RESEARCH ARTICLE

URBAN POPULATION STATUS AND STUDIES OF NAMKKAL TOWN, USING GEOGRAPHICAL INFORMATION SYSTEM (GIS)

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ARTICLE INFO	ABSTRACT
	Urban growth in India has been very significant during the past decades. The urban population had doubled from 1901 to 1947 and it increased again six fold from independence to 2001. One of the most talked about aspects of this growth is the emergence of three agglomeration that have exceeded 14 millon inhabitants in 2007, thus belonging to the "mega cities" of the world, as defined by the united nations. The present paper studies the status of the population growth in Namkkal Town of Namkkal District, using Geographical information system. The study include the level of urbanization with industrial activities based on the population growth. In addition to the study will carry the population, sex-ratio, education, and workers in the town.

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INTRODUCTION

The level of urbanization is measured by the percentage of the population living in urban area. Bloom, Canning, and Malaney, (2000). Demographic Change and Economic Growth in Asia .An area is classified as rural or urban depending upon various criteria such as population size, density, occupation composition and civic status. During British rule in India, every municipality regardless of size, every cantonment, all civil lines not included in municipal limits, and every other collection of houses permanently inhabited by not less than 5000persons could be considered urban as long as it exhibited an urban character even when such an area was not under municipal government. This definition was carried through the 1961 Census. Since the 1961 Census, an urban area was determined based on two important criteria, namely:

(i) Statutory administration;
(ii) Certain economic and demographic indicators.

Study area

Namakkal District is a newly formed district from Salem District.

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It is functioning from 01-01-1997. It consists of 4 Taluks namely Namakkal. Rasipuram, Tiruchengode and Paramathi Velur. The district is bounded by Salem on the north, Karur on the south, Trichy and Salem on the east and Erode on the West. The area of the town is 371.03 sq.km and the population is 122326 as per the census 2011.The Geographical area of the district is 3363, 35 K.m. which lies between 11.00 and 11.360 North Latitute and 77.280 and 78.300 East Longitude. It well connected by road to the surrounding urban centers.

Namkkal town is one of the districts in Tamilnadu state. For administrative purpose, the district has been divided into 2 Revenue Divisions, 4 Taluks, 30 Revenue firkas and 454 Revenue Villages (Including group Villages). For local arrangements, the district has been divided into 5 Municipalities, 15 Panchayat Unions, 19 Town Panchayats and 331 Village Panchayats. The soils of Namakkal district can be broadly classified into 5 major soils types viz., Red Soil, Black Soil, Brown soil, Alluvial and Mixed Soil. Major part of the district covered by Red Soil. Cauvery river, which is perennial in nature, flows along the western and southern boundaries of the district. Tirumanimuttar river, which is the most important tributary of Cauvery in the district, has its origin in Manjavadi area of *Shevroy* hills in Salem district and traverses the district before its confluence with Cauvery at Nanjai Edayar village of Paramathi Taluk.
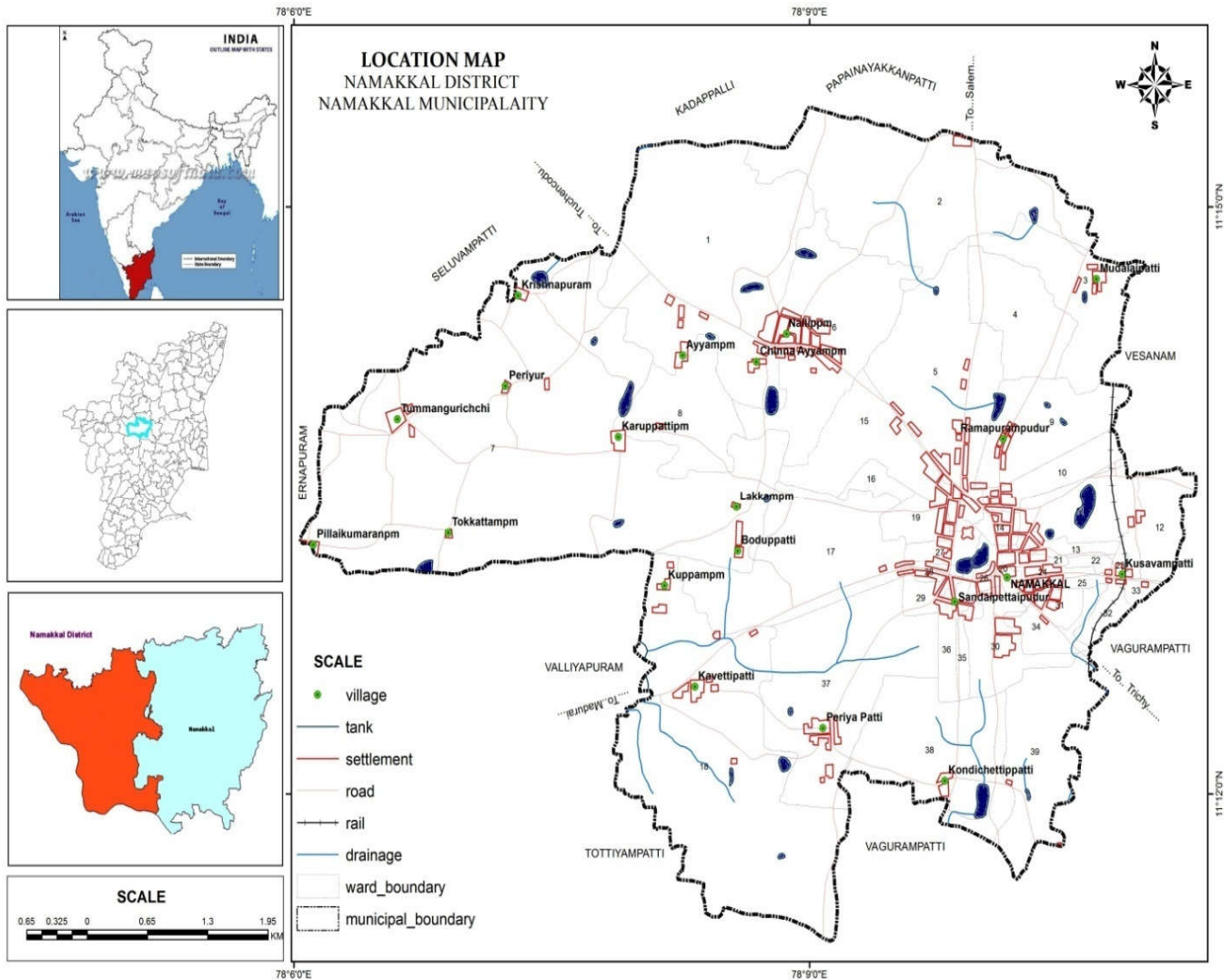
Weather cools down progressively from about the middle of June and by December, the mean daily maximum temperature drops to 30.2°C, while the mean daily minimum drops to 19.2°C and 19.6°C in January in Salem and Mettur Dam respectively. The total population of the taluk was studied in ward wise, the total wards are 39 given below the data. The important wards 35, 33, 31, 34, are the highest population showing the lowest population in the study area .The area is one of the most important for the Tamilnadu one and gradually developing urban town (Map No.1).

*To analysis of the population ratio with change variation of the urban tow*n.

MATERIALS AND METHODS

Base map with all physical and cultural details has been prepared from the topographical sheets published by the Survey of India (SOI) on 1:50,000. To study the urban demographic structure of the Namakal Town, and prepared the thematic layers like, Total population, literate, illiterate,
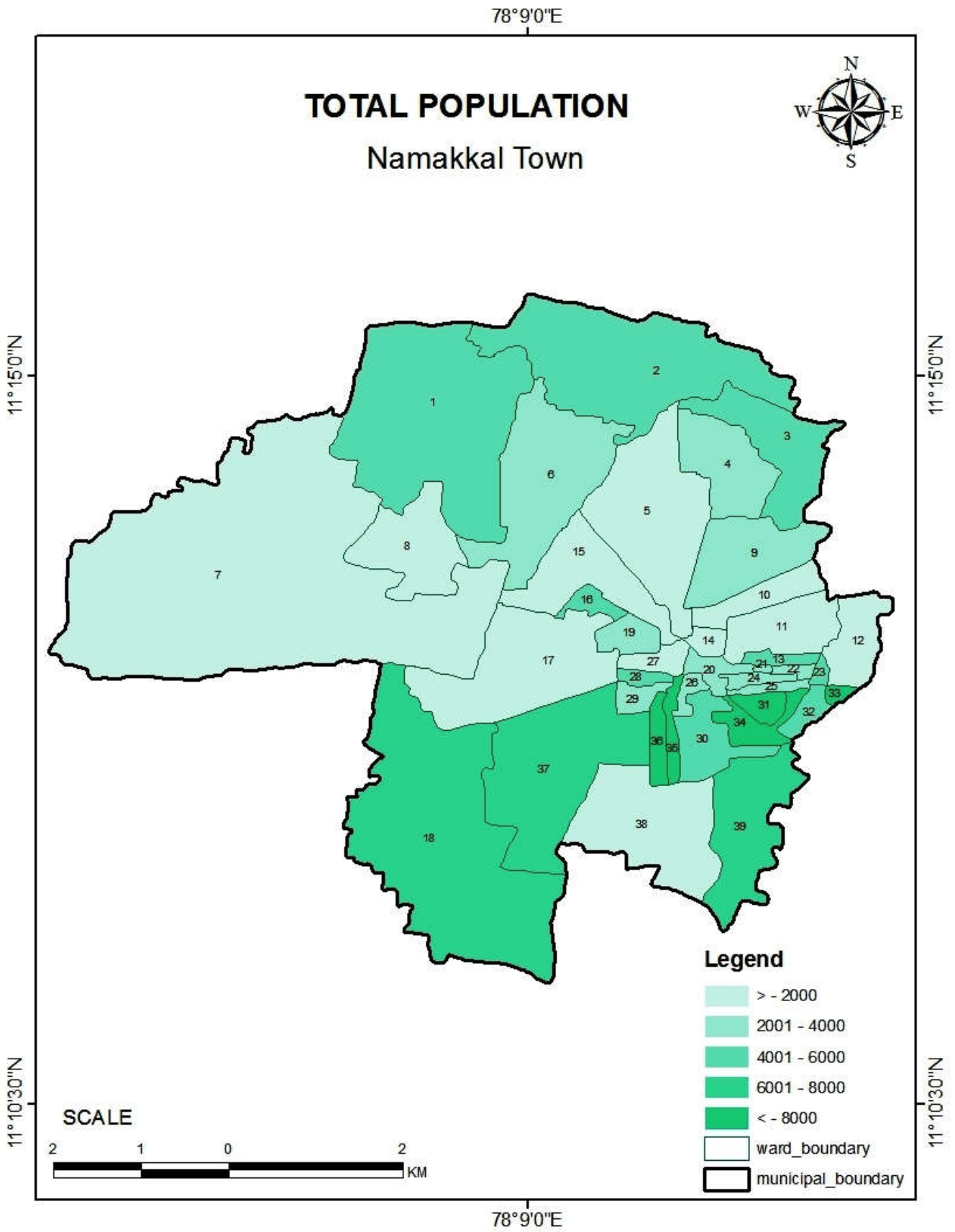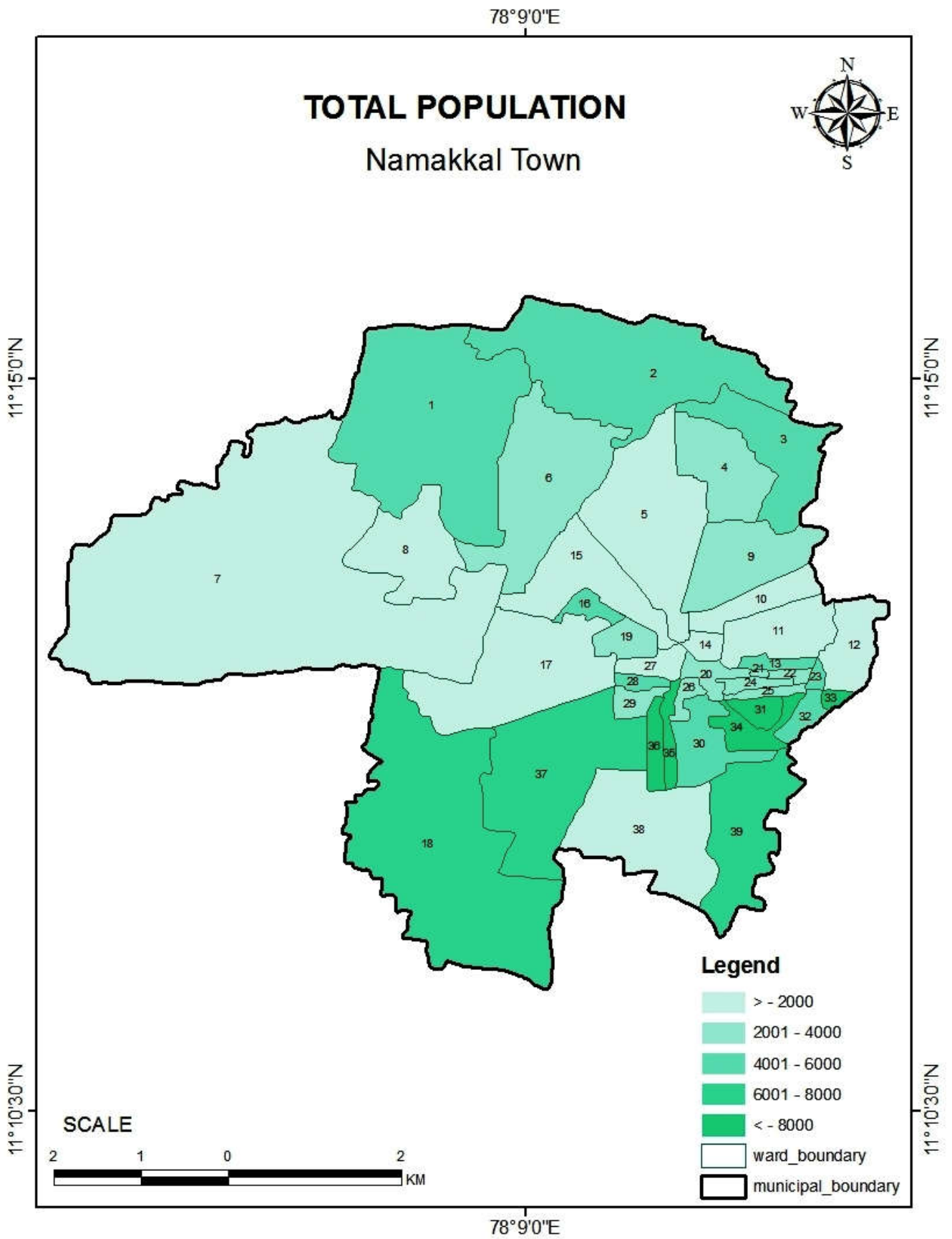

Map No.1. Study area-Namakkal Town

Objectives

Aim of the present study is to urban population studies of the Namakal Town, Tamilnadu. Using GIS. In this connection, the following objectives are,

* To bring out of urban population of the namakal Town, via population characteristic, SC/ST population, Literate, Main and marginal workers.
* Base line information and maps prepared by survey of India Toposheets (SOI) and satellite imageries used for prepared the thematic layers.

Total workers, Main workers includes Main cultivators, Agricultural labor, House hold Industry and main to other, marginal workers and non-workers. After demographic structure study, to bring the Urban Land use and infrastructure of the District, carried out the base line information of the urban area of Namakkal Town. Data entry, Calculation and Analysis. By the preparation different visual and thematic maps carried through Geographical information system and delineated all points for urban population of the area. Recommendation and suggestion for further urban development and management of the study area.

Map No. 2. Total Population in Namakkal Town

TOTAL POPULATION

Namakkal Town

Legend

- > - 2000
- 2001 – 4000
- 4001 – 6000
- 6001 – 8000
- < - 8000
- ward_boundary
- municipal_boundary

SCALE

2   1   0   2
KM

RESULTS AND DISCUSSION

Introduction

Khomiakova (2008). Spatial Analysis of Regional Divergence in India: Income and Economic Structure Perspectives. The urban population concentrated based on the availabilities of the infrastructure and their facilities with the Namakkal town. The most of the population attract to the basic amenties like better water source, drainage, system, communication, and transport, services, employment, marketing, and commercial point also to. The growth of the town is decided to the rang of population within the occupation of the employments and administrative units. Birds all, Kelley and Sinding (2001). Population Matters: Demographic Change, Economic Growth and Poverty in the Developing World . Registrar General of India (2006). Population Projections for India and the States 2001- 2026. The section was described about the population projection of India another 25 years with status of the future scenario.

Urban-Total population

The total population of the taluk was studied in ward wise, the total wards are 39 given below the data. The important wards 35, 33,31,34, are the highest population showing the lowest population in the study area. The area is one of the most important for the Tamilnadu one and gradually developing urban town. Among the wards in the study area, which is most higher population in the Namakkal town like 36, 37, 39 and the lowest population 17, 11, 12, 38, 8, 5, 10, 14. The population of the Namakkal town ranging the highest in 1.5-3 in east portion of the town, Particularly in the mean centre of the study area. The most part of the study area, SC/ST population is concentration in high, reaming area other population is occupied in the Namakkal town (Map No.2 & Fig No.1). From the population data, table 3.1 and diagram 3.1 have given the status of population in Namakkal Town. Among the 39 wards of Namakkal Town have categories, High, Medium, Low . The high population in the 35, 33, 36. Medium 20, 25, 6, Low 37, 12, 5. The most concentration of population following wards. because of the core of the town, function. CBD and other urban Land use.

SC/ST Population

The most concentration with occupied in SC population only in the Namakkal town area. The ST population is very low concentration in the town. The total population of the SC/ST in the study area. the highest ST population occupied in the 9,33,32,39,38 and the lowest population the 1,3,4,7,8,12,13. The most of the population concentration with in the mean centre of the town. The ST population high concentration 32,19, further low concentration is nil population in the Namakkal town. The status of the SC/ST population in the study area of namakkal town. The ST population showing lowest concentration in the town, can identify through the figure. The map showing the SC/ST population of the town. The population mostly occupied throughout the study area. Among the population the highest concentration N-E and S-W of the study area. Among the 39 wards of Namakkal town have categories, High, Medium, Low. The high population in the

33,38,32, medium 34,39,16, low 4, 23,28. The ST population showing lowest concentration in the Namakkal town, can identify through the figure. The population mostly occupied throughout the study area. Among the population the highest concentration N-E and S-W of the study area.

Literate/Illiterate Population

Namakkal town has an average literacy rate of 78%, higher than the national average of 60%, 10% of the population is under 6 year of age. The overall details of the educational uses in the Namakkal town in the recent decade most of the place were high concentration of the educational uses. From that maps given the where the possible location of the educational uses.

Table No 1. Total Population in Namakkal Town

Name	Total Male	Total Female	Total Population
WARD 1	1247	1255	2502
WARD 2	1532	1464	2996
WARD 3	1162	1137	2299
WARD 4	863	806	1669
WARD 5	516	504	1020
WARD 6	1062	1054	2116
WARD 7	635	690	1325
WARD 8	517	555	1072
WARD 9	799	791	1590
WARD 10	603	580	1183
WARD 11	522	519	1041
WARD 12	474	486	960
WARD 13	1320	1289	2609
WARD 14	498	543	1041
WARD 15	566	632	1198
WARD 16	1149	1215	2364
WARD 17	537	543	1080
WARD 18	2077	2211	4288
WARD 19	822	889	1711
WARD 20	1019	1023	2042
WARD 21	728	780	1508
WARD 22	1003	916	1919
WARD 23	1177	1206	2383
WARD 24	958	969	1927
WARD 25	1012	1036	2048
WARD 26	702	775	1477
WARD 27	613	641	1254
WARD 28	1197	1189	2386
WARD 29	820	856	1676
WARD 30	1236	1225	2461
WARD 31	4462	4466	8928
WARD 32	5185	5115	10300
WARD 33	5168	5188	10356
WARD 34	2515	2563	5078
WARD 35	7875	7815	15690
WARD 36	2471	2476	4947
WARD 37	490	469	959
WARD 38	4124	4004	8128
WARD 39	1448	1347	2795

The high rang of the literate is 1.5-3, above 3, Literate population upper portion with their adjoins places given in the red tone in the map. The locational aspects of the study area showing the literate and illiterate population in the Namakkal town. The next rang of the population above 85 is surrounded the previous zone in the Namakkal town. The lowest concentration of the literate population seen in the through out of the study area. The science and arts college, Engineering colleges, Schools, had given the better educations. The illiterate population in the Namakkal town was seen inner portion and boundaries of the town. Male literacy is very low

of the town, Female literacy high. The Fig No.1 showing the overall details of the educational uses in the town. high 35, 32, 33, medium 7,10,17, low 37,12,14.
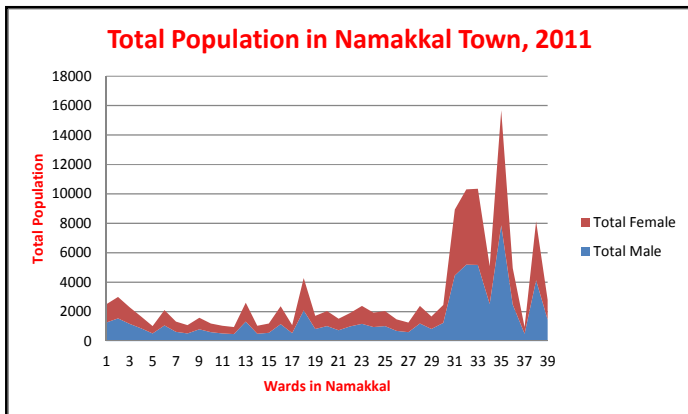

Fig. No 1. Total Population in Namakkal Town

Total Workers

The total workers in the town as per census 2011 are agricultural, agricultural Labor and Industrial households. The among the total workers main and marginal workers like cultivators, agricultural Labor and house hold the workers constitute about 47.56% of the population. The maximum share (55%) of the workforce is from the tertiary sector and minimum share of the workforce is the primary sector, which accounts to about 40%. Secondary sector is about 15% and forms the second major occupation of the town is in a decline trend. The female workers are very high of the Namakkal town, male worker low of the area. The worker high of wards in 32, 33, 35, medium level of the wards 3, 23, 28, low level workers in wards 5, 11, 17.

Main Cultivators

The Main cultivators are activities of agricultural in owned the land with potential activities of the food crops. From that among the wards 1, 22, 31 to 36 is the moderate cultivators and 37 to 39 is high concentration of the major cultivators of the Namakkal town. The main cultivator's population data, table 3.7 have given the status of population in Namakkal town. the male main cultivators in very high, Female main cultivators in low. the overall high main cultivators wards in 39, 38, 36, medium level wards in 31, 33, 35, low level wards in 7, 30, 28.

Main Agricultural Workers

The main agricultural labours in the town ward 31 to 39 are mainly people who have working in the agricultural and other allied activities. The remaining the wards are concentrated slightly in the about said activities. The male agricultural workers are very high, female workers low. The overall Namakkal town wards in high 38, 36, 39, medium workers wards in 31, 32, 33, low level wards in 5, 23, 24.

Main House Hold Workers

Only the following wards are randomly distributed the house hold workers in town - 3, 4, 6, 17, 18, 22, 31, 32, 33, 34, 35,

36, 37, 38. From the town mainly the industrial activities and some place the small cottage industries. The overall house hold workers is low, the male workers very low, female workers is high in the town. The Namakkal town wards in high 35, 33, medium level wards in 10, 23, 39, low level wards in 8, 20, 12.

Marginal Workers

In general the marginal workers in the study area treated as the partially the activities of the allied with time of the available works. Marginal workers population data, table 3.10 have given the status of population in Namakkal town. the female workers in high, male workers in low. the overall Namakkal town is high. High level wards in 33, 39, 35, medium 30, 34, 10, low 37, 11, 22.

Marginal Cultivators

The ward 33 only the major cultivators in the food and other allied crops . The cultivators in female high, male low and the overall population in Namakkal town is high. high level wards in 33, 39, medium level wards in 4, 31, low level wards in 34, 32, 30.

Marginal Agricultural Workers

The wards 33, 38, 39 only the major marginal agricultural workers in the town. The workers in over all very low. The male workers in low, female workers in high. The Namakkal town wards high in 39, 38, 33, medium level wards in 31, 35, 36, low level wards in 2, 19, 29.

Marginal House Hold Workers

The household workers in female are very high, male low. The overall population in high wards in, 12, 10, 39, medium level wards in 38, 33, low level wards in 32, 25, 34.

Conclusion

The urban population of the Namakkal town distributed scatterely in and around of the study area with industrial activities and other allied activities. Among the population categories The gradual growth of the population is based on the education, Industrial activities and allied workers. The recent status of the urban was rapidly developed with population concentration in Namakkal- Trichy by-pass, Namakkal-Salem by-pass, Namakkal- Karur by-pass were mainly concentrated many more residential, commercial and educational uses. The high concentrated many more of the uses only the residential urban zone along the parallel road.

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