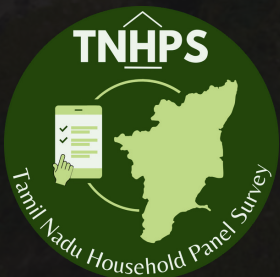


Department of  
Economics  
& Statistics



# Nagapattinam



Tamil Nadu Household Panel Survey  
Pre-Baseline District Report 2018-19



**Tamil Nadu Household Panel Survey (TNHPS)  
Pre-Baseline Survey (PBS) District Report 2018-19**

***Nagapattinam District***

February 2024

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## Summary of PBS Findings

### *Demographic Indicators*

- Nagapattinam had a sample size of 6,517 households, of which 70.97 percent of households were from rural areas and 29.03 percent of households were from urban areas.
- The district had a huge demographic dividend with almost half the population—about 48.09 percent—aged between 17 and 45 years.
- The percentages of SC, BC and MBC households in the district were at 37.22 percent, 31.36 percent, and 30.53 percent respectively.

### *Education*

- The literacy rate in the district had increased from 83.59 percent in 2011 (Census 2011) to 88.24 percent in 2018. Nagapattinam was ranked ninth among the then 32 districts in terms of this indicator.
- Though both rural and urban literacy rates registered an increase, the rural literacy rate was 7.99 percent lesser than the urban literacy rate in 2018. The gender gap in literacy rate was more than twice as wider in rural areas at 10.92 percent than in urban areas at 4.80 percent.
- While more than 98 percent of the General category population in the district had received formal education, only around 82 percent of the SC population had done so.

### *Employment*

- The percentage of the employed population in the district at 46.28 percent was lower than the state estimate of 50.10 percent, while the share of the unemployed population at 4.21 percent was higher than the state estimate of 3.50 percent. The rest were not in the labour force at 49.48 percent.
- Nagapattinam district was ranked twenty-seventh among the then 32 districts in Tamil Nadu in terms of employed population.
- The percentage of population that was employed was higher in rural parts of the district than the urban.

- While 71.12 percent of the male population aged 14 and above was employed, the female work participation in the district was only 24.31 percent.
- Around 72.72 percent of the female population aged 14 and above were not in the labour force, and among these, majority of them—about 74.44 percent—were associated with attending to domestic duties as a homemaker.
- Since Nagapattinam was primarily a rural district, almost half—about 48.37 percent—of the employed population depended on the agricultural sector for employment. While casual labour in agriculture was predominant in rural areas, self-employment in non-agricultural sector was most prevalent in urban areas. There was also a high share of casual labour in industry in the urban areas.
- The agriculture sector employed almost two-thirds of the SC population and more than 40 percent of the MBC population. The maximum proportion of the General and BC population in the district were employed as casual labourers in the industrial sector, in contrast to the state level estimates, where a majority of these two social groups were employed as salaried workers in the private sector.

#### *Land Ownership and Assets*

- Nagapattinam district was ranked twelfth in the state in terms of agricultural land ownership. A relatively higher percentage of MBC and BC category households owned agricultural land in the district as compared to the other social groups.
- More than half the households—about 56.22 percent—that owned agricultural land in the district had access to irrigation facilities like canals, dug wells and tube wells.
- More than 90 percent of the agricultural land-owning households in the district were holding marginal or small agricultural lands—less than two hectares.
- Ownership of at least one agricultural, allied agricultural or fishing asset in the district was higher at 35.95 percent as compared to the state estimate of 20.92 percent.
- While all General category households owned at least one household asset, almost 20 percent of SC households did not own any household asset, including a mobile phone.

- The percentage of households possessing priority ration cards in the district was at 95.45 percent, which was much higher compared to the state level estimate of 71.14 percent.

### *Household Income*

- The mean annual household income of Nagapattinam district was 37.66 percent lesser (₹88,993) than the state PBS estimate (₹1,42,752); in the urban areas it was ₹1,61,082 and in rural areas it was ₹71,222. The district was ranked 29<sup>th</sup> out of 32 districts with respect to this parameter.
- The mean income from salaried work was the highest at ₹1,68,648, while that from allied agricultural activities was the lowest at ₹14,774.
- The Gini coefficient measuring income inequality across households in the district (0.528) was lower than the state PBS estimate (0.563).

### *Housing*

- More than 90 percent of the households in the district were living in their own house, which was significantly higher than the state level estimate of 75.16 percent. The district was ranked third among the then 32 districts in the state in terms of this parameter.
- Out of the households that lived in an own house in the district, 19.94 percent of houses were built under a government scheme. The SC households had the highest percentage of houses built under a government scheme in the district compared to other social groups.
- Around 44 percent of the households in the district were living in pucca houses, which was considerably lower than the state level estimate of 63.42 percent.

### *Drinking Water, Electricity and Cooking Fuel*

- The primary source of water in the district was public tap/standpipe in both rural and urban areas.
- The district witnessed increase in electrification in both rural and urban areas between 2011-2018.

- Although the use of LPG as the primary cooking fuel in the district had increased from 34.86 percent in 2011 to 59.00 percent in 2018, firewood use was still quite significant in the district—about 40.34 percent—in 2018. The district was ranked third in terms of firewood use among all districts.
- Almost 60 percent of SC households in the district still used firewood as their primary cooking fuel, which was significantly higher than the state estimate for this social group at 27.6 percent. LPG usage was high amongst the General and BC categories.

### *Sanitation*

- The percentage of households with latrine within the house premises had increased drastically from 39.54 percent in 2011 (Census, 2011) to 75.74 percent in 2018. This parameter was significantly lower for SC households compared to other social groups, where 38.50 percent of SC households did not have a latrine within the house premises.
- The percentage of total households in the district following open defecation had declined from 57.83 percent in 2011 (Census, 2011) to 21.06 percent in 2018.

## 1. Introduction

### 1.1 Profile of Nagapattinam District

Nagapattinam district in Tamil Nadu was formed in the year 1991 from the bifurcation of Thanjavur district. In the year 2020, Nagapattinam district was bifurcated into Nagapattinam and Mayiladuthurai districts. However, this report includes data and analysis for the erstwhile Nagapattinam district. It is in the Central region of the State, with Cuddalore in the North, Bay of Bengal in the East, and the South, and Tiruvarur to the West.

According to Census (2011), Nagapattinam had a total population of 16.2 lakhs, accounting for approximately 2.25 percent of Tamil Nadu's total population, which was 7.21 crores. The district comprised 4.1 lakh households, with 77.44 percent residing in rural areas. The male population was 47.45 percent, and the female population was 52.55 percent. Nagapattinam demonstrated a child-sex ratio of 959.39 as compared to the State estimate of 943.27. Within the social groups, 31.54 percent of the population belonged to the Scheduled Castes, while 0.23 percent belonged to the Scheduled Tribes. The literacy rate in Nagapattinam district stood at 83.59 percent, compared to the State's average of 80.09 percent. The male literacy rate was 89.79 percent, while the female literacy rate was 77.58 percent.

In the fiscal year 2018-19, Nagapattinam's Net District Domestic Product was ₹19,16,424 lakhs, ranking at twenty-fifth among all districts. The district's per capita Net District Domestic Product was recorded at ₹1,11,926, ranking it at twenty-seventh among districts. Nonetheless, the per capita Net District Domestic Product of the district was significantly below the Tamil Nadu average of ₹1,83,884 (Department of Economics and Statistics, 2023). In terms of sectoral distribution, the primary sector (agriculture and allied) contributed approximately 26 percent to its domestic income, while the secondary (industry) and tertiary (service) sectors contributed approximately 17 percent and 57 percent, respectively (Department of Economics and Statistics, 2017).

According to the Tamil Nadu State Planning Commission (2017a), Nagapattinam ranked twenty sixth in terms of the Human Development Index with a score of 0.601, indicating the need for improving the development of the general population. It ranked twenty seventh in the Gender Inequality Index with a score of 0.104, demanding attention to expanding resources to close the gender divide. In terms of the Child Development Index, the district ranked twelfth with a score of 0.657, indicative of an average performance in developing the youth. Additionally, Nagapattinam ranked fifth in terms of the Multidimensional Poverty Index with a score of 0.41, pointing to a relatively good performance in the eradication and prevention of poverty.

Nagapattinam district faces economic challenges but is making good strides in improving child development and reducing poverty. However, there's still work needed to tackle gender inequality and boost overall human development in the region.

### *1.2 About the TNHPS and Pre-Baseline Survey (PBS)*

The Tamil Nadu Household Panel Survey (TNHPS) has been designed as a longitudinal survey, beginning with a Pre-Baseline Survey or the PBS—an extensive household listing activity— followed by a Baseline Survey (Wave 1) and subsequent periodic surveys (Wave 2, Wave 3 etc.). The TNHPS aims to analyze the patterns of change in various socio-economic indicators, including households' income, occupational structures and living conditions.

The PBS collected data on a comprehensive set of socio-economic indicators for the period 2018-19 with the results providing district-level estimates for these indicators, and informing the sampling design and the associated sampling frame for the first wave of the TNHPS. In the absence of Census 2021, the PBS estimates act as a valid benchmark for the Government of Tamil Nadu in terms of socio-economic development since 2011. The PBS surveyed around 2,12,282 households in the erstwhile 32 districts of Tamil Nadu across 1,476 Primary Sampling Units—684 rural PSUs and 792 urban PSUs.

This report analyzes data from the PBS for Nagapattinam district and presents the findings. Wherever possible, the report compares the district PBS estimates with the most recent census data of Nagapattinam (Census, 2011) and the state PBS estimates (TNHPS-PBS, 2021) to assess the socio-economic development of Nagapattinam district. The sample size for the district was 6,517 households, among which 4,625 households were from rural areas and 1,892 households were from urban areas. The blocks covered during the survey were: Keelaiyur, Kilvelur, Kollidam, Kuthalam, Mayiladuthurai, Nagapattinam, Sembanarkoil, Sirkali, Thalainayar, Thirumarugal and Vedaranyam.

## 2. Survey Response

For the Pre-Baseline Survey (PBS) 2018-19, a total of 6,807 households in the Nagapattinam district were selected using a multi-stage stratified sampling design<sup>1</sup>. The final sample size for PBS was 6,517 households, of which 70.97 percent of households were from rural areas and 29.03 percent of households were from urban areas of the district. The area-wise distribution of the total sample as well as the survey response is given in Table 2.1.

*Table 2.1 Distribution of Sample Households – Response-wise*

Response of Households	Area Type					
	Rural		Urban		Nagapattinam	
	Number of HHs	Percentage	Number of HHs	Percentage	Number of HHs	Percentage
Response	4,625	98.03	1,892	90.57	6,517	95.74
Non-Response	73	1.55	50	2.39	123	1.81
Non-sample	20	0.42	147	7.04	167	2.45
<b>Total</b>	<b>4,718</b>	<b>100</b>	<b>2089</b>	<b>100</b>	<b>6,807</b>	<b>100</b>

Nagapattinam district had a slightly lower response rate—willingness of households to participate in the TNHPS-PBS—of 95.74 percent compared to the state response rate of 96.5 percent. Rural areas had a higher response rate as compared to the urban areas. Around 1.81 percent of households were not willing to participate in the survey. About 2.45 percent of the selected samples were removed as they were not considered as households as per the definition used in the PBS<sup>2</sup>.

<sup>1</sup> Detailed explanation of the Sampling Methodology available in the TNHPS-PBS State Report (see TNHBS-PBS, 2021)

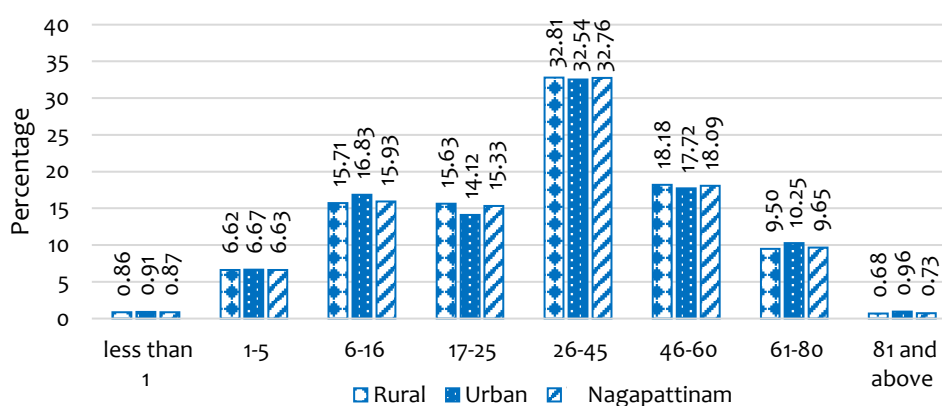
<sup>2</sup> A household is defined as a group of persons normally living together and taking food from a common kitchen. The category called non-sample consisted of institutions, houses of NRIs and other buildings where there was no kitchen.

### 3. Key Findings

#### 3.1 Demographic Indicators

As per the PBS estimates, the average household size<sup>3</sup> in the district had reduced from 3.92 in 2011 (Census, 2011) to 3.54 in 2018. As per the PBS estimates, 52.55 percent of the population in the district were female, and 47.45 percent of the population were male. Around 22.16 percent of the households in the district were headed by females, which was higher than the state estimate of 18.93 percent (TNHPS-PBS, 2021).

Chart 3.1 Age-wise Distribution of Population – Area-wise



As per the PBS estimates, almost one-third of the population in the district were in the age group of 26 to 45 years. Within the district, the population share—between age 17 to 60 years—was higher in rural areas at 66.62 percent than urban areas at 64.38 percent.

The percentage of currently married population in the district was 68.64 percent. A higher percentage of males were currently married compared to females. The widowed female population was notably higher than the widowed male population. The widowed population in urban areas was higher than in the rural areas of the district.

The religion-wise distribution of the households in the district, as per the PBS estimates, shows that 91.49 percent of the households practiced Hinduism, 5.55 percent practiced Islam and 2.87 percent followed Christianity.

<sup>3</sup> Household size is defined as the number of family members currently living in the household during the PBS survey.



*Table 3.1 Social Group-wise Distribution of Households*

<b>Social Group</b>	<b>Percentage</b>
SC	37.22
ST	0.15
BC	31.36
MBC	30.53
Denotified Communities (DNC)	0.10
General	0.46
DK/RF	0.18
<b>Total</b>	<b>100</b>

As per the PBS estimates, the highest percentage of households in Nagapattinam district belonged to the SC category, followed by the BC and MBC categories. The percentages of SC and ST households in the district were 37.22 percent and 0.15 percent in 2018.

The percentage of ST and DNC category households in Nagapattinam district was only 0.15 percent and 0.10 percent respectively, and only sixteen ST and eleven DNC households were sampled in the district. Hence, the results pertaining to these social groups discussed in the report must be interpreted in this context.

### *3.2 Development Indicators*

In this section, we discuss the PBS estimates on various development indicators such as literacy rate and employment status in Nagapattinam district.

#### *3.2.1 Education*

The change in literacy rate of Nagapattinam district and the state of Tamil Nadu during the period 2011 and 2018 is given in Table 3.2. As per Census 2011, a person aged seven and above who can both read and write with understanding in any language is treated as literate. In the PBS, literacy rate is measured as those that have formal schooling and those that can read and write a simple sentence.

Table 3.2 Literacy Rates between Census (2011) and PBS (2018)

Gender	District-Rural		District-Urban		Nagapattinam		Tamil Nadu	
	2011	2018	2011	2018	2011	2018	2011	2018
Male	88.65	92.42	93.74	97.19	89.79	93.35	86.77	90.97
Female	75.54	81.50	84.54	92.39	77.58	83.63	73.40	80.15
<b>Total</b>	<b>82.00</b>	<b>86.68</b>	<b>89.03</b>	<b>94.67</b>	<b>83.59</b>	<b>88.24</b>	<b>80.09</b>	<b>85.40</b>

\*The represented trend should be understood under the context that Census does 100 percent enumeration whereas in the PBS, a sample is surveyed.

As per Census 2011, the literacy rate in Nagapattinam district at 83.59 percent was higher than the state estimate of 80.09 percent. The PBS estimates show that in the year 2018, the literacy rate in Nagapattinam district had increased to 88.24 percent, which continued to be higher than the state estimate of 85.40 percent. The district was ranked ninth in terms of literacy rate among the 32 districts in Tamil Nadu (TNHPS-PBS, 2021).

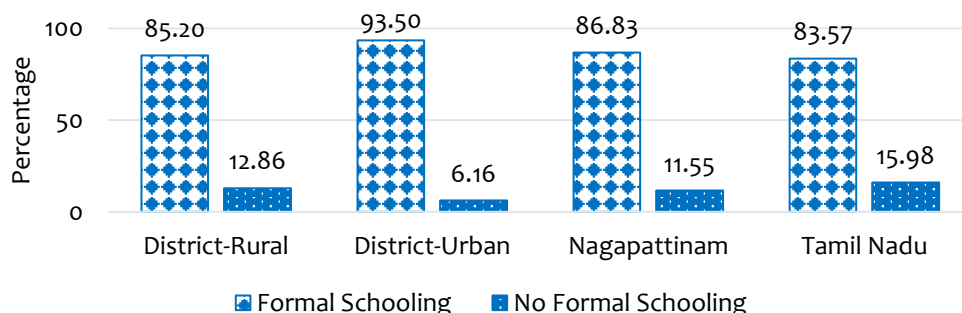
Both male and female literacy rates in Nagapattinam district had recorded an increase during the period under consideration, though a wide gender gap still prevailed. The gender gap in literacy rate had declined from 12.21 percent in 2011 to 9.72 percent in 2018, which is lower than the state gender gap of 10.82 percent.

Both rural and urban literacy rates recorded an increase between 2011 and 2018, though the rural literacy rate was still 7.99 percent lower than the urban literacy rate in 2018. The gender gap in literacy rate was much higher in rural areas—about 10.92 percent—than in urban areas at 4.80 percent.

### 3.2.2 Education Status of Population (Age 7 and above)

In this section, we discuss the education status of the population aged seven and above in Nagapattinam district.

Chart 3.2 Formal Schooling of the Population – Area-wise



\*Others and Don't Know/Refuse to Answer categories are not included in any chart, unless their value is substantially high. Therefore, the total might not add up to 100 percent.

Chart 3.2 shows that 86.83 percent of the specified population in Nagapattinam district had attended formal schooling, which was higher compared to the state estimate of 83.57 percent. The percentage of population with formal education in urban areas was higher than in rural areas of the district.

Chart 3.3 Formal Schooling of the Population – Gender-wise

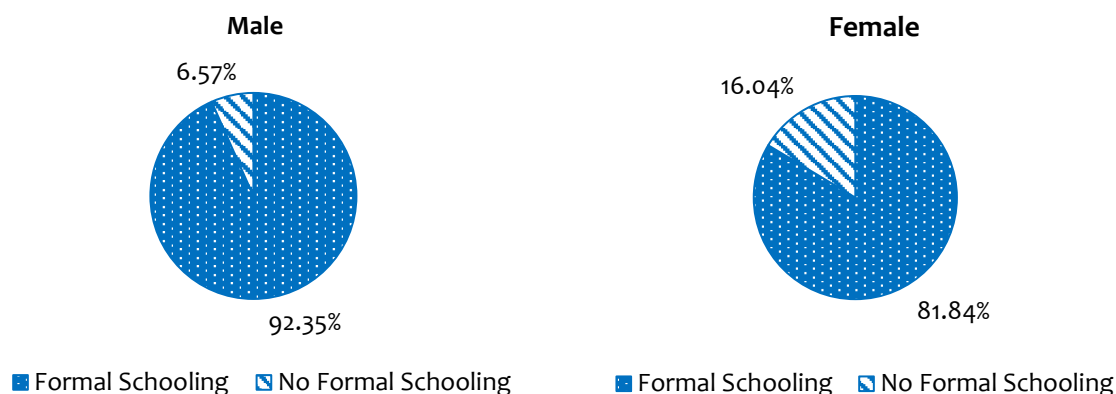


Chart 3.3 shows that the percentage of the population that had formal education in the district was much higher among males compared to females, again denoting a wide gender gap, like in literacy.

A district level analysis of the PBS on education attainment status of various social groups is shown below.

Table 3.3 Formal Schooling of Population - Social Group-wise Percentages

Education Status	Social Group						
	SC	ST	BC	MBC	DNC	General	Nagapattinam
Formal Schooling	81.77	79.67	92.69	87.07	89.89	98.60	86.83
No Formal Schooling	16.05	18.25	6.63	11.01	10.11	1.40	11.55
Others and DK/RF	2.18	2.08	0.67	1.93	0.00	0.00	1.62
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

A majority of the General population, followed by the BC population, in the district had formal education. The proportions of the SC population in the district that had attended formal schooling were lower compared to the other social groups. The results for the ST and DNC categories must be interpreted in the context of their sample size, as discussed in Section 3.1.

To take this analysis further, Table 3.4 gives detailed information on the current highest level of formal educational attainment of the population that had received formal education

*Table 3.4 Highest Formal Educational Attainment of Population: Area-wise Percentages*

Educational Attainment	Area Type		
	Rural	Urban	Nagapattinam
Primary (I to V)	23.38	19.05	22.48
Middle School (VI to VIII)	23.25	20.11	22.59
High School (IX to X)	23.90	22.57	23.62
Higher Secondary (XI to XII)	13.29	14.56	13.55
Bachelor's degree	6.66	12.84	7.94
Diploma Degree	5.06	4.76	4.99
Post Graduate Degree	2.25	5.73	2.97
Other Higher Education	0.00	0.02	0.00
Others/DK/RF	2.22	0.35	1.83
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>

The PBS estimates show that around 82.24 percent of the district's population—age 7 and above, with formal education—was either pursuing or had completed schooling upto higher secondary level. The percentage of population that was either pursuing or had completed tertiary education—such as bachelor's degree, diploma, or post graduate degree and above—was 15.90 percent, which was considerably lower than the state estimate of 20.02 percent. Also, this figure was higher for urban areas than rural areas of the district.

*Table 3.5 Highest Formal Educational Attainment of Population: Gender-wise Percentages*

Educational Attainment	Gender		
	Male	Female	Nagapattinam
Primary (I to V)	19.92	25.05	22.48
Middle School (VI to VIII)	22.76	22.44	22.59
High School (IX to X)	26.66	20.57	23.62
Higher Secondary (XI to XII)	12.32	14.79	13.55
Bachelor's degree	7.38	8.50	7.94
Diploma Degree	7.21	2.77	4.99
Post Graduate Degree	2.59	3.36	2.97
Other Higher Education	0.01	0.00	0.00
Others/DK/RF	1.15	2.52	1.83
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>

Table 3.5 shows that a higher percentage of males—about 17.19 percent—were either pursuing or had completed tertiary education compared to females—about 14.63 percent—in the district. A higher percentage of females had completed bachelor's and post-graduate degree compared to males, whereas the case with respect to diploma degree percentages was the reverse.

*Table 3.6 Highest Formal Educational Attainment of Population (Age 7 and above) - Social Group-wise Percentages*

Educational Attainment	Social Group						
	SC	ST	BC	MBC	DNC	General	Nagapattinam
Primary (I to V)	23.19	24.87	21.05	23.36	13.56	8.22	22.48
Middle School (VI to VIII)	23.18	26.11	21.48	23.20	20.11	18.65	22.59
High School (IX to X)	25.78	17.82	23.37	21.22	33.63	29.09	23.62
Higher Secondary (XI to XII)	12.72	5.75	13.93	14.11	22.42	17.90	13.55
Bachelor's degree	5.72	10.18	10.49	7.68	7.47	16.76	7.94
Diploma Degree	5.02	7.64	4.74	5.24	2.81	4.74	4.99
Post Graduate Degree	1.79	5.09	4.22	3.02	0.00	4.64	2.97
Other Higher Education	0.00	0.00	0.01	0.00	0.00	0.00	0.00
Others/DK/RF	2.59	2.55	0.72	2.16	0.00	0.00	1.83
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

The social group-wise analysis in Table 3.6 shows that most of the specified SC and MBC population—about 84.87 percent and 81.89 percent respectively—in the district were either pursuing or had completed only primary or secondary school. The percentage of population with tertiary education—bachelor’s degree and above—was higher among the General category at 26.14 percent, followed by the BC category at 19.46 percent. Tertiary education estimates for the SC, BC, MBC, and General categories in the district were considerably lower than their respective state level estimates. The results for the ST and DNC categories must be interpreted in the context of their sample size, as discussed in Section 3.1.

About 11.55 percent of the population had not received formal education in Nagapattinam district (refer Chart 3.2), the PBS had investigated the ability of those who could read and write a simple sentence with understanding—or functional literacy.

*Table 3.7 Functional Literacy of Population with No Formal Schooling – Area-wise Percentages*

Functional Literacy	Area Type		
	Rural	Urban	Nagapattinam
Yes	11.48	18.91	12.25
No	88.41	80.83	87.62
DK/RF	0.11	0.26	0.13
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>

Table 3.7 shows the area-wise functional literacy status of the population with no formal schooling in the district. Only 12.25 percent of the population without formal schooling had functional literacy. The functional literacy rate of the population (age 7 and above) in urban areas was significantly higher than rural areas of the district.

*Table 3.8 Functional Literacy of Population with No Formal Schooling - Social Group-wise Percentages*

Functional Literacy	Social Group						
	SC	ST	BC	MBC	DNC	General	Nagapattinam
Yes	9.54	11.40	19.82	12.48	25.00	0.00	12.25
No	90.27	88.60	80.18	87.42	75.00	100	87.62
DK/RF	0.19	0.00	0.00	0.09	0.00	0.00	0.13
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

Table 3.8 shows the functional literacy status of the population with no formal schooling, across various social groups. Only 9.54 percent of the SC population without formal schooling were equipped with functional literacy. Only two—of the 109—General category respondents surveyed in the district did not receive formal schooling, and both did not have functional literacy.

### 3.2.3 Employment Status

This section looks at the employment status of the household members, types of employment that they are engaged in, the unemployment rate at the district level and comparison of these findings with the state PBS estimates. In the PBS, the population aged 14 years and above has been classified as employed, unemployed and not in the labour force<sup>4</sup>.

The employed category—population aged 14 years and above—includes the following:

- (i) People who are self-employed in agriculture,
- (ii) People who are self-employed in allied agricultural activities,
- (iii) People who are self-employed in non-agricultural activities,
- (iv) People who worked as casual labourers in agriculture,
- (v) People who worked as casual labourers in industry,
- (vi) People who worked as casual labourers in the service sector,
- (vii) People who worked as casual labourers in other domains,

<sup>4</sup> Percentage of population employed = (Number of employed persons 14 years and above/Total population of the district 14 years and above) \*100

Percentage of population unemployed = (Number of unemployed persons 14 years and above/Total population of the district 14 years and above) \*100

Percentage of population not in labour force = (Number of persons 14 years and above not in workforce/Total population of the district 14 years and above) \*100

- (viii) People who worked as salaried employees in the government sector,
- (ix) People who worked as salaried employees in the private sector,
- (x) People who are involved in multiple occupations, and
- (xi) People who are involved in other types of work.

The unemployed category includes those aged 14 years and above, who did not work but were actively seeking and/or available for work.

The not in the labour force category consists of the following categories:

- (i) People who attended educational institutions,
- (ii) People who attended domestic duties only,
- (iii) Rentiers, pensioners, remittance recipients, etc.,
- (iv) People who are not able to work due to disability and
- (v) Others (including begging, etc.).

*Chart 3.4 Employment Status of Population – Area-wise*

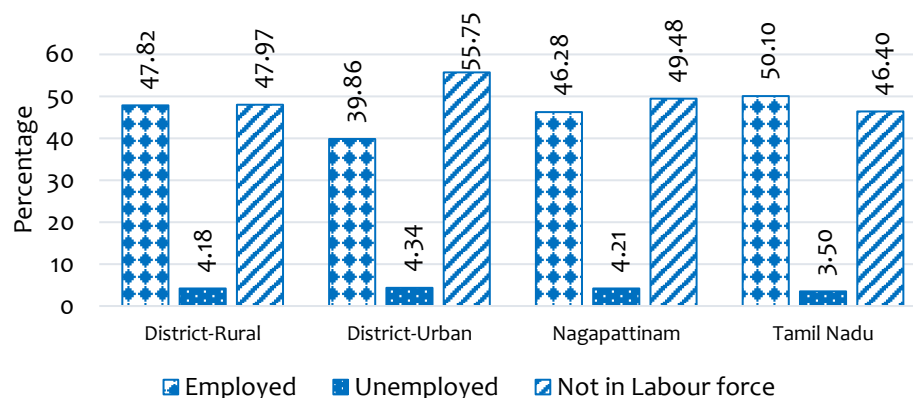


Chart 3.4 shows that the overall percentage of employed population—14 years and above—in the district was lesser than the state estimate. The percentage of employed population was higher in rural areas as compared to urban areas of the district. The share of unemployed population was higher in the district as compared to the state. The unemployment status in both rural and urban areas of the district were higher than the respective state rural and urban estimates—3.6 percent and 3.3 percent. Nagapattinam district was ranked twenty-seventh among all districts in Tamil Nadu in terms of employed population and ranked seventh in terms of unemployment status.

Chart 3.5 Employment Status of the Population – Gender-wise



Chart 3.5 shows the gender-wise employment status of the population aged 14 years and above. While 71.12 percent of the specified male population was employed, the female work participation was only 24.31 percent. Decreased female labour force participation has been well documented at the national level (Das et al., 2015; Desai, 2017; Desai & Joshi, 2019). While the district female work participation was higher than the national average of 23.3 percent in 2017-18 (National Statistical Office, 2019), it was lesser than the state estimate of 29.96 percent (TNHPS-PBS, 2021). Around 72.72 percent of the female population was not in the workforce, and among these, majority of them—about 74.44 percent—were associated with attending to domestic duties as homemakers (see Chart 3.7). As per the state PBS estimates, Nagapattinam district was ranked twenty-seventh in terms of female work participation and ranked six in terms of female unemployment status.

Table 3.9 Work type of Population – Area-wise Percentages

Work Type	Area Type		
	Rural	Urban	Nagapattinam
Self Employed Agriculture	6.55	1.86	5.77
Self Employed Non-Agriculture	7.93	27.44	11.19
Self Employed Allied Agriculture	1.30	1.69	1.37
Casual Labourer Agriculture	48.49	5.08	41.23
Casual Labourer Industry	13.55	23.65	15.24
Casual Labourer Service	4.67	10.70	5.68
Casual Labourer (Others)	2.76	0.02	2.31
Salaried Worker Government	3.64	9.94	4.69
Salaried Worker Private	7.81	18.93	9.67
Other	0.29	0.26	0.29
Multiple Occupation	2.87	0.43	2.47
DK/RF	0.14	0.00	0.12
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>

Since Nagapattinam is primarily a rural district, almost half—about 47.00 percent—of the employed population depended on the agricultural sector for employment (self-employed



and casual labour). While the greatest proportion of the working population in the state were salaried workers in the private sector at 21.82 percent (TNHPS-PBS, 2021), this category consisted of only 9.67 percent of the working population in the district. While casual labour in agricultural sector was predominant in rural areas of the district, self-employed labour in non-agricultural sector was most prevalent in urban areas. There was also a high share of casual labour in industry in urban areas of the district.

*Table 3.10 Percentage of Employed Population Engaged in Different Types of Livelihood Activities – Social Group-wise Percentages*

Work Type	Social Group						
	SC	ST	BC	MBC	DNC	General	Nagapattinam
Self Employed Agriculture	1.96	0.00	8.96	9.07	0.00	0.00	5.77
Self Employed Non-Agriculture	3.85	4.99	19.02	15.44	9.29	21.43	11.19
Self Employed Allied Agriculture	0.40	0.00	1.46	2.88	0.00	0.00	1.37
Casual Labourer Agriculture	63.10	3.85	18.19	28.34	68.68	2.90	41.23
Casual Labourer Industry	11.43	39.94	20.87	15.90	0.00	28.03	15.24
Casual Labourer Service	4.42	0.00	6.71	6.79	0.00	8.50	5.68
Casual Labourer (Others)	2.31	0.00	1.09	3.51	0.00	0.00	2.31
Salaried Worker Government	2.75	36.24	7.34	4.81	0.00	16.24	4.69
Salaried Worker Private	6.01	14.98	14.57	10.78	22.03	21.28	9.67
Other	0.20	0.00	0.21	0.51	0.00	0.00	0.29
Multiple Occupation	3.44	0.00	1.59	1.76	0.00	1.62	2.47
DK/RF	0.14	0.00	0.00	0.20	0.00	0.00	0.12
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

Nagapattinam being a rural district provided employment opportunities in the agriculture sector (casual labour + self-employed) to almost two-thirds of the SC population and more than 40 percent of the MBC population. This was higher than the state level estimates, where around 37.69 percent of the SC population was employed in agriculture. The maximum proportion of the General and BC population in the district were employed as casual labourers in the industrial sector, in contrast to the state level estimates, where a majority of these two social groups were employed as salaried workers in the private sector (TNHPS-PBS, 2021). The results for ST and DNC categories must be interpreted in the context of their sample size, as discussed in Section 3.1, as there were only 21 ST and 12 DNC employed respondents surveyed in the district.

Chart 3.6 Composition of Population Not in the Labour Force – Area-wise

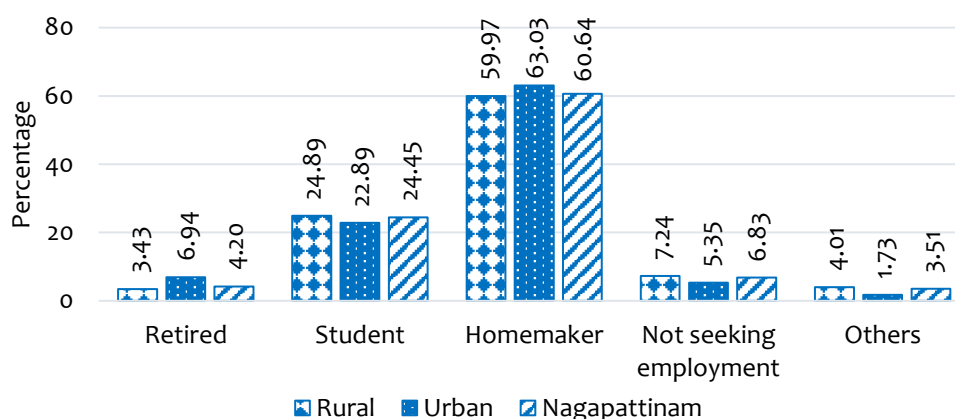
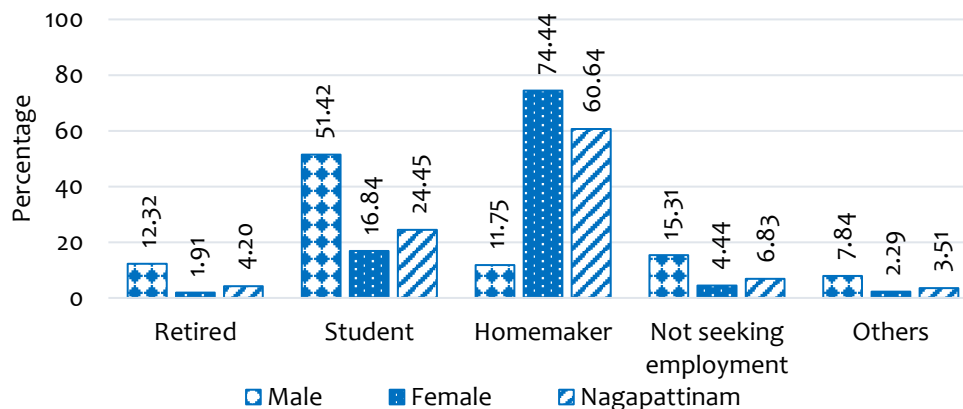


Chart 3.6 shows that, similar to the trend at state level, majority of the population that was not in the labour force in the district comprised homemakers involved in unpaid domestic duties of the household, followed by students. The proportions of the population that were not seeking employment or were students were higher in rural areas than urban areas, whereas the percentages of retired people and homemakers were higher in urban areas than rural areas.

Chart 3.7 Composition of the Population Not in the Labour Force – Gender-wise



The gender-wise distribution of the population currently not in the labour force is given in Chart 3.7. While Chart 3.3 represents the lower female involvement in formal education, Chart 3.7 shows the staggeringly lower female involvement in higher education, as only 16.84 percent of the female not-in-labour-force population were students. Similar to the state trend, majority of the male not-in-labour-force population were students, whereas a majority of the female not-in-labour-force population were homemakers. It must be noted that the study did not capture unpaid domestic labour or any other form of unpaid labour carried out by women.

Table 3.11 Composition of Population Not in Labour Force - Social Group-wise Percentages

Current Status	Social Group						
	SC	ST	BC	MBC	DNC	General	Nagapattinam
Retired	2.72	5.55	5.48	4.07	5.19	9.18	4.20
Student	33.25	11.09	18.22	23.12	34.52	20.46	24.45
Homemaker	53.08	72.27	65.76	62.37	49.93	43.35	60.64
Not seeking employment	7.10	11.09	6.99	6.17	5.19	20.73	6.83
Others	2.97	0.00	3.47	4.05	5.19	6.27	3.51
DK/RF	0.88	0.00	0.08	0.23	0.00	0.00	0.37
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

Table 3.11 shows that within all social groups, the percentage of homemakers was the highest compared to other categories in the district. The General category had the highest percentage of not-working population who were not seeking employment compared to the other social groups.

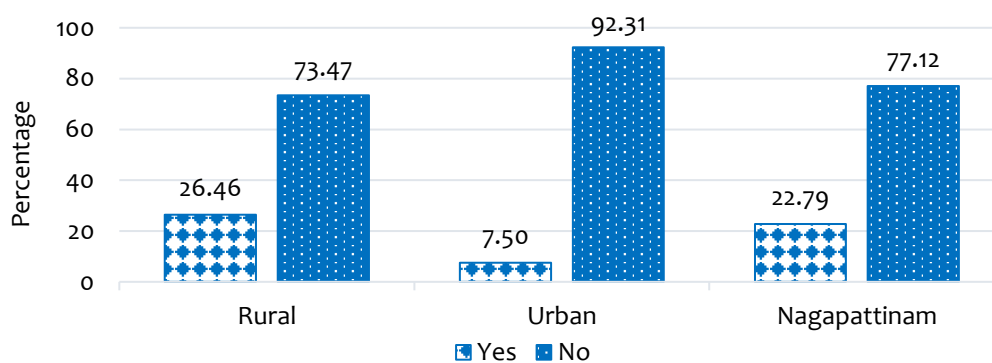
### 3.3 Socio-Economic Indicators

The PBS estimates for various socio-economic indicators of Nagapattinam district such as ownership of agricultural land, household assets and income are discussed in this section.

#### 3.3.1 Ownership of Agricultural Land

The PBS estimates of ownership of agricultural land at the household level in the rural and urban areas of Nagapattinam district is given in Chart 3.8. The TNHPS PBS definition of land ownership does not include leased-in land or other forms of holdings. Data were collected on the ownership of agricultural land only. The fourth round of National Family Health Survey (NFHS, 2015-16) was a secondary source of data that followed the same definition for ownership of agricultural land.

Chart 3.8 Ownership of Agricultural Land – Area-wise



Nagapattinam is a largely rural and agricultural district. The percentage of households owning agricultural land in the district was higher than that at the state level at 19.41

percent. The district was ranked twelfth in the state in terms of agricultural land ownership (TNHPS-PBS, 2021). Area-wise comparison shows that a higher proportion of households in rural of the district owned agricultural land at 26.46 percent as compared to the urban households at 7.50 percent.

Table 3.12 shows the percentage of agricultural land-owning households in the district that depended on irrigation or rain.

*Table 3.12 Type of Agricultural Land Owned by the Households – Area-wise Percentages*

Type of Agricultural Land	Area Type		
	Rural	Urban	Nagapattinam
Only Irrigated Agriculture Land	55.15	72.12	56.22
Only Unirrigated Agriculture Land	42.67	23.08	41.44
Both Irrigated and Unirrigated Agriculture Land	1.80	4.08	1.94
DK/RF	0.38	0.72	0.40
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>

Table 3.12 shows that more than half the households that owned agricultural land in the district had access to irrigation facilities. Canal irrigation, tank irrigation, dug well and tube well are the major sources of irrigation in Nagapattinam district (Tamil Nadu State Planning Commission, 2017b). A higher percentage of urban households owned irrigated agricultural land as compared to the rural households in the district. The proportion of households having irrigated agricultural land was higher in the district compared to the state estimate of 50.03 percent.

*Table 3.13 Ownership of Agricultural Land - Social Group-wise Percentages*

Agricultural Land Ownership	Social Group						
	SC	ST	BC	MBC	DNC	General	Nagapattinam
Yes	12.27	0.00	26.67	32.01	22.01	13.81	22.79
No	87.66	100	73.22	67.88	77.99	86.19	77.12
DK/RF	0.06	0.00	0.11	0.11	0.00	0.00	0.09
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

An analysis of the social group-wise ownership of agricultural land by households in Table 3.13 showed that a relatively higher percentage of the MBC and BC households owned agricultural land in the district as compared to other social groups. Though 25 percent of the ST households in the state-owned agricultural land (TNHPS-PBS, 2021), none of the sixteen ST households surveyed in the district owned agricultural land. The results for ST and DNC categories must be interpreted in the context of their sample size, as discussed in Section 3.1.

Based on the size of agriculture land, the PBS classified the land owned by the households into marginal, small, semi-medium, medium, and large. Of the households that owned agricultural land, the percentage of households under each size category is given in Table 3.14.

*Table 3.14 Size of Agricultural Land Owned by the Households – Area-wise Percentages*

Size of Agricultural Land (in Hectares)	Area Type		
	Rural	Urban	Nagapattinam
Marginal (0.01 - 0.99)	82.79	62.99	81.58
Small (1 - 1.99)	9.34	17.19	9.81
Semi Medium (2 - 3.99)	5.76	8.92	5.95
Medium (4 - 9.99)	0.93	8.19	1.38
Large (10 and above)	1.18	2.71	1.28
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>

Table 3.14 shows that 91.39 percent of the agricultural land-owning households in the district were holding marginal or small agricultural lands (less than 2 hectares). This estimate was higher than the state level estimate of 89.33 percent. The share of semi-medium and medium landholdings was lesser than that of the state at 7.64 percent and 2.26 percent respectively, while that of large landholdings was greater than the state estimate of 0.77 percent.

### 3.3.2 Ownership of Agricultural, Allied Agricultural and Fishing Assets

In this section, we discuss the ownership of agricultural, allied agricultural and fishing assets such as tractor, pump set, dairy animals, poultry birds, mechanized and non-mechanized boats, amongst the households of Nagapattinam district.

*Chart 3.9 Ownership of Agricultural, Allied Agricultural and Fishing Assets – Area-wise*

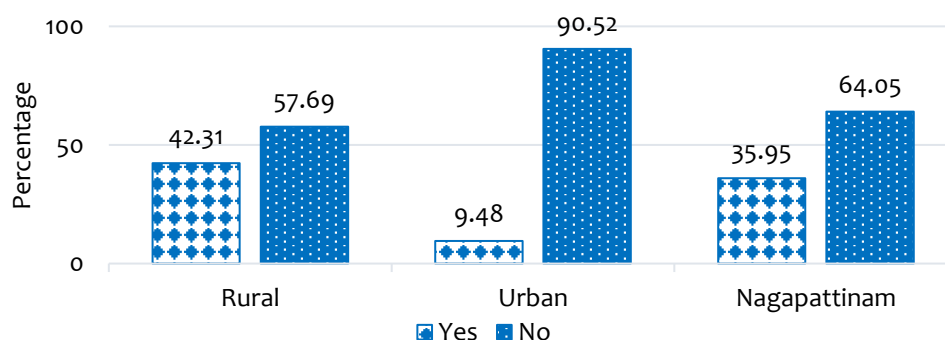


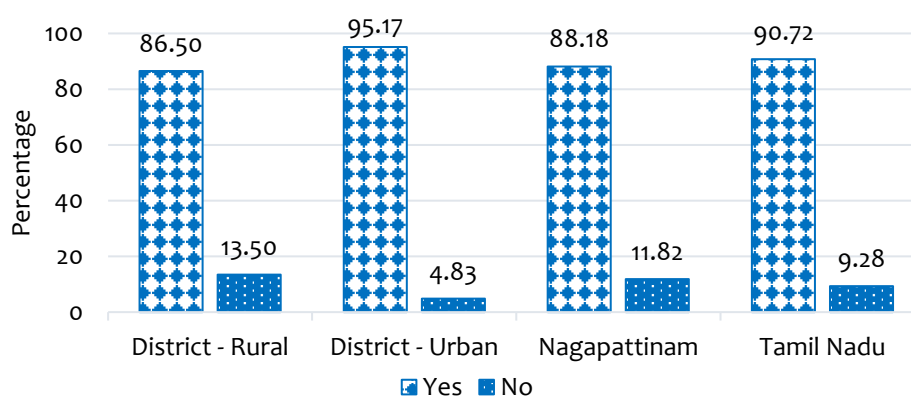
Chart 3.9 shows that 35.95 percent of the households in Nagapattinam district owned at least one agricultural, allied agricultural or fishing asset. This was higher than the state

estimate of 20.92 percent and is reflective of the rural nature of the district. The ownership of such assets was higher in rural areas than urban areas. The ownership pattern was higher in both rural and urban areas of the district compared to the state rural estimate of 32.69 percent and state urban estimates of 7.67 percent (TNHPS-PBS, 2021).

### 3.3.3 Presence of Household Assets

Chart 3.10 shows the percentage of households in Nagapattinam district that owned at least one household asset. Household assets include Air Conditioner (AC), refrigerator, two-wheeler, four-wheeler, and mobile phones. The state PBS estimates found that the combination of mobile phone and two-wheeler were the predominantly owned assets in rural areas whereas a combination of refrigerator, two-wheeler and mobile phone was largely owned in the urban areas.

Chart 3.10 Ownership of at least one Household Asset – Area-wise



The percentage of households owning at least one household asset in Nagapattinam district was lower than the state PBS estimate of 90.72 percent. Within the district, the urban areas had a higher percentage of households owning at least one household asset than the rural areas.

Table 3.15 Presence of at least one Household Asset - Social Group-wise Percentages

Presence of Household Asset	Social Group						
	SC	ST	BC	MBC	DNC	General	Nagapattinam
Yes	80.65	100.00	94.36	90.71	85.32	100.00	88.18
No	19.35	0.00	5.64	9.29	14.68	0.00	11.82
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

The social group-wise ownership of household assets in Nagapattinam district is given in Table 3.15. The PBS estimates show that while all General category households owned at

least one household asset, only 80.65 percent of the SC households in the district owned any such asset. This means that almost 20 percent of SC households did not even own a mobile phone. The results for ST and DNC categories must be interpreted in the context of their sample size, as discussed in Section 3.1.

### 3.3.4 Possession of Ration Card

Possession of a ration card can be treated as a determinant of socio-economic status at the household level. It plays a vital role in inclusion—or exclusion—of households from the government welfare schemes such as the availability of subsidized items from the Public Distribution System and subsidized LPG connection. The percentage of households that possessed a ration card in rural and urban areas of Nagapattinam district are given in Chart 3.11.

Chart 3.11 Possession of Ration Card – Area-wise

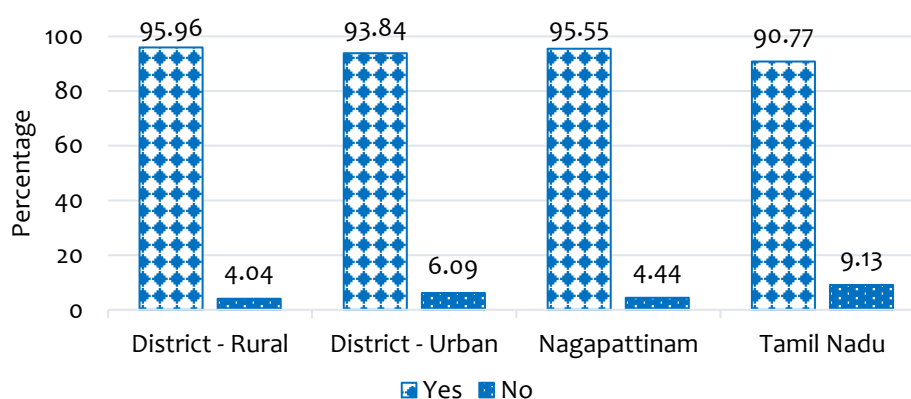


Chart 3.11 shows that the percentage of households in the district that possessed a ration card was higher than the state estimate. Both urban and rural households indicated a high level of possession of ration cards.

Table 3.16 Possession of Ration Card at the Household Level - Social Group-wise Percentages

Possession of Ration Card	Social Group						
	SC	ST	BC	MBC	DNC	General	Nagapattinam
Yes	95.11	86.69	95.25	96.60	100.00	92.54	95.55
No	4.89	13.31	4.75	3.40	0.00	4.45	4.44
DK/RF	0.00	0.00	0.00	0.00	0.00	3.01	0.01
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

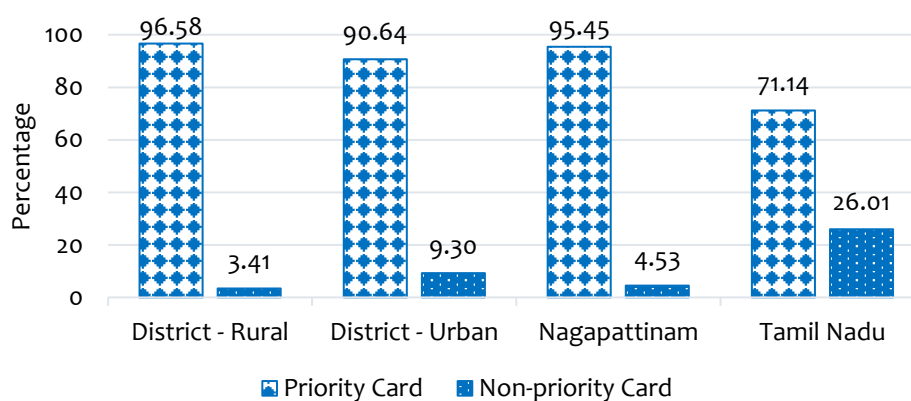
Social group-wise estimates on the possession of ration card at the household level is shown in Table 3.16. More than 90 percent of households belonging to all social groups—

except ST—possessed ration cards in the district. Possession of ration card was high among the General category households in the district as compared to the state PBS estimates of 85.21 percent (TNHPS-PBS, 2021). The results for ST and DNC categories must be interpreted in the context of their sample size, as discussed in Section 3.1.

### 3.3.5 Type of Ration Card

According to the National Food Security Act (NFSA) 2013, ration cards are broadly categorized into Priority Households (PHH) and Non-Priority Households (NPHH). Households with priority ration card are the target group of various social welfare schemes such as Antyodaya Anna Yojana (AAY) among others.

Chart 3.12 Type of Ration Card at the Household Level – Area-wise



The percentage of households possessing priority ration cards in the district was much higher compared to the state level estimate. A higher percentage of rural and urban households in the district possessed priority ration cards compared to their respective state rural estimate of 76.44 percent and state urban of 64.81 percent (TNHPS-PBS, 2021).

## 3.4 Household Income

### 3.4.1 Annual Household Income from Various Sources in the year 2017-2018

In this section, we analyze the annual income of households in Nagapattinam district from various sources in the financial year 2017-2018. The sources of income include income earned from agriculture, allied agriculture, salaried work, self-employed, wage labour and other sources. The category ‘other sources’ consists of income sources such as pension, remittances, investments, and other mixed categories. Table 3.17 shows the mean income of households that depended on various sources of income in Nagapattinam district.



*Table 3.17 Mean Annual Household Income from Different Sources in the FY 2017-2018 (INR)*

Source	District - Rural	District - Urban	Nagapattinam	Tamil Nadu
Agriculture	38,206	72,084	40,261	61,830
Allied Agriculture	13,005	41,212	14,774	38,576
Salaried	1,31,105	2,47,880	1,68,648	2,29,857
Self Employed	77,716	1,39,899	1,01,725	1,47,403
Wage Labour	38,786	50,148	40,366	47,734
Other Sources	61,008	1,28,379	76,287	97,646
<b>Income from all Sources</b>	<b>71,222</b>	<b>1,61,082</b>	<b>88,993</b>	<b>1,42,752</b>

The mean annual household income of the district was 37.66 percent lesser than the state PBS estimate of ₹1,42,752. The mean household income was higher among the households with salaried income and lower among the households that depended on allied agriculture. Among the then 32 districts, Nagapattinam was at twenty ninth place in terms of this indicator (TNHPS-PBS, 2021).

In rural areas of Nagapattinam district, the mean household income was ₹71,222, which was lower than the state rural PBS estimate of ₹92,765 (TNHPS-PBS, 2021). Agriculture was predominant in Nagapattinam, and the mean annual household income was low probably due to high number of marginal landholders, high percentage of casual labour in agriculture and drought during the previous years. The mean household income was higher among the households who depended on salaried income. Lower mean income was reported among the households that engaged in allied agricultural activities.

In urban areas, the mean household income was ₹1,61,082, which was lower than the state urban estimate of ₹1,99,629 (TNHPS-PBS, 2021). The mean household income was higher among the households who depended on salaried income. Again, lower mean income was reported among the households that engaged in allied agricultural activities.

### *3.4.2 Income Inequality in Nagapattinam District*

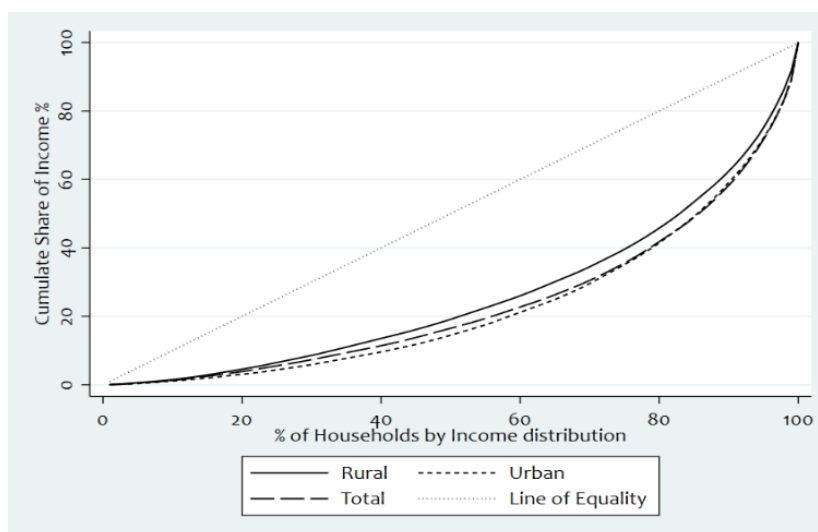
The Gini coefficient measures inequality levels in income or wealth where the coefficient value of 0 denotes perfect equality and 1 denotes perfect inequality (across households). The income inequality in Nagapattinam district (0.528) was lower than the state estimate (0.563)<sup>5</sup>. Income inequality across households in urban areas of the district was higher than its rural areas.

<sup>5</sup> Other studies have estimated the Gini coefficient for Tamil Nadu, for instance - Chandrasekhar et al. (2021) estimated the Gini coefficient of income inequality for Tamil Nadu as 0.378 in 2018-19 using data from the Periodic Labour Force Survey (PLFS) (2018-19).

Table 3.18 Gini Coefficient of Income Inequality- Area-wise

Area	Gini Coefficient
District - Rural	0.480
District - Urban	0.544
Nagapattinam	0.528
<b>Tamil Nadu</b>	<b>0.563</b>

Chart 3.13 Lorenz Curve and Income Inequality



The Lorenz curve is a graphical representation of inequality in the distribution of income or wealth of households. Chart 3.13 shows that, in Nagapattinam, the bottom 60 percent of the households held only around 20 percent of the total income; the bottom 80 percent of households held just about 40 percent of the total income and the top 20 percent of households held close to 60 percent of the total income. Both Chart 3.13 and Table 3.18 show that income inequality was higher in urban areas compared to the rural areas of the district.

### 3.4.3 Households' Expectation of Change in their Income in the Next 5 Years

Besides the present income of the households in the year 2017-18, the PBS also investigated the households' expectation of change in income in the following five years. The expectation of a household head on the change in the household's income in the future depends highly on various factors such as probability of a household member's entry (or exit) to (or from) the labour market, expected possession of financial and non-financial assets and so on. These variables can capture the level of optimism—or pessimism—that each household has about their future economic status.

*Table 3.19 Households' Expectation of Change in Income in the Next 5 Years – Area-wise Percentages*

Expectation of Change in Household Income	Area Type			
	District - Rural	District - Urban	Nagapattinam	Tamil Nadu
Higher	41.71	58.31	44.92	50.06
Lower	13.55	9.17	12.71	8.17
About the same	43.09	30.97	40.74	31.66
DK/RF	1.64	1.55	1.63	10.11
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

While more than half the households in urban areas of the district expected their household income to increase in the coming five years, the percentage of households expecting a decline in their future income was higher in rural areas compared to urban areas. A majority of rural households expected their future income to remain the same.

*Table 3.20 Households' Expectation of Change in Income in the Next 5 Years - Social Group-wise Percentages*

Expectation of Change in Household Income	Social Group						
	SC	ST	BC	MBC	DNC	General	Nagapattinam
Higher	38.55	66.53	53.42	44.09	45.13	31.60	44.92
Lower	16.89	13.31	8.91	11.20	20.71	23.15	12.71
About the same	43.62	20.16	36.25	42.02	24.42	45.26	40.74
DK/RF	0.95	0.00	1.41	2.69	9.75	0.00	1.63
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

Contrary to most other districts, the percentage of General category households expecting an increase in future income was lower than the other social groups in the district. More than half the BC households expected a higher future income whereas a high proportion of SC households expected their future income to remain the same. The results for ST and DNC categories must be interpreted in the context of their sample size, as discussed in Section 3.1.

### 3.5 Basic Infrastructure

In this section, we discuss the PBS estimates for variables such as ownership and type of houses, electrification status, drinking water and sanitation.

### 3.5.1 House Ownership Status

The area-wise percentages of households that live in their own house or stay at a rented house are given below.

Chart 3.14 Ownership Status of the Households' Dwelling/House – Area-wise

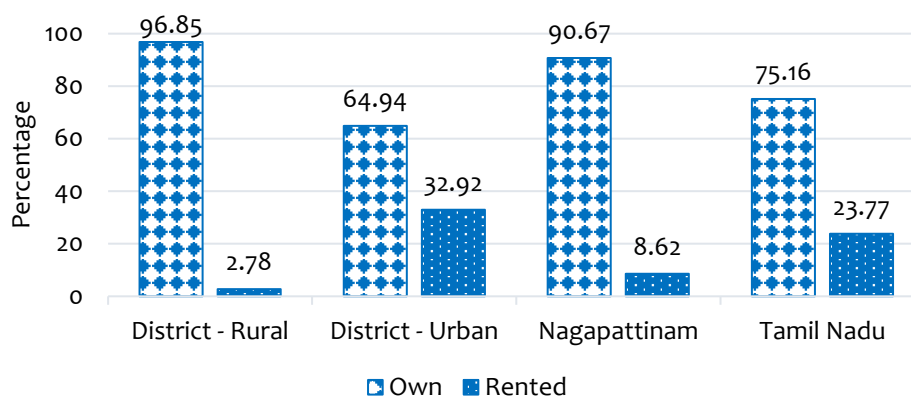


Chart 3.14 shows that the proportion of households living in their own house in the district was much higher than the state level estimate. Nagapattinam district was ranked third among the then 32 districts of Tamil Nadu in terms of percentage of households living in their own house (TNHPS-PBS, 2021). While most of the households in rural areas lived in their own house, a large proportion of urban households were relying on rented houses for their stay. Only less than one percent of households were living in other houses such as relative's houses, encroachments etc. This data does not capture the ownership of a house in a different geographical location.

Table 3.21 Ownership Status of the Households' Dwelling/House- Social Group-wise Percentages

Ownership Status	Social Group						
	SC	ST	BC	MBC	DNC	General	Nagapattinam
Own	97.03	65.01	82.29	91.96	100.00	82.99	90.67
Rented	2.21	21.69	16.76	7.73	0.00	17.01	8.62
Others	0.72	13.31	0.96	0.32	0.00	0.00	0.69
DK/RF	0.04	0.00	0.00	0.00	0.00	0.00	0.02
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

Table 3.21 shows that more than 80 percent of SC, MBC, BC, and General category households in the district lived in their own house. The percentage of General category households living in their own houses was higher than the state estimates of 62.55 percent (TNHPS-PBS, 2021). The results for ST and DNC categories must be interpreted in the context of their sample size, as discussed in Section 3.1.

A detailed analysis of ownership of houses showed that out of the 90.67 percent households that lived in an own house in Nagapattinam district, 19.94 percent of houses were built under a government scheme, which was higher than the state PBS estimate of 14.12 percent (TNHPS-PBS, 2021). The social group-wise analysis of this parameter is given below.

*Table 3.22 House Constructed Under a Government Scheme - Social Group-wise Percentages*

House Constructed Under Government Scheme	Social Group						
	SC	ST	BC	MBC	DNC	General	Nagapattinam
Yes	31.32	7.88	10.13	14.67	0.00	0.00	19.94
No	68.66	92.12	89.87	85.24	100.00	100.00	80.03
DK/RF	0.02	0.00	0.00	0.08	0.00	0.00	0.03
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

In Nagapattinam district, SC households had the highest percentage of houses built under a government scheme compared to other social groups. None of the twenty-six house-owning General category households surveyed in the district had built a house under a government scheme. The results for ST and DNC categories must be interpreted in the context of their sample size, as discussed in Section 3.1.

### 3.5.2 House Type

Based on the material used for wall/roof or the quality of the house, the PBS classifies a house as kutccha, pucca or semi-pucca. The percentage of houses that come under each type are given below.

*Chart 3.15 Type of House – Area-wise*

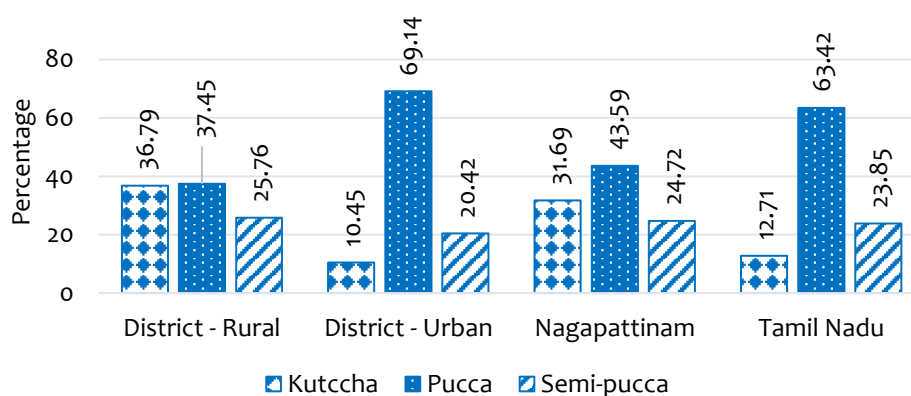


Chart 3.15 shows that around 44 percent of households in Nagapattinam district were living in pucca houses, which was much lower than the state estimate of 63.42 percent. The percentage of urban households living in pucca houses in the district was much higher

than rural households, but lower than the state urban estimate of 75.22 percent (TNHPS-PBS, 2021). The percentage of people living in semi-pucca houses was lower than kutccha houses in the district.

### 3.5.3 Primary Drinking Water Source

In this section, we discuss the PBS findings on the primary source of drinking water of the households in Nagapattinam district. The primary sources<sup>6</sup> of water: bottled water, piped water into dwelling, piped water to yard or plot, public tap or standpipe and tube well or borehole. Other water sources include protected well, unprotected well, rainwater collection and surface water (tank/pond/river/dam).

Chart 3.16 Primary Source of Drinking Water of Households – Area-wise

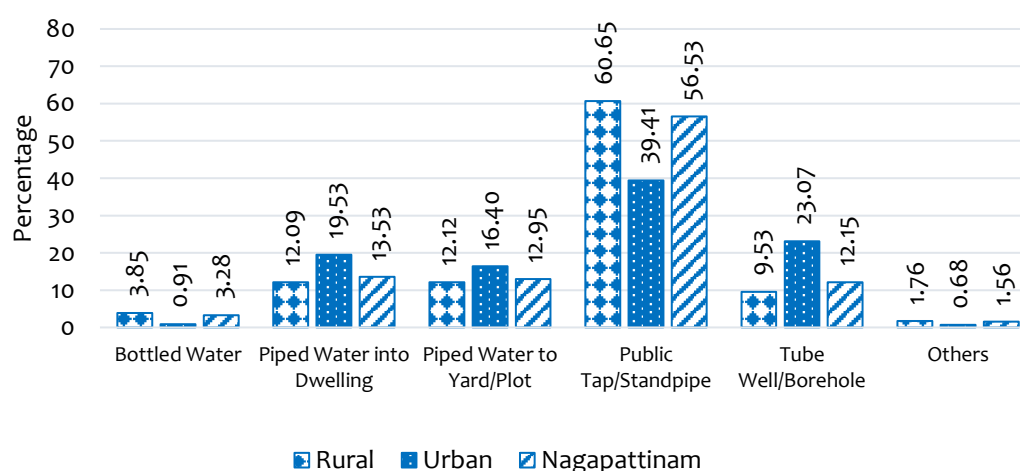


Chart 3.16 shows that 56.53 percent of households in Nagapattinam district were using public tap or standpipe as their primary source of drinking water, which was much higher than the state estimate of 32.84 percent (TNHPS-PBS, 2021). While the state PBS estimates show that piped water into the dwelling in urban areas—about 37.02 percent—and public tap/standpipe in rural areas—about 44.51 percent—were the primary water sources of households (TNHPS-PBS, 2021), in Nagapattinam district, public tap/standpipe were predominantly used both in urban and rural households.

### 3.5.4 Electricity

Tamil Nadu had witnessed mass electrification during the last decade. A comparison of households with an electricity connection between Census (2011) and the state PBS estimates (TNHPS-PBS, 2021) showed that the state was close to achieving complete

<sup>6</sup> Primary source - Water that is availed for the greater part of the year

electrification in case of urban areas. The electrification status had improved in rural areas as well.

Chart 3.17 shows the electrification status of households in Nagapattinam district, along with a comparison to the electrification status during Census (2011).

*Chart 3.17 Comparison of Households with Electricity between Census (2011) and PBS (2018)*

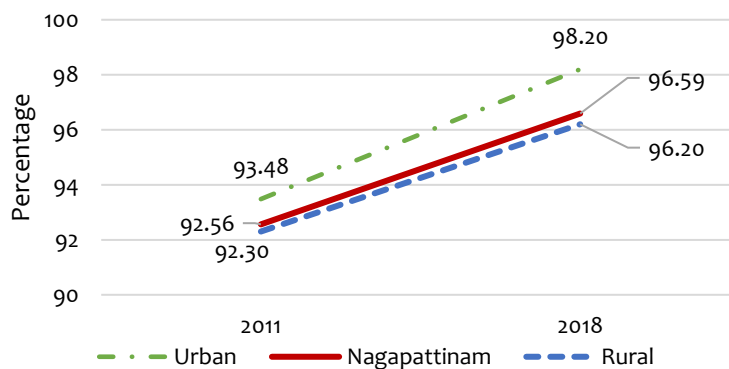
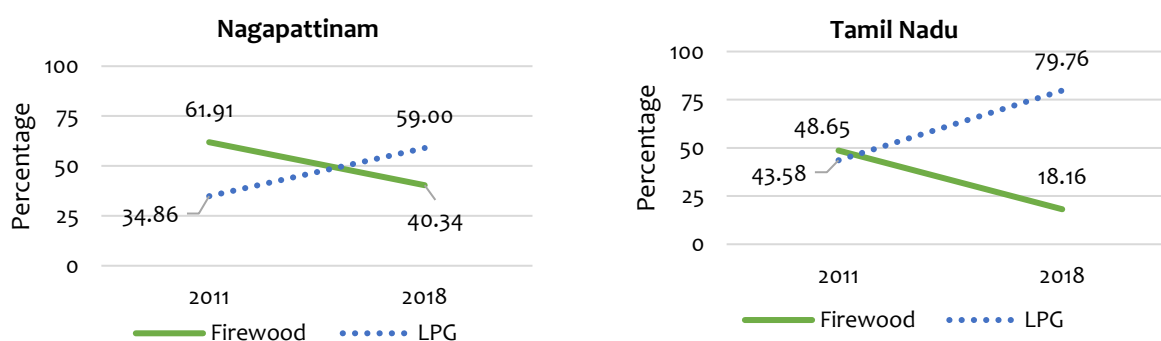


Chart 3.17 shows increase in electrification status in both rural and urban areas of Nagapattinam district during the period 2011 to 2018. The rate of growth of households with electricity was higher in urban areas compared to the rural areas. The electrification status in the district—about 96.59 percent—was slightly lower than the state estimate of 97.6 percent (TNHPS-PBS, 2021).

### 3.5.5 Primary Cooking Fuel

A comparison of Census (2011) and the PBS estimates on the primary cooking fuel<sup>7</sup> used by the households in the district is given in Chart 3.18 and Chart 3.19.

*Chart 3.18 Comparison of Primary Fuel used for Cooking - District and State*



<sup>7</sup> Primary Cooking Fuel: Fuel that is used for the greater part of the year

Chart 3.18 shows that, although the use of LPG as the primary cooking fuel in Nagapattinam district had increased tremendously from 2011 (Census 2011) to 2018, firewood use was still quite significant in the district—about 40.34 percent—in 2018. Compared to other districts of Tamil Nadu, Nagapattinam district was ranked twenty-ninth in terms of LPG use and ranked third in terms of firewood use, preceded by Pudukkottai and Ariyalur districts (TNHPS-PBS, 2021).

Chart 3.19 Comparison of Primary Fuel used for Cooking – Rural and Urban

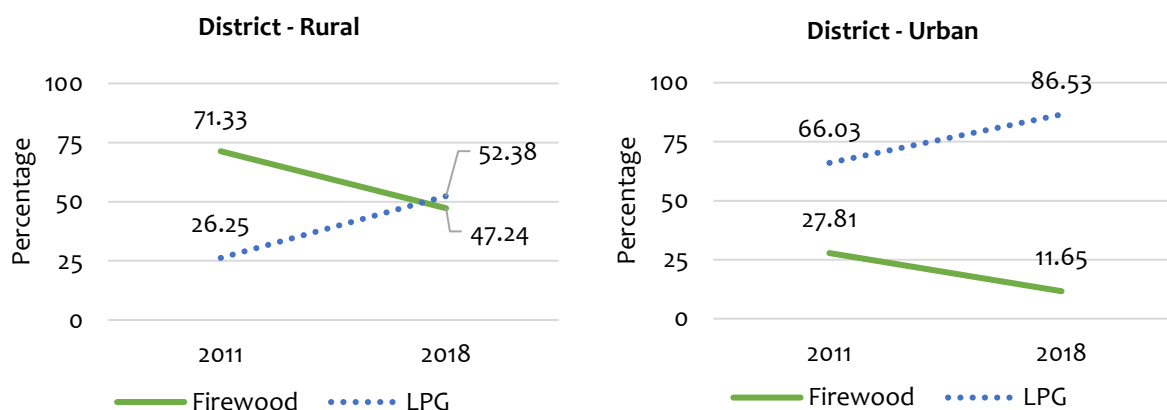


Chart 3.19 shows that the predominant fuel in rural areas in the district had changed drastically from firewood to LPG in the period 2011-18, though firewood use was still quite high. LPG uptake had increased further in urban areas, and that of firewood had dropped to a smaller amount during the same period.

Table 3.23 shows the use of various fuels for cooking among households of different social groups in Nagapattinam district.

Table 3.23 Primary Cooking Fuel in Household - Social Group-wise Percentages

Primary Cooking Fuel	Social Group						
	SC	ST	BC	MBC	DNC	General	Nagapattinam
Firewood	59.96	18.43	23.03	35.03	57.39	0.00	40.34
LPG	39.32	74.91	76.47	64.25	42.61	100.00	59.00
Kerosene	0.29	6.65	0.23	0.49	0.00	0.00	0.34
Others	0.23	0.00	0.23	0.07	0.00	0.00	0.19
DK/RF	0.20	0.00	0.04	0.16	0.00	0.00	0.14
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

\*Others Include Electricity, Gobar Gas, Solar Energy, etc.

Table 3.23 shows a striking social group-wise pattern in the choice of main cooking fuel. Almost 60 percent of SC households in the district still used firewood as their primary

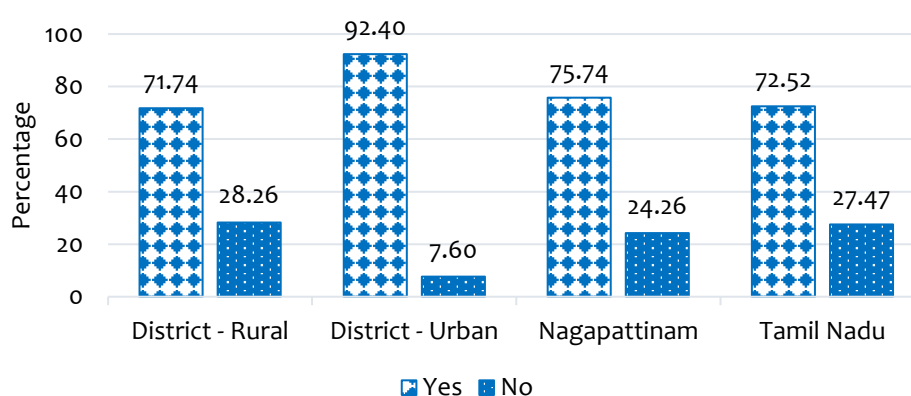


cooking fuel, which was significantly higher than the state estimate for this social group at 27.6 percent (TNHPS-PBS, 2021). LPG usage was high amongst the General and BC categories. The results for ST and DNC categories must be interpreted in the context of their sample size, as discussed in Section 3.1.

### 3.5.6 Sanitation

The PBS estimates on households with and without latrine in the district is given in Chart 3.20.

Chart 3.20 Presence of Latrine within the Premises of the Household – Area-wise



The percentage of households with latrine within the house premises had increased drastically from 39.54 percent in 2011 (Census, 2011) to 75.74 percent in 2018. As per the state PBS estimates, Nagapattinam district was ranked thirteenth among the 32 districts in terms of this indicator (TNHPS-PBS, 2021). The percentage of households equipped with latrine facilities in the district was higher than the state level estimate. A greater percentage of urban households were equipped with latrine facilities compared to rural households. It is pertinent to note that almost a quarter of the households in the district did not have access to a latrine within their house premises.

Table 3.24 Presence of Latrine within the premises of the Household - Social Group-wise Percentages

Latrine within House Premises	Social Group						
	SC	ST	BC	MBC	DNC	General	Nagapattinam
Yes	61.50	100	89.06	78.93	92.66	100.00	75.74
No	38.50	0.00	10.94	21.07	7.34	0.00	24.26
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

Table 3.24 brings to light the significant variation in latrine presence within the house premises across various social groups in the district. This parameter was significantly lower for SC households compared to other social groups. Yet, the percentages of SC, BC, and MBC households with latrine access in the district were higher than their respective state level estimates of 52.2 percent, 84.5 percent and 67.5 percent respectively (TNHPS-PBS, 2021). All the sixteen ST households surveyed in the district had a latrine within their house premises. The results for ST and DNC categories must be interpreted in the context of their sample size, as discussed in Section 3.1.

Chart 3.21 Presence of Latrine in the Premises of Different Types of Houses – Area-wise

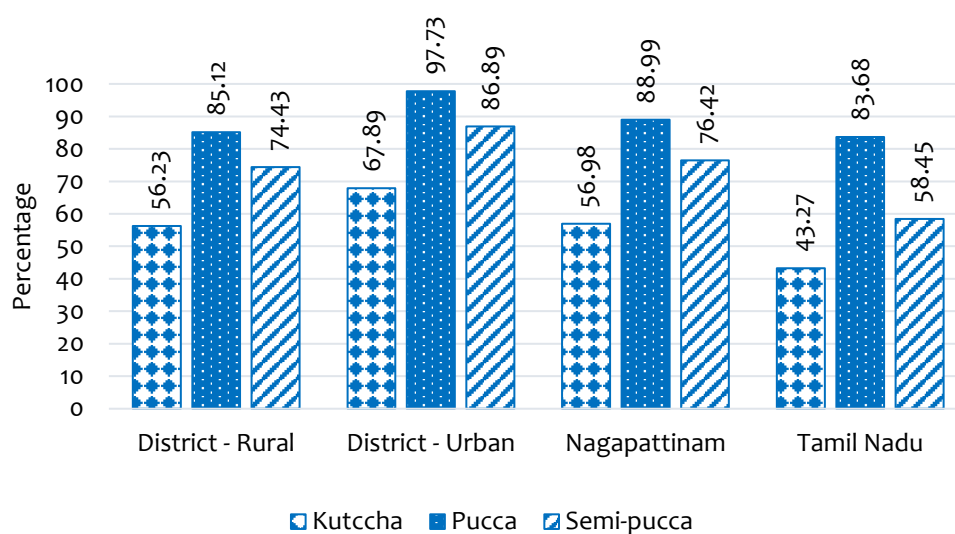


Chart 3.21 shows that the percentage of pucca houses with latrine facilities was higher than for semi-pucca and kutccha houses in the district. The percentages of latrine facilities in kutccha, pucca and semi-pucca houses in the district were higher than their respective state estimates, and those in the urban areas were higher than rural areas in the district.

The percentage of total households in the district following open defecation had declined from 57.83 percent in 2011 (Census, 2011) to 21.06 percent in 2018. As per the state PBS report, Nagapattinam district was ranked twentieth in the state in terms of the percentage of total households following open defecation.

The alternative practices of defecation followed by 24.26 percent of the district's households (see Chart 3.20) that did not have a latrine within the premises of the house is shown in Chart 3.22.

Chart 3.22 Alternate Practices of Defecation by the Households without Latrine – Area-wise

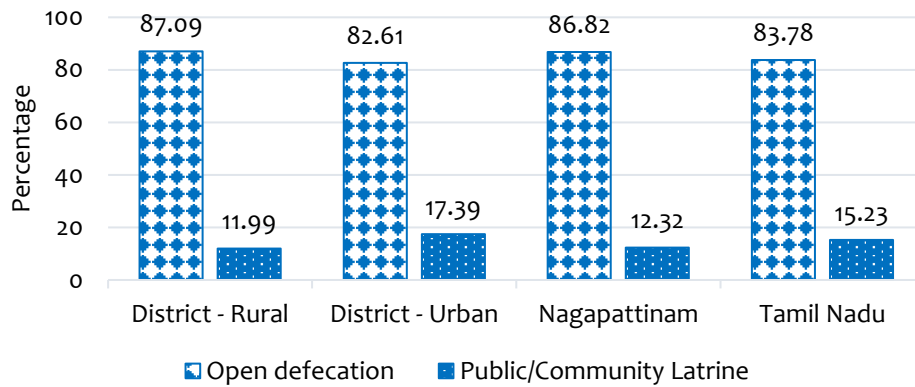


Chart 3.22 shows that 86.82 percent of households without latrine within the premises of the house in Nagapattinam district were following open defecation, which was higher than the state level estimate. The practice of open defecation by these households was higher in rural areas compared to urban areas of the district.

## 4. Conclusion and Recommendations

The Pre-Baseline Survey (PBS) 2018-19 of Nagapattinam district was conducted from the sample of 6,517 households in the district who were willing to participate in the survey. The survey focused on five major indicators: i) demographic indicators, ii) development indicators, iii) socio-economic indicators, iv) household income and v) basic infrastructure.

Nagapattinam district was among the top ten districts in the state in terms of literacy rate. The percentage of households owning agricultural land in the district was higher than the state estimates. The ownership pattern of having at least one agricultural, allied agricultural and fishing assets was higher in the district compared to the state estimates. Income inequality as measured by the Gini coefficient was lower than the state estimate. The district was ranked third among all districts of Tamil Nadu in terms of the percentage of households living in their own houses.

Despite the high literacy rate, unemployment is much higher in the district than the state estimates, majority of the employed population are casual labourers in agriculture. Policies to diversify the labour market in the district, by generating more white-collar jobs might reduce unemployment and increase the income of the households. Similarly, in employment, female work participation continues to be significantly lower than that for males. A social group-wise pattern in work type was observed. The SC and BC population were largely employed as casual labourers in the agricultural sector, which yielded lower incomes. Policy interventions targeted at upskilling these marginalized sections may help reduce these disparities.

The mean annual household income of the district was 37.66 percent lesser than the state estimates. Among the then 32 districts, Nagapattinam was at twenty-ninth place in terms of mean annual household income. Agriculture being predominant in Nagapattinam, the mean annual household income from this sector was very low compared to other sources of income due to various reasons such as high number of marginal landholders and high percentage of casual labour in agriculture. The percentage of households possessing ration card, especially priority card, was higher in the district compared to the state estimates, probably reflecting the poor economic condition of the households in the district.

The district estimates on the percentage of households living in pucca houses were much lesser than the state estimates. Majority of the households in both rural and urban areas depended on public tap/standpipe as primary water source. Government intervention may help ensure that all households are provided with piped water into the dwelling for easier

access to quality water. Though the use of LPG as the primary cooking fuel in the district had increased between 2011 and 2018, firewood was still predominantly used in the district. The district ranked third in terms of firewood use as the primary cooking fuel. Policy intervention to ensure that all households are equipped with LPG connection might help reduce the usage of firewood as the primary cooking fuel, especially in rural areas and among SC households. Policies to increase the availability of latrine facilities at the household level, especially among SC households, might go a long way in reducing open defecation.

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**A collaborative project between  
Department of Economics and Statistics &  
Madras Institute of Development Studies**

The Tamil Nadu Household Panel Survey (TNHPS) is designed as a longitudinal survey where a set of sample households in Tamil Nadu will be surveyed at specific intervals to analyse the change in their socio-economic conditions over time. The TNHPS aims to analyse how individuals, families, communities, and society are transforming in Tamil Nadu. Understanding this transformation is important for informed policy-making and for society in today's modern world where open links with other states and countries lead to enormous movement of people, ideas, technology, capital, and goods and services. The Pre-Baseline Survey (PBS) elicited information from 2,12,282 households across different districts of Tamil Nadu on a comprehensive set of socio-economic indicators. This serves as the sampling frame for the Baseline Survey (BLS) of subsequent rounds of comprehensive surveys of 7,45,653 individuals in the state.

Based on the information collected during the PBS 2018-19, this report provides a baseline on key socio-economic and demographic indicators of the district along with brief notes on the methods and processes followed in collecting, processing and analysis of data. As the first state-level initiative for collecting comprehensive household panel data through digital data collection methods, TNHPS emerges as an important source of information for evidence-based policymaking in the state.



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