multidimensional Poverty Index**

#### **Indicators**

Dimension	Indicator		
Health	IMR		
	Higher order Birth		
	Malnourished Children		
Education	Drop out in primary and		
	secondary		
Living Standards	Access to cooking fuel		
	Access to toilet facilities		
	Access to drinking water		
	Access to Electricity		
	Pucca house		

# Computation of Multidimensional Poverty Index

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#### <u>DISTRICT HUMAN DEVELOPMENT REPORT – VIRUDHUNAGAR</u>

#### **ABBREVIATIONS**

AD Anno Domini

AEO Assistant Education Officer

AIDS Acquired Immune Deficiency Syndrome

BDO Block Development Officer

BNYP Bharath Nirmal Yojana Programme

BPL Below Poverty Line

BSNL Bharath Sanchar Nigam Limited

BT Bitumus

CBR Crude Birth Rate
CC Cement Concrete

CDI Child Development Index

CDR Crude Death Rate

CFL Compact Fluorescent Lamp

CMGCPS Chief Minister's Girl Child Protection Scheme

Cr. Crore

DANWRA Dr. Dharmambal Ammaiyar Ninaivu Widow

Re-marriage Assistance

Dept. Department

DIC District Industrial Centre
DNC De-notified Community

DOR Drop Out Ratio

DPO District Planning Officer

Dr. Doctor

Engg. Engineering

ESI Employees State Insurance

EVR. MNMADOW E.V.R. Maniammaiyar Ninaivu Marriage Assistance for

Daughter of Poor Widows

GER Gross Enrolment Ratio
GH Government Hospital
GII Gender Inequality Index

Govt. Government

ABBREVIATIONS Page 136

#### <u> DISTRICT HUMAN DEVELOPMENT REPORT – <mark>VIRUDHUNAGAR</mark></u>

HDI Human Development Index

HHs Households

HIV Human Immuno Deficiency Virus

HSCs Health Sub Centre

HUD Hospital Unit Dose

IFA Iron Folic Acid

IMR Infant Mortality RateIOB Indian Overseas Bank

IP In Patient

IUD Intra Uterine DeviceJSY Janani Swaksha Yojana

k.m. Kilometre

LBO Lead Bank Office

LED Bulbs Light Emiting Diode

LIC Life Insurance Corporation

LPG Liquid Petroleum Gas

Ltd. Limited

MAP Maternity Assistance Programme

MBC Most Backward Class

MCH Mean Cell Hemoglobin/Mean Corpuscular Hemoglobin

MGNREGA Mahatma Gandhi National Rural Employment

Guarantee Programme

MMR Maternal Mortality Rate / Mother Mortality Rate

MPI Multidimensional Poverty Index

MRANMA Moovalur Ramamirtham Ammaiyar Ninivu Marriage

Assistance

MRMBS Muthulakshmi Reddy Maternity Benefit Scheme

MSMEs Micro, Small and Medium Enterprises

mt. Meter

MUD Mud Roads NA Not Available

NDDP Net District Domestic Product

ABBREVIATIONS Page 137

#### <u>DISTRICT HUMAN DEVELOPMENT REPORT – <mark>VIRUDHUNAGAR</mark></u>

NH National Highways

OAP Old Age Pension

OC Other Caste
Op Out Patient

PARD Bank Pragathy Association for Rural Development Bank

PF Provident Fund

PHCs Primary Health Centres
PHCs Primary Health Centres

Rh Rhodium
Rs. Rupees

SBI State Bank of India

SC Schedule Caste
SH State Highways

SHGs Self Help Groups

SIDCO State Industrial Development Corporation

Sq. Km. Square Kilometre
ST Schedule Tribes

TAICO Tamil Nadu Industrial Co-operative Bank Limited

TB Tuberculosis

TIIC Tamil Nadu Industrial Investment Corporation Limited

TNSTC Tamil Nadu State Transport Corporation

TR Transition Rate

TVS T.V. Sundaram Iyangar

U5MR Under Five Mortality Rate

UNDP United Nations Development Programme

WBM Water Bound Macadam

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