District Human Development Report - 2017
CUDDALORE DISTRICT

EXECUTIVE SUMMARY

State Planning Commission
Tamilnadu
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DISTRICT HUMAN DEVELOPMENT REPORT

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Introduction

- Cuddalore is one of the backward districts in the State of Tamil Nadu. The district is located along the eastern coastal region of the State.

- It is bordered by Villupuram, Nagapattinam, and Perambalur districts. The district is also bordered by the Bay of Bengal in the eastern border.

- The district of Cuddalore has rich deposits of lignite that help the small factories that run in the area. The district is also one of the most robust fishing areas in the State and a home to a large number of fisher populations.

- The district has links to the first century settlers in this region. The district also has some tourist attractions for the people of Tamil Nadu and for the people from all over India.

- Cuddalore District is divided into 7 Taluks, they are: Chidambaram, Cuddalore, Kattumannarkoil, Panruti, Tittakudi, Kurinjipadi, Vriddachalam taluks. Kurinjipadi Taluk was recently separated as a new taluk.

- Cuddalore District has 13 Blocks (sub taluk), they are: Annagramam, Bhuvanagiri, Cuddalore, Kammapuram, Kattumannarkoil,
Keerapalayam, Komaratchi, Kurinjipadi, Mangalur, Nallur, Panruti, Parangipettai and Vriddhachalam Blocks.

- Main Rivers of Cuddalore District are Kollidam (Coleroon), Pennar and Vellar
- The Lakes of Cuddalore District are: Perumal Eri, Veeranam Lake and Wellington Lake

Geography

- It lies in the Agro Climatic Zone II (East Coast plains and hills) and the geographic coordinates of the district are: latitude is 15 11’ to 12 35’, longitude is 78 38’ to 80 0’ and altitude is 4.6m MSL.

- The total geographical area of the district is 3,678 square kilometres with the coastal line of 68 kilometres stretching from Puducherry Union Territory in the North to the mouth of the river Coleroon in the South.

Topography

- The geomorphology of the Cuddalore coastal stretch includes the coastal plain with an average width of 6 kms.

- Its coastal landforms include strandlines, raised beaches, sand dunes, mangrove swamps and tidal flats with predominantly sandy beaches on the northern side and mangrove swamps on the South.

- The coastal towns of Cuddalore in the North and Porto Novo (Parangipettai) in the South
are the most densely populated along this region.

- The entire district can be broadly divided into 3 zones. This area is occupied by denudation landforms like shallow buried pediment, deep buried pediment, and pediments.

- The central part of the district is characterized by sedimentary high grounds, elevation >80m of Cuddalore sandstone of Tertiary Age. This zone occupies part of Virudhachalam, Kammapuram, Kurinjipadi, Cuddalore, and Kattumannarkoil taluks.

- The rest of the area in the district is covered by the eastern coastal plain, which is predominantly occupied by the flood plain of fluvial origin formed under the influence of Penniyar, Vellar, and Coleroon river systems. Marine sedimentary plain is noted all along the eastern coastal

**Soil Condition**

- The soils of the district are classified as the black, red, ferruginous, They are again subdivided into clays, loam, and sands. Black soils are observed in the Chidambaram and Virudhachalam taluks.

- Sandy soils are seen along the coast in Cuddalore and Chidambaram taluks.

- The alluvial soils are found as small patches along the stream and river courses in the district.
Red sandy soil is seen covering the Cuddalore sandstone, laterite, and lateritic gravels occur in parts of Virudhachalam, Panruti and Cuddalore taluks.

Climate

- The Cuddalore district has a hot tropical climate. The summer season, which is very oppressive, is from March to May.
- The average maximum and the average minimum temperatures have been 36.8°C in May and 19.9°C in January, respectively.

STATUS OF HUMAN DEVELOPMENT

- The top three blocks in HDI in Cuddalore district are Cuddalore (0.877) Kumaratchi (0.731) and Parangipettai (0.725). The bottom three blocks are Kattumannarkoil (0.555), Virudhachalam (0.542) and Mangalore (0.481).
- Gender inequality in the district has been studied with health, empowerment and labour market as the dimensions. Among all the blocks, GII is the highest in Kattumannarkoil (0.055) Kammapuram (0.095) Virudhachalam (0.129) blocks. And it is the lowest in Nallur (0.009), Parangipettai (0.015) and Panruti (0.028).
- Child Development Index has been prepared by taking health and education as dimensions. The top three blocks in the
district with higher CDI value are Cuddalore (0.759) Kumaratchi (0.672), and Annagramam (0.621) and the bottom three blocks with lower CDI value are Mangalore (0.386). Kammpuram (0.381) and Melbhuwanagiri (0.375).

- Multi – dimensional poverty Index has been worked out for all the blocks in the district with standard of Living, health and education as the dimensions and inter – block variations have been studied.

- Cuddalore (0.113), Parangipettai (0.366) and Panruti (0.470) are the three blocks with lower MDPI value, whereas. Nallur (0.629) Kammapuram (0.673) and mangalore (0.693) are the three blocks with higher MDPI value. As the indicators are negative in nature, minimum value represents good performance and higher value shows poor performance.

- In the blocks which suffer from multi – dimensional poverty, there is need for effective implementation of the ongoing income and asset creation programs with the participation of targeted groups. Not only that, there should be more focus on healthcare programmes so as to reduce infant mortality rate (IMR), High order Birth Rate (HOB) and to bring down the proportion of malnourished children.

- In the case of education, dropout rate has been taken as a proxy measure of
educational attainment. The primary dropout rate was 0.4 for the district as a whole for 2013-14. There was only marginal variation across the blocks. But the dropout rate at the secondary level during 2013 – 14 was 6.75 at the district level. Among the blocks, the highest dropout rate was recorded in Keerapalayam block (8.12) and that needs special attention by the Education Department.

**Employment, Income and Poverty**

- The employment strategies should include using labour - intensive agricultural technologies developing small and medium size enterprises and promoting micro projects in rural areas. Many strategies promote self – employment, non – farm employment in rural areas, targeted employment interventions.

- Micro finance and credit as a means of employment generation, skill formation and training. There should be focus on creating better and more productive jobs, particularly those that can absorb the high concentrations of the working poor.

- The work participation rate of Cuddalore district in 2001 was 42.58 and it marginally increased to 44.89 in 2011. During 2011, the proportion of rural and urban women in the district was 47.66 percent - 32.26 percent
respectively and it changed marginally in 2011. The work participation rate of male and female in 2001 was 65.45 and 34.55 respectively and marginally changed to 64.08 and 35.92 respectively in 2011.

The workers have been broadly classified as cultivators, agricultural labourers, household industry workers and other workers. There was negative growth rate (-11.14) of cultivators during 2001 and 2011. It shows that they have switched over to non-farm activities due to vagaries of monsoon and unstable farm income.

There was 20.08 percent increase in the growth rate of agricultural labourers during 2001 and 2011. The growth rate of household industry workers was 5.15% in the district during 2001 and 2011. The growth rate of this category is low when compared with other categories of workers except cultivators.

The registration and placement provided by the employment office in Cuddalore shows that the percentage of placement was less than two percent during 2007 and 2014.

The government has implemented MGNREGS scheme in all the blocks of the district for providing sustainable employment and creation of assets.

During 2001 – 12, in composition of GDDP at constant 2004-05 prices) of Cuddalore district, the contribution of tertiary sector was
high (65.42), followed by secondary sector (18.29) and primary sector (16.29).

- The per Capita income of the district in 2011 – 12 was Rs. 56,315 and it was lower than that of the State (Rs. 63,996) in the same year. The Compound Annual Growth Rate (CAGR) of district during 2004 – 05 to 2011 – 12 (7.72) was lower than that of the State during the same period (8.23). It may be noted that the district faced severe natural disasters of Tsunami (2004), Cyclone Nisha (2008) and Thane (2011).

- During 2013 – 14, 23.36 percent of Below Poverty Line (BPL) households were there in Cuddalore district. Among the blocks, Mangalore had the highest percentage (36.67) of BPL households.

- There is scope for addressing poverty and alleviating the same, specifically the vulnerable population of the district. The government is providing a lot of freebies to the targeted population expecting to fill the income gap at the house hold level.

- The Tamil Nadu State Food Policy follows a Universal Public Distribution System (PDS) to ensure non –easy excludability, access and adequate availability of food grains at affordable prices.

In Cuddalore district, 1397 PDS outlets are functioning in 896 revenue villages and they cover the entire rural and urban population.
• Though the district has good network of canals, the availability of water for irrigation is limited by rain water and Cauvery water. As both of them are erratic, the agricultural operations get affected which result in unsustainable income.

• This warranty alternative farming methods and one such method is integrated farming. It offers scope for getting income throughout the year and at the same time reduces risk due to vagaries of Nature. Instead of sowing only a single crop, farmers can try and diversity agricultural activities like dairy, bio – gas, Mushroom, Fish, and poultry along with crops to get a higher income.

• Cashew, minor millets, and maize being the major crops of some blocks – there is scope for setting up of food processing and poultry feed industry in those blocks. Paddy and groundnut being the other major crops of the district, modern rice and oil mills could be set up.

• Fishing is the main activity along the coast and is the major livelihood as well as food security of a large section of economically underprivileged population of the coastal areas in Cuddalore district. As agriculture is also a major livelihood of the district, the fish waste can, be utilized for compost making and is an excellent organic input for farming and waste disposal system, besides serving as an excellent source of protein in poultry
Welfare measure like, housing, modernization of existing fishing laboures fish landing centres and training programmer for better fish processing help the fishermen of the district to lead a decent life.

Promoting clusters will help to alleviate poverty in the district. The areas that require special attention are: promotion of marketing opportunities, enhancing productivity and competitiveness, linkages with support institutions, appropriate financing, creation of infrastructure, and setting up of local governance framework for groups of local stakeholders for continuous business promotion.

Demography, Health and Nutrition

Demography is the study of human population dynamics. The population of Cuddalore district increased by three lakhs during 2001 and 2011. It increased from about 23 lakhs in 2001 to 26 lakhs in 2011.

The Crude Birth Rate of the district in 2014 was 14.80 and the Crude Death Rate was 4.9 in 2014.

Sex ratio is a sensitive indicator that displays the status of women. The sex ratio of the district in 2001 was 987 and it marginally increased to 995 in 2011. It is lower than the sex ratio of the State (1004) in 2001.
The Child sex ratio in 2011 was 896 and it was lower than that of the State (943) in 2001.

The life expectancy at birth in the district in 2013 – 14 was 72.4 and this was marginally lower than that of the State (73.4)

The IMR of the district declined from 8.50 in 2013 to 6.20 in 2014.

The Maternal Mortality Rate (MMR) in the district was 50. MMR is a vital indicator of health status of women. Among the 13 blocks, the highest MMR (130) was reported is Virudhachalam and followed by Annagramam (109). Zero MMR was reported in Kumaratchi, Nallur and Parangipettai blocks.

In the district, 55 percent and 19 percent of deliveries took place in government hospitals and Primary Healthcare centres respectively in 2014 and 25 percent of deliveries took place in private hospitals.

Still Birth Rate gives a picture of the nutritional and immune status of the female population. The average SBR of the district in 2013 was 10.2 and it marginally decreased to 9.8 in 2014. Among the 13 block in the district, it is found that during 2014, Keerapalayam (11.80) Annagramam (10.40) Melbhuvanagiri (10.50) and Nallur (14.10) had higher SBR even though, Nallur block had performed well in all other health parameters, the
performance of SBR very poor. There is need for focusing on this aspect in Nallur block. Across the blocks, there is no uniform trend in the reduction of SBR in all the blocks of the district.

- In the case of immunization, it is important to note that all blocks in the district had nearly 100 percent coverage, except Panruti block (92.3) It is expected that it will reduce IMR and under 5 mortality rate in the district. The district's average immunization coverage is 104 percent.

- Child Sex Ratio in Cuddalore district drastically decreased from 957 during 2001 census to 896 in 2011 census. The district administration has conducted intensive surveillance over this issue in the last three years and it had some impact.

- The State aims to eradicate severe malnutrition and also reduce the incidence of micronutrient deficiencies. About 23 percent of children in the district are treated as malnourished children. The proportion of malnourished children in 0-5 age group vary across the blocks ranging from 9.13 in Panruti to 41.39 in Nallur block Anganwadi centres could take care of only one third of the nutritional requirement of the children. Due to continuous efforts by Anganwadi workers and ICDS officials, the nutritional status has improved and percentage of malnutrition children came down.
• The provision of Iron and Folic Acid (IFA) tablets to pregnant women to prevent nutritional, anaemia forms an integral part of the safe motherhood services offered as part of the Reproductive and Child Health Programme in India.

• In Cuddalore district, 96.50 percent of women and 17.90 percent of children received IFA tablets during 2014. Among adolescent girls, 54.50 percent were provided with IFA tablets.

• Non – Nutritional Factors and their Impact on Nutrition Water supply.

• All households in Cuddalore district have access to safe drinking water. The efforts of the State government and district administration in highly commendable in this regard. Piped drinking water supply would reduce the water-borne diseases. There are, however, six blocks (Panruti, Kurinjipadi, Melbhuwanagiri, Mangalore, Virudhachalam and Annagramam) where the performance is marginally below the level of the district’s performance.

• Open defecation is still a common practice in rural areas. Provision of toilet facilities will improve the sanitary condition and reduce disease outbreaks. In Cuddalore district, only 42 percent of households had toilet facilities in 2014. In Cuddalore block, 61 percent of the households had toilet facilities, whereas in Kurinjipadi, only 17 percent of households had toilet facilities. The performance of five
blocks, namely Annagramam (39%). Kammapuram (26%) Kurinjipadi (17%) Mangalore (39%) and Nallur (39%) is below the district average in the provision of toilet facilities. These blocks have to be prioritized and funds be earmarked for provision of toilet facilities.

- In Cuddalore district, number of HIV positive persons decreased from 506 in 2013 to 451 in 2014. It may be noted that Cuddalore block had the highest number of HIV positive persons (165) in 2014.

- TB is a communicable and killer disease. Leprosy causes in many cases permanent disability. In Cuddalore district, positive T.B persons increased from 1147 in 2013 to 1192 in 2014. Cuddalore block had the highest number of positive T.B persons and Parangipettai had the lowest number of TB persons.

- The number of leprosy patients in the district increased from 123 in 2013 to 143 in 2014.

- To know the magnitude of the above diseases, periodical mapping of TB, leprosy and HIV incidence in rural and urban areas may be carried out.

- Cuddalore being a coastal district, it is highly vulnerable to vector borne diseases such as Dengue, Malaria and Chickengunya. Deaths occur mostly due to late diagnosis and late referral to higher medical institutions. There
is only one laboratory in the district headquarters (Cuddalore) for identifying the disease.

- The rural - urban divide is another worrying aspect in the healthcare services. For effective functioning of PHCs and HSCs, provision of residential accommodation for medical and paramedical staff is absolutely necessary.

**Literacy and Education**

- The percentage of literacy of the district increased from 70.01% in 2001 to 78.04% in 2011. The male literacy percentage increased from 81.04% in 2001 to 85.93 % in 2011. But the female literacy percentage had shown remarkable increase from 60.27% in 2001 to 70.14% in 2011. It shows that gender disparity came down during the decade.

- The Enrolment Ratio at primary level during 2012 – 14 in Cuddalore district is almost 100% in 2012 – 13 and 98.5 in 2013 – 14.

- The enrolment ratio at primary level is commendable and it is due to effective implementation of government programmes in the district. It is interest to note that there is no gender difference in educating children in all the blocks of the district.

- The completion rate at the primary level is 98 percent in the district. The dropout rate at the primary level in the district is negligible (0.40).
The upper primary enrolment ratio in the district during 2012 – 14 is close to the enrolment ratio at the primary level.

The completion rate with respect to upper primary education during 2012-13 and 2013–14 was 94.40 for the district as a whole.

The dropout rate is relatively high compared to primary level education in the district.

The transition rate from primary to upper primary in the district during 2013-14 was 99.83. All the blocks of the district recorded almost 99% irrespective of sex during 2013–14.

The transition Rate from upper primary to secondary for the district as a whole in 2013–14 was 95.72. For boys, it was 99.60 and for girls 99.60.

In 2014, in Cuddalore district, 1818 schools were functioning. They include, 902 primary schools, 515 upper primary schools, 219 secondary schools, 182 Higher secondary schools, seven engineering colleges, one medical Dental College, 15 polytechnics and Industrial Training Institutes, 53 Teacher Training Institutes, 13 Arts and Science colleges, and one University namely Annamalai University is functioning in the district apart from other small educational institutions.
During 2013 – 14, Pupil – Teacher Ratio in Cuddalore district in primary school was 27:1 and in upper primary it was 29:1.

During 2013 – 14, the Enrolment Ratio in secondary education was nearly 90 per cent (Boys 88 and girls 91)

The dropout level at the secondary level in the district decreased from 6.48 in 2012 – 13 to 4.63 in 2013 – 14.

In the modern world, ICT skills and knowledge of English is an important employability skill to be employed as well as to move higher in one’s professional life.

Steps should be initiated to bridge the gap of digital divide by way of providing unlimited online access to the E-resources and also provide online training in English, which will enable student to take up their college education with confidence and dignity and also make them ready for jobs.

Gender

Gender equality is a key factor contributing to the economic growth of a nation. The 2011 census data revealed that there are 919 girls for every 1000 boys in the 0-6 age group in India, Highlighting the imbalance in child sex ratio. Ideally, the ratio should be above 950.

Self – Help groups try to remedy the situation to a great extent. During 2013 -14 in Cuddalore district, there were 19,719 SHGS,
with a membership of 2,94,122 and the credit availed was Rs. 120.51 crore.

- In this district both Mahalir Thittam and Puthu Vazhvu projects are going on and they play a major role in empowering women. The existing economic activities may be scaled up to higher level for generating sustainable income and employment.

- The literacy rate of female is 70% in the district, which is very low compared to male literacy rate of 85.9 and the female literacy rates vary across the blocks. For instance, Kumaratchi had literacy rate of 78.4 Whereas Mangalore, which is a backward block, had a female literacy rate of 58.2 and a significant proportion of S.C population (40.47%) live in the block. Adequate attention may be provided especially to SC womenfolk in providing literacy to the adults.

- Female work participation of the district during 2011 was 32.47%. Minimum level of participation (25.25%) is reported in Cuddalore block. Mangalore block witnessed higher female work participation rate (52.02%). While the share of women in work participation rate in the district increased, it is observed that they are engaged in low paid occupations. Gender discrimination against women is self-evident. Female agricultural wage rate in the district ranges from Rs. 90 to Rs. 169.
The percentage of female workers in non-agricultural occupations was 26.40 in 2011. On an average, 38% of women participated in urban and rural local bodies in 2011. In Melbhuvanagiri, the participation rate of women was 43%. This shows that the growing democratic institutions are encouraging women to take part in all the events of public life.

SHG development model is based on the idea of women empowerment. It not only offers members a sustainable income and a new level of financial mobility, but also encourages women to utilize local resources, raises awareness of their rights and develops leadership skills and confidence.

The SHGs in the district could be further strengthened and motivated, and there is a wide scope to develop and strengthen micro enterprises through SHGs to generate sustainable income and employment.

Social Security

Social security is increasingly viewed as an integral part of the development process. The poverty in rural areas for older persons is increasing and needs attention. Hence the rural poor would need social security in a large measure.

Demographic profile of the aged of the 26.05 lakh population of the district (2011 census),
9.38 percent of the population is aged. It is interesting to note that the sex ratio of the aged people is more or less equal. 1,14,855 are provided financial assistance under various schemes.

- A number of schemes are implemented by the government to provide financial security to the aged and the destitute. They include
  1) Old Age pension (Normal scheme)
  2) Destitute physically handicapped pension scheme
  3) Destitute widows pension scheme
  4) Destitute Agricultural labourers pension scheme
  5) Destitute / Deserted wives pension scheme.

Besides to abolish caste discrimination, inter – caste marriage scheme is there and significant number of people benefited from it. Similarly, maternal assistance is provided to the targeted population. However, crimes against women are still high in the district.

**Infrastructure**

- Infrastructure plays a crucial role in promoting economic growth. It includes physical as well as social infrastructure.

- The quality and durability of roads differ across the blocks. Road infrastructure may be developed through PPP model for having better quality and durability.

- It is heartening to note that rural electrification is carried out vigorously to support the
agricultural sector. There are 898 revenue villages in the district and all these villages are provided with electricity for domestic, commercial and agricultural purposes. Of the total number of households, 94 percent have electricity connection. Among the blocks, there is not much variation in accessing electricity. But, some of the marginalized sections could not get the electricity connection. The reasons may be explored by way of making an in-depth study to address the issues.

- Cuddalore district has sizable telecommunication network in the form of telephone exchanges, PCO’s, Landline and mobile phone towers.

- There are 167 cooperative societies in Cuddalore district with a membership of 5 lakhs. Among the blocks, Parangipettai has less number of cooperative societies.

- As far as commercial banks are concerned, there are 158 branches with 5.03 lakh account holders. Among the blocks, Mangalore (9), Nallur (9) Annagramam (8) Keerapalayam (8), Melbhuwanagiri (6), Parangipettai (6) and Kattumannarkoil (5) have comparability a few bank branches.

- The Life Insurance Corporation of India is the single largest insurance institution in the district and it has issued 10.9 lakh policies till 2014.
• Cuddalore district is connected to other parts of Tamil Nadu through a very good road and rail network. It has one sea port. Import of crude oil is done through this port.

• Cuddalore district is at the tail end of the Cauvery delta region. Parts of the district get water from the irrigation canals that bring water from Mettur dam. Ground water from Neyveli mines provides coverage. According to a rough estimate, 60% of the farms are dependent solely on rainfall and the rest have access to groundwater.

Conclusion

• Cuddalore has always been classified as a multi-hazard prone district. It is prone to cyclone and floods. The district also falls within zone – 3 with respect to earthquake. The devastation caused in December, 2004 Tsunami, cyclone Nisha in 2008 and cyclone Thane in December 2011 left coastal lands flattened and infrastructure worth millions of dollars and economic assets and material were destroyed. Those natural calamities had severe impact on fishing communities in Cuddalore district.

• Cuddalore district is endowed with five river basins and they are the major sources of drinking water and irrigation facilities in the district.
The existing system of water supply and sanitation has deteriorated due to a number of reasons. Hence, adequate steps have to be taken to provide sustainable drinking water supply and covered drainage system. And there is need for scientific solid waste management system in the district.

An effective delivery mechanism is needed to ensure people's participation at various stages of the formulation and implementation of welfare programs in the district and adequate monitoring of the use of resources at various levels is needed to achieve the intended targets.