Chapter - III

Profile of the study area
CHAPTER - III

PROFILE OF THE STUDY AREA

3.1 PROFILE OF THE STUDY AREA

Thanjavur being the foremost district of the cauvery delta occupies an important position in the agricultural map of Tamil Nadu state. Since its formation, the district is called as the rice bowl of Tamil Nadu. It was bifurcated and a new district named Nagapattinam was formed during 1993. Nagapattinam district was again bifurcated into Nagapattinam and Thiruvarur districts during 1997. Thus, the erstwhile district of Thanjavur had been trifurcated into Thanjavur, Nagapattinam and Thiruvarur districts. Thanjavur district stands unique from time immemorial for agricultural activities and is rightly acclaimed as the Granary of the India lying in the deltaic region of the famous river Cauvery and criss-crossed by lengthy network of irrigation canals. This coastal district abounds in green paddy fields, tall coconut groves, vast gardens of and plantain trees and other verdant vegetation. Various testimonials available in the ancient Tamil literature referring to the Cauvery as possessing the sanctity of the Ganges in conformity with the and mythological stories attributed to its divine origin, rightly point out why the river is popularly called the 'Mother Cauvery' and its evident from 'Kaviri-Thala-Puranam'. The river has also been named
'Ponni' because it is yielding 'pon' -Gold in the form of paddy. That is said with pride that every iota of the earth of Thanjavur is equal to an of gold. The tillers in Tamil literature have been rightly called as 'Kauvirippudhalvars', the sons of the Cauvery, as they alone are worthy of title for the rich production of golden grains in this fertile soil.

It is no wonder therefore that at the very threshold of the district itself, one can feel the distinguished green vegetation and call Thanjavur as “the green mansion”, of the South. With the river Cauvery irrigating the district, the cropping pattern followed was Paddy-Paddy-Rice fallow pulses/cotton/gingelly. The economy of the district is, therefore, primarily agrarian in nature with very few industrial units.

Thanjavur is one of the thirteen coastal districts of Tamil Nadu in the production of marine fish which accounts for about 5 per cent of the total marine fish catch in the State. The district is famous for its exquisite ancient handicrafts-making of bronze icons, Thanjavur art plates, bell-metal castings, bowls, and napkin and powder boxes of metal with beautiful and artistic in-laying and engraving work of motifs well known as "Tanjore swami work". It is equally well-known for pith-work, ornamental fans, mats and making of musical instruments out of jackwood. It is also a flourishing center of handloom silk and cotton. Thanjavur attained prominence under the Chola rulers who were paramount in South India during 9th to 12th centuries. They were not
excellent rulers but also mighty builders, who erected a large number of exquisite temples in their empire, some of which constitute the finest specimens of architecture. Hence the district stands distinguished in the even in its large number of temples, whose legends extend deep into early historic times. Many of these temples reflect the power, genius and architectural grandeur of their authors displaying the unique and proficiency in sculpture, painting and wood carving. Art gallery the great Saraswathi Mahal library, the 'Sangeetha Mahal' (hall of music), the of classical music and dance known as 'Bharathanatyam' and the of grand annual music festival at Thiruviyaru, in honour of the great Thiagaraja, all bear testimony to the cultural heritage.

The district can be divided into two distinct regions viz., the deltaic region, the upland area or non-deltaic region. The deltaic region covers the whole northern and eastern portions of the district where the Cauvery with its wide network of branches irrigate more than half of the district. It comprises the whole of Kumbakonam taluk and parts of Thanjavur, Papanasam taluks. The rest of the southern and western areas of the district are non-deltaic or upland region. A good portion of upland regions which was dry has now been brought under irrigation with the help of Grand Anaicut canal, fed by the Cauvery-Mettur Project and by extension of the Vadavar river. Non-deltaic region is also devoid of hills and slopes gradually seawards.
Thanjavur is the home to famous Brihadeeswara Temple, one of UNESCO World Heritage Sites. Thanjavur is famous for the Brihadishwara Temple (or Brihadeeswara temple) built by Raja Raja Cholan during the 11th century. The Brihadishwara Temple, also known as the Big Temple, is one of UNESCO World Heritage Sites. The temple is enclosed in two courts, surmounted by a lofty tower and including the exquisitely decorated shrine of Murugan. Among the other historic buildings is the Vijayanagara fort, which contains a palace that was expanded by the Maratha king Serfoji II with an armoury, a Bell Tower and the Saraswathi Mahal Library, which contains over 30,000 Indian and European manuscripts written on palm leaf and paper. Also built by Serfoji II is the Manora Fort, a monumental tower, situated about 65 km away from Thanjavur.

3.2. DISTRICT AT A GLANCE

3.2.1. Location

Thanjavur District lies in the East Coast of Tamil Nadu. It is between 9°50’ and 11°25’ of the northern latitude and 78°45’ and 70°25’ of Eastern longitude. The District is bounded on the north-west by the River which demarcates itself from Tiruchirapalli, Perambalur and districts, and on the north and east it is bounded by Nagapattinam and Thiruvarur districts, and on the South by the Palk Strait and district and on the West by Pudukkottai and Thiruchirappalli
The district has its headquarters at Thanjavur which was once upon a
the kingdom capital of Raja Raja Cholan.

Figure – 1

The Position of Thanjavur District in the National Map

3.2.2. Administrative Divisions

The district consists of the following administrative units.

Revenue divisions : 3
Taluks : 8
Blocks : 14
Revenue villages : 906
Village Panchayat : 589
The district includes eight taluks namely;

1. Kumbakonam,
2. Orathanadu,
3. Papanasam,
4. Pattukkottai,
5. Peravurani,
6. Thanjavur,
7. Thiruvaiyaru and
8. Thiruvidaimarudur.
Further, the district has been sub-divided into 14 community development blocks namely

**Figure – 3**

Map showing the blocks in the district

1. Ammapettai
2. Kumbakonam
3. Orathanadu
4. **Pattukkottai**
5. Sethubavachatram
6. Thiruppanandal
7. Thiruvonam
8. Budalur
9. Madukkur
10. Papanasam
11. **Peravurani**
12. Thanjavur
13. Thiruvaiyaru
14. Tiruvidaimarudur
3.2.3. Demography

As per the Census 2011, Thanjavur district has a total population of about 24.02 lakhs, out of which about 66 percent live in rural areas and the rest live in urban areas. The details are furnished below in Table 3.1, below.

**Table 3.1**

**POPULATION IN THANJAVUR DISTRICT-2011 CENSUS**

(in numbers)

<table>
<thead>
<tr>
<th>Particulars</th>
<th>Person</th>
<th>Male</th>
<th>Female</th>
<th>Decadal growth rate in percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>2402781</td>
<td>11183112</td>
<td>1219669</td>
<td>8.42</td>
</tr>
</tbody>
</table>

Source: Census of India 2011

In 2011, Thanjavur had population of 2,402,781 of which male and female were 1,183,112 and 1,219,669 respectively. In 2001 census, Thanjavur had a population of 2,216,138 of which males were 1,096,638 and remaining 1,119,500 were females. Thanjavur District population constituted 3.33 percent of total Maharashtra population. In 2001 census, this figure for Thanjavur District was at 3.55 percent of Maharashtra population.

Literacy rate in Thanjavur District is furnished in the following table 3.2.
Average literacy rate of Thanjavur in 2011 were 82.72 compared to 75.45 of 2001. If things are looked out at gender wise, male and female literacy were 89.06 and 76.61 respectively. For 2001 census, same figures stood at 84.47 and 66.70 in Thanjavur District. Total literate in Thanjavur District were 1,802,291 of which male and female were 951,803 and 850,488 respectively. In 2001, Thanjavur District had 1,476,256 in its district.

### Table 3.2

**LITERACY RATE IN THANJAVUR DISTRICT**

(in percent)

<table>
<thead>
<tr>
<th>Particulars</th>
<th>Literacy rate</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Person</td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td>Total</td>
<td>1802291</td>
<td>951803</td>
<td>850488</td>
</tr>
</tbody>
</table>

Source: Census of India, 2011

### Table 3.3

**OCCUPATIONAL CLASSIFICATION OF POPULATION-2010-11**

<table>
<thead>
<tr>
<th>Industrial Category</th>
<th>Persons</th>
<th>% to total workers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main Workers</td>
<td>750032</td>
<td>83.60</td>
</tr>
<tr>
<td>Marginal workers</td>
<td>147091</td>
<td>16.40</td>
</tr>
<tr>
<td>Total workers</td>
<td>897123</td>
<td>100</td>
</tr>
<tr>
<td>Cultivators</td>
<td>144942</td>
<td>16.16</td>
</tr>
<tr>
<td>Agricultural labor</td>
<td>410718</td>
<td>45.78</td>
</tr>
<tr>
<td>Household industries</td>
<td>37986</td>
<td>4.23</td>
</tr>
<tr>
<td>Other Workers</td>
<td>303477</td>
<td>33.83</td>
</tr>
</tbody>
</table>

Source: Census of India 2001.
3.2.4. Soils and Topography

i) Geology

The geological formation of Thanjavur district is made up of cretaceous, Tertiary and Alluvial deposits and the major area is occupied by the Alluvial and Tertiary deposits. The cretaceous formations occur as a small patch in West and South-West of Vallam. These formations have a very thick lateritic cap consisting of impure lime stones and sand stones of silt, clay calcareous and argillaceous variety, in the coast, these formations are over laid by Cuddalore sand stone of Tertiary age are well developed as best seen, West of Grant Anaicut canal and near Orathanadu. These sand stones are covered by a thin layer of wind brown sandy clays, unconsolidated sand, clay bound sands and mottled clays with the lignite seams. This tertiary formation is invariably capped by laterite. In the east, the alluvial deposits of the river Cauvery and its tributaries lie over the Tertiary sand stone. They consist of sands, gravelly sands, clays and sandy clays. The thickness of these formations ranges from 30 Mt. to 400 Mt.

ii) Soil Colour

In Thanjavur district brown coloured soil was the maximum constituting nearly 65 per cent. Red soil and black soils were found in 19.30 and 15.97 percent of the area respectively.
iii) Soil Series

In Thanjavur district, 13 soil series were identified and the distribution of the various soil series is given in the Table 3.4 below. It could be seen from the table that Madukkur soil series occupied 34.18 per cent of the area followed by Kalathur (15.90 per cent). Kallivayal soil series was the least which accounted for only 0.17 per cent.

Table 3.4
SOIL SERIES AND ITS EXTENT IN THANJAVUR DISTRICT

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Name of the Soil series</th>
<th>Extent in ha.</th>
<th>Percentage to total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Madukkur</td>
<td>1,10,573</td>
<td>34.18</td>
</tr>
<tr>
<td>2.</td>
<td>Kalathur</td>
<td>52,449</td>
<td>15.90</td>
</tr>
<tr>
<td>3.</td>
<td>Padugai</td>
<td>36,467</td>
<td>11.27</td>
</tr>
<tr>
<td>4.</td>
<td>Pattukkottai</td>
<td>33,424</td>
<td>10.33</td>
</tr>
<tr>
<td>5.</td>
<td>Adhanur</td>
<td>30,642</td>
<td>9.47</td>
</tr>
<tr>
<td>6.</td>
<td>Vallam</td>
<td>13,045</td>
<td>4.03</td>
</tr>
<tr>
<td>7.</td>
<td>Alathur</td>
<td>12,111</td>
<td>3.74</td>
</tr>
<tr>
<td>8.</td>
<td>Mudukulam</td>
<td>9,266</td>
<td>2.86</td>
</tr>
<tr>
<td>9.</td>
<td>Peravurani</td>
<td>6,672</td>
<td>2.06</td>
</tr>
<tr>
<td>10.</td>
<td>Alangudi</td>
<td>6,626</td>
<td>2.05</td>
</tr>
<tr>
<td>11.</td>
<td>Budalur</td>
<td>6,446</td>
<td>1.99</td>
</tr>
<tr>
<td>12.</td>
<td>Melkadu</td>
<td>5,045</td>
<td>1.56</td>
</tr>
<tr>
<td>13.</td>
<td>Kallivayal</td>
<td>482</td>
<td>0.17</td>
</tr>
<tr>
<td>14.</td>
<td>Reserved Forest</td>
<td>1,255</td>
<td>0.39</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>3,23,506</strong></td>
<td><strong>100.00</strong></td>
</tr>
</tbody>
</table>

Source: Soil Survey and Land use Organization, Thanjavur.
The various soil series available in the district have been briefly explained in the following Table 3.5 for a better perception.

### Table 3.5

**CHARACTERISTICS OF SOIL SERIES IN THANJAVUR DISTRICT**

<table>
<thead>
<tr>
<th>Name of the series</th>
<th>Characters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Madukkur</td>
<td>Very deep brown soils derived from laterite parent material- Sandy loam – cultivated</td>
</tr>
<tr>
<td>Kalathur</td>
<td>Very dark gray brown, very deep calcareous, fine textured cauvery river alluvium Clay- cultivated.</td>
</tr>
<tr>
<td>Padugai</td>
<td>Brown, very deep, fine loamy, young soils lying near the rivers. Sandy clay loam – cultivated.</td>
</tr>
<tr>
<td>Pattukkottai</td>
<td>Pale Brown, very deep, loamy, non-calcareous occupying, the top portion of the gently sloping Cauvery Mettur Project area- Loamy sand- Fallow</td>
</tr>
<tr>
<td>Adhanur</td>
<td>It comprises of dark gray brown to dark yellowish brown, loamy textured soils derived from Cauvery alluvium. The soils are very deep non-calcareous, having sand layer with in 100 cm Sandy clay loam-</td>
</tr>
<tr>
<td>Vallam</td>
<td>It comprises of moderately deep sandy loam, yellowish red soils occupying the top most portion of the laterite cap. Sandy loam- cultivated fallow.</td>
</tr>
<tr>
<td>Alathur</td>
<td>These are grayish brown, fine loamy, very deep strongly calcareous, moderately alkaline soil occurring at the bottom of the cauvery Mettur Project area. Sandy clay loam cultivated fallows.</td>
</tr>
<tr>
<td>Location</td>
<td>Description</td>
</tr>
<tr>
<td>--------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Madukulam</td>
<td>It consists of dark red-very deep, non-calcareous, fine loamy textured one occupying in the gently sloping land subjected to severe soil erosion. Sandy clay loam-cultivated.</td>
</tr>
<tr>
<td>Peravurani</td>
<td>They include grayish brown, very deep, alkaline, fine loamy, calcareous soils, setting on the sides of the jungle rivers having proximity to the sea Sandy loam-</td>
</tr>
<tr>
<td>Alangudi</td>
<td>These soils consist of very dark gray brown, fine, very deep calcareous, poorly drained Cauvery alluvium. It occurs in pockets away from the river beds when the river takes wide curves. Sandy clay loam</td>
</tr>
<tr>
<td>Budular</td>
<td>These are yellowish red to dark red, deep, non calcareous, acidic, gravelly in – SITU soils derived from granitic genesis. Sandy clay loam-cultivated.</td>
</tr>
<tr>
<td>Melkadu</td>
<td>These are dark brown, very deep, sandy calcareous coastal alluvium solid. Loamy sand-fallow</td>
</tr>
<tr>
<td>Kallivayal</td>
<td>These are dark brown, very deep, fine loamy, calcareous, saline and mildly alkaline soils derived from the coastal alluvium. Sandy loam-fallow</td>
</tr>
</tbody>
</table>

Source: Soil Survey and Land use Organization, Thanjavur.
iv) Soil Series and Crops

Details on major soil series found in the district and the crops grown are furnished in the Table 3.6 below.

Table 3.6

<table>
<thead>
<tr>
<th>Soil Series</th>
<th>Irrigated Crops</th>
<th>Rain fed crops</th>
</tr>
</thead>
<tbody>
<tr>
<td>Melkadu</td>
<td>Tobacco, Gingelly and Vegetables</td>
<td>Groundnut and Casuarina</td>
</tr>
<tr>
<td>Padugai</td>
<td>Banana, Sugarcane, Paddy, Vegetables</td>
<td>Groundnut, Gingelly and Eucalyptus</td>
</tr>
<tr>
<td>Kallivayal and Peravurani</td>
<td>Paddy and Pulses</td>
<td>-----</td>
</tr>
<tr>
<td>Alathur</td>
<td>Paddy, Sugarcane and Paddy, Millets and Chillies</td>
<td>-----</td>
</tr>
<tr>
<td>Budalur and Madukkur</td>
<td>Groundnut, Gingelly, Paddy, Millets and Chillies</td>
<td>Groundnut</td>
</tr>
<tr>
<td>Pattukkottai</td>
<td>Groundnut, Gingelly, Vegetables and Chillies</td>
<td>Groundnut, Coconut, Fruit trees, Eucalyptus and Casuarina</td>
</tr>
<tr>
<td>Mudukulam</td>
<td>Coconut, Flowers and Vegetables</td>
<td>Groundnut, Millets and Fruit trees</td>
</tr>
</tbody>
</table>

Source: Soil Survey and Land use Organization, Thanjavur.

vi) Land Capability

Land capability classification is given in Table 3.7 which shows the suitability of soils for agricultural uses. The groupings are made according to the soil limitations and the risks of damage when they are used.
Table 3.7

LAND CAPABILITY OF THANJAVUR DISTRICT

<table>
<thead>
<tr>
<th>Land Classification (LCC)</th>
<th>Capability</th>
<th>Soil Series</th>
<th>Extent</th>
<th>Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>II – Lands that have moderate limitations for sustained use under</td>
<td>Soil Series</td>
<td>242429</td>
<td>75.23</td>
<td></td>
</tr>
<tr>
<td>II s – Soil Limitations</td>
<td>Kalathur, Alangudi, Madukkur, Peravurani, Adhanur and Padugai</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>II es – Erosion and Soil Limitations</td>
<td>Budalur, Madukulam Padu, ukkottai</td>
<td>49139</td>
<td>15.25</td>
<td></td>
</tr>
<tr>
<td>II sw – Soil and wetness associated limitations</td>
<td>Alathur</td>
<td>12111</td>
<td>3.76</td>
<td></td>
</tr>
<tr>
<td>III – lands that have severe limitations for sustained use under agriculture</td>
<td>Soil Series</td>
<td>5045</td>
<td>1.57</td>
<td></td>
</tr>
<tr>
<td>III s – Soil Limitations</td>
<td>Melkadu</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>III sw - Soil and wetness associated limitations</td>
<td>Kallivayal</td>
<td>482</td>
<td>0.14</td>
<td></td>
</tr>
</tbody>
</table>

Source: Soil Survey and Land use Organization, Thanjavur.

This classification system evaluates the soil based on the inherent characteristics (soil depth, texture, concretions, reaction, permeability), external land features (slope, erosion, stoniness etc.) that limits the use land and environmental factors (rainfall and temperature). The soils into capability classes is primarily done on the basis of their produce common cultivated crops and pastures without deterioration long period of time. The capability classes are designated by roman I to VIII. In addition, the sub-classes (limitations) like topography (t), soils(s), wetness (w), climate (c) and erosion (e) are shown by suffixing letters to the land capability classes. The numerals indicate progressively greater limitations and narrower choices for a practical use. It could be
from the table above, that the soils with soil limitations are found to the of 75 percent.

vi) Soil Reaction (pH)

The details on series-wise soil reaction (pH) are furnished in Table 3.8. (pH is a measure of the activity of the (solvated) hydrogen ion.) This could bring out a better perception on the best suited soils for the cultivation of crops whether it is seasonal/annual or perennial crop.

<table>
<thead>
<tr>
<th>Category</th>
<th>Soil Series</th>
<th>Extent (ha.)</th>
<th>Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medium acidic (5.6 to 6.0)</td>
<td>Budalur and Vallam</td>
<td>19494</td>
<td>6.04</td>
</tr>
<tr>
<td>Slightly acidic (6.1 to 6.5)</td>
<td>Pattukkottai and Mudukulam</td>
<td>42690</td>
<td>13.25</td>
</tr>
<tr>
<td>Neutral (6.6 to 7.5)</td>
<td>Padugai, Adhanur and Madukkur</td>
<td>177682</td>
<td>55.14</td>
</tr>
<tr>
<td>Mildly alkaline (7.6 to 8.0)</td>
<td>Kalathur</td>
<td>51449</td>
<td>15.97</td>
</tr>
<tr>
<td>Moderately alkaline (8.1 to 8.5)</td>
<td>Alangudi, Melkadu, Alathur, Kallivayal</td>
<td>24264</td>
<td>7.53</td>
</tr>
<tr>
<td>Strongly Alkaline (8.6 to 9.0)</td>
<td>Peravurani</td>
<td>6672</td>
<td>2.07</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td><strong>322251</strong></td>
<td><strong>100.00</strong></td>
</tr>
</tbody>
</table>

Source: Soil Survey and Land use Organization, Thanjavur.
It could be seen from the above table, that the neutral soil series are Padugai, Adhanur and Madukkur accounted for more than 55 per cent of area in this district. These are the soils that are the best suited for agricultural purposes.

vii) Soil Productivity

The productivity ratings of the soils are worked out taking into consideration the soil properties such as depth, base saturation, texture, structure, organic matter content, mineral reserve and soil moisture. Five productivity classes were identified and used here. Different productivity ratings are given in Table 3.9, below.

**Table 3.9**

**PRODUCTIVITY RATINGS OF THE SOILS IN THANJAVUR DISTRICT**

<table>
<thead>
<tr>
<th>Productivity Class</th>
<th>Soil Series</th>
<th>Extent (ha.)</th>
<th>Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extremely Poor</td>
<td>Kallivayal, Melkadu</td>
<td>5527</td>
<td>1.72</td>
</tr>
<tr>
<td>Poor</td>
<td>Vallam, Alathur, Padugai</td>
<td>31828</td>
<td>9.88</td>
</tr>
<tr>
<td>Average</td>
<td>Kalathur, Alangudi, Budalur, Mudukulam, Pattukottai, Madukkur and Adhanur</td>
<td>248429</td>
<td>77.09</td>
</tr>
<tr>
<td>Good</td>
<td>Padugai</td>
<td>36467</td>
<td>11.31</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>322251</strong></td>
<td><strong>100.00</strong></td>
</tr>
</tbody>
</table>

Source: Soil Survey and Land use Organization, Thanjavur.
It could be seen from the table that the average productivity class accounted for the maximum of 77.09 per cent and the related soil series were Kalathur, Alangudi, Budalur, Mudukulam, Pattukkottai, Madukkur and Adhanur.

3.2.5. Rainfall and Climate

The climate of Thanjavur can be termed as a fairly healthy one like other coastal areas. November, December, January and February are the pleasant months in a year with climate full of warm days and cool nights. From March onwards, the climate rather becomes sultry and the mercury shoots up and reaching its peak by the end of May and June, depending upon the on-set of summer rain. The South-West monsoon sets in June and continues till September followed by North-East monsoon in October that brings complete relief to the farmers till January. The rainfall during South-west monsoon period is much lower than that of North-East monsoon which sets in October and continues till the end of December and winter period starts in January. However, Thanjavur District is benefited more by North-East monsoon because of its heavy rainfall and the Western ghats invariably feeds the Cauvery and helps greatly for the vast cultivation of the deltaic area. The details on normal rainfall of the district are given below in Table 3.10.
### Table 3.10

**SEASON-WISE NORMAL RAINFALL IN THANJAVUR DISTRICT**

(in mm)

<table>
<thead>
<tr>
<th>Season</th>
<th>Month</th>
<th>Normal Rainfall</th>
</tr>
</thead>
<tbody>
<tr>
<td>South West Monsoon</td>
<td>June</td>
<td>36.7</td>
</tr>
<tr>
<td></td>
<td>July</td>
<td>70.9</td>
</tr>
<tr>
<td></td>
<td>August</td>
<td>115.8</td>
</tr>
<tr>
<td></td>
<td>September</td>
<td>118.6</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>342.0 (32.48)</strong></td>
</tr>
<tr>
<td>North East Monsoon</td>
<td>October</td>
<td>190.5</td>
</tr>
<tr>
<td></td>
<td>November</td>
<td>208.7</td>
</tr>
<tr>
<td></td>
<td>December</td>
<td>146.5</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>545.7 (51.82)</strong></td>
</tr>
<tr>
<td>Winter Season</td>
<td>January</td>
<td>32.8</td>
</tr>
<tr>
<td></td>
<td>February</td>
<td>17.9</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>50.7 (4.82)</strong></td>
</tr>
<tr>
<td>Hot Weather Season</td>
<td>March</td>
<td>21.9</td>
</tr>
<tr>
<td></td>
<td>April</td>
<td>36.1</td>
</tr>
<tr>
<td></td>
<td>May</td>
<td>56.6</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>114.6 (10.88)</strong></td>
</tr>
<tr>
<td><strong>Year Total</strong></td>
<td></td>
<td><strong>1053.00 (100.00)</strong></td>
</tr>
</tbody>
</table>


*(Figures in parenthesis represent percentage)*

A look at the above table has revealed that the normal annual is 1053 mm. The maximum rainfall of 51.82 per cent is received during north east monsoon followed by south west monsoon with 32.48 per
of the total rainfall. The maximum and minimum temperatures in the district are 36.6°C, and 22.8°C respectively.

3.2.6 Land Use Pattern

The total geographical area of the district is 3.40 lakhs hectares as could be noted from Table 3.11, below.

Table 3.11
LAND USE PATTERN IN THANJAVUR DISTRICT
(in ha.)

<table>
<thead>
<tr>
<th>Land use</th>
<th>2007-08</th>
<th>2008-09</th>
<th>2009-10</th>
<th>Triennium ending 2010-11</th>
<th>% age to the geographical area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total geographical area</td>
<td>339657</td>
<td>339657</td>
<td>339657</td>
<td>339657</td>
<td>100.00</td>
</tr>
<tr>
<td>Forests</td>
<td>3426</td>
<td>3426</td>
<td>3390</td>
<td>3414</td>
<td>1.00</td>
</tr>
<tr>
<td>Barren and Uncultivable land</td>
<td>2201</td>
<td>2197</td>
<td>2149</td>
<td>2182.333</td>
<td>0.63</td>
</tr>
<tr>
<td>Land put to non-agrl. Use</td>
<td>78989</td>
<td>80590</td>
<td>81676</td>
<td>80418.33</td>
<td>24.05</td>
</tr>
<tr>
<td>Culturable waste</td>
<td>15634</td>
<td>14591</td>
<td>14700</td>
<td>14975</td>
<td>4.33</td>
</tr>
<tr>
<td>Permanent pastures</td>
<td>1746</td>
<td>1477</td>
<td>1385</td>
<td>1536</td>
<td>0.41</td>
</tr>
<tr>
<td>Misc. tree crops and Current fallow</td>
<td>6814</td>
<td>5462</td>
<td>5010</td>
<td>5762</td>
<td>1.48</td>
</tr>
<tr>
<td>Other fallows</td>
<td>49993</td>
<td>32161</td>
<td>29913</td>
<td>37356</td>
<td>8.81</td>
</tr>
<tr>
<td>Net area sown</td>
<td>157160</td>
<td>189295</td>
<td>192030</td>
<td>179495</td>
<td>56.54</td>
</tr>
<tr>
<td>Area sown more than 36 inches</td>
<td>36844</td>
<td>62159</td>
<td>49262</td>
<td>49422</td>
<td>14.50</td>
</tr>
<tr>
<td>Gross area sown</td>
<td>194004</td>
<td>251454</td>
<td>241292</td>
<td>228917</td>
<td>71.04</td>
</tr>
</tbody>
</table>

Source: Season and Crop Reports, DES, Chennai.
Of this, an area of just one per cent is under forests and 0.41 per cent under pastures and grazing lands. As much as 24.05 per cent of the total area is under non-agricultural uses. The area under cultivable waste is 4.33 per cent. The fallow lands have accounted for nearly 12 per cent of the total geographical area. The cultivable land is about 1.80 lakhs hectares constituting 56.54 per cent of the geographical area of the district. The cropping intensity of nearly 339657 for the triennium ending 2010-11, is a good indication of the intensity of agriculture in the district.

3.2.7. Land Holdings and Distribution

The land holding pattern in the district is given below, in Table 3.12.

<table>
<thead>
<tr>
<th>Category of farmers</th>
<th>No.</th>
<th>% age to the total holdings</th>
<th>Area operated (ha.)</th>
<th>% age to the area operated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marginal (below one ha.)</td>
<td>213782</td>
<td>76.96</td>
<td>75805</td>
<td>32.99</td>
</tr>
<tr>
<td>Small (1.0 - 2.0 ha.)</td>
<td>38191</td>
<td>13.75</td>
<td>54198</td>
<td>23.59</td>
</tr>
<tr>
<td>Semi-medium (2.0 - 4.0)</td>
<td>18673</td>
<td>6.72</td>
<td>50951</td>
<td>22.17</td>
</tr>
<tr>
<td>Medium (4.0 - 10.0)</td>
<td>6407</td>
<td>2.31</td>
<td>36537</td>
<td>15.90</td>
</tr>
<tr>
<td>Large (above 10.0 ha.)</td>
<td>720</td>
<td>0.26</td>
<td>12298</td>
<td>5.35</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>277773</td>
<td><strong>100.00</strong></td>
<td><strong>229789</strong></td>
<td><strong>100.00</strong></td>
</tr>
</tbody>
</table>

Source: Agristat 2006, Director of Agriculture, Chennai
It could be discerned from the table above that the small holdings with a size of less than 2 ha constitute more than 90 per cent of the total number of holdings in the district and this category accounts for only about 56 per cent of the land area owned. On the other hand the relatively larger land holdings with a size of more than 4 ha constituting about just 3.00 percent of the total number of holdings account for more than 21 per cent of the total land owned in the district. However the medium sized holdings. (Four to ten ha) which constituted 2.3 per cent of the total holdings have accounted for nearly 16 per cent of the total area operated. Thus, there exists the skewed distribution of land among different farm sizes.

3.2.8. Irrigation, River and Groundwater

The agricultural occupation of the district is well supported by the river Cauvery and its tributaries. Cauvery is considered to be the best of rivers that drain the Southern Peninsula of India. The river flows from Karnataka State and passes through Dharmapuri, Salem, Erode, Thiruchirappali, Thanjavur, Thiruvarur and Nagapattinam districts of Tamil Nadu state covering a distance of about 770 Kms. and draining an of about 72.800 sq.kms. in all. Springing from a spot lying on Mountains on western-ghats at a height of 1,320 meters above mean sea level, Cauvery meanders its way across Karnataka and Tamilnadu and showering not only economic prosperity to the millions of people but
carving a niche for itself in their lives in historical, cultural and religious realms.

The three minor tributaries, Palar, Chennar and Thoppur enter into the Cauvery on her course, above Mettur, where the famous dam has been constructed. The Mettur dam joins the Sita and Pala mountains beyond that valley through which the Cauvery flow, up to the Grand Anaicuts. The dam in Mettur, impounds water not only for the improvement of irrigation but also to ensure the regular and sufficient water to the important Hydro-Electric generating station at Mettur. The river further runs through Erode district where river Bhavani merges with it. Two more tributaries viz. Noyyal and Amaravathi join it, while it passes through Erode and reaches Thiruchirappalli district. Here the river becomes wide, with a sandy bed and flows in an easterly direction till it splits into two at upper anaicuts about 14 kilometers west of Thiruchirappalli. The northern branch of river is called the Coleroon, while the southern branch retains the same name Cauvery and then goes directly eastwards into Thanjavur District. These two rivers again come closer just before Kallanai and form the interim island namely Srirangam near Thiruchirappalli. The river rapidly increasing in volume, as hundreds of streams rivulets merge with it which are mostly fed on the heavy rainfall of the
south-West monsoon. After Sivasamudram Falls in Mysore, the Cauvery again forms beautiful waterfalls at Hoganekal in Dharmapuri District of Tamil Nadu state.

The Chola king, “Karikalan” has been immortalized as he has constructed the bank for the Cauvery all the way from Puhar (Kaveripoompattinam) to Srirangam. It was built as far back as 1,600 ago or even more. On both sides of the river, the bund are found to a distance of 1,080 feet. The dam Kallanai on the border between Tiruchirapalli and Thanjavur districts, constructed by him is a superb engineering marvel, which was constructed with earth and stone and has the vagaries of nature for hundreds of years. In 19th century, it was on a larger scale. The name of the historical dam has since been “Grand Anaicut” and stands as the head of the mammoth irrigation with wide net-work of canals in the Thanjavur district. From upper the coloroon branches and runs in north-east direction. After Grand the Cauvery divides into numerous branches and cover the whole of the with a vast network of irrigation channels and gets lost in the wide paddy fields. The mighty Cauvery River here is reduced to an channel and falls into the Bay of Bengal at the historical place called Poompuhar (Kaveripoompatinam) about 13 Kms north of The river Cauvery flows the entire district in different names through its tributaries and branches viz., Grand Anicut canal, Vennar, Pannaiyar,
Koraiyar, Vettar, Kodamuritiyar, Thirumalairajanar, Arasalar, Veerasozhanar, Mudikondan, Noolar, Vanjiar, Vikaraman, Nattar, Kirtimanar, Nandalar, Majalar, Mahimalayar, Palavar, Puthar, Valappar, Vadavar, pamaniar, Mulliyar, Ayyanar, Adappar, Harichandranathi, Vellaiyar, Pandavaiyar, Odambogiyar, Kattar, and all these branch off into a number of small streams. These are the sources of irrigation in the district.

The details on source-wise area irrigated in the district are given in Table 3.13. It could be visualized from the table that canals are the major sources of irrigation accounting for more than 75 per cent of the total irrigated area in the district, followed by tube wells accounting for about 24 per cent of the gross area irrigated.
Table 3.13
SOURCE – WISE AREA IRRIGATED
(in ha)

<table>
<thead>
<tr>
<th>Sources of irrigation</th>
<th>2007-08</th>
<th>2008-09</th>
<th>2009-10</th>
<th>Triennium ending 2010-11</th>
<th>% age to the Gross area irrigated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canals</td>
<td>95772</td>
<td>159137</td>
<td>155378</td>
<td>136762</td>
<td>56.82</td>
</tr>
<tr>
<td>Tanks</td>
<td>168</td>
<td>368</td>
<td>500</td>
<td>345</td>
<td>0.14</td>
</tr>
<tr>
<td>Tube wells</td>
<td>54570</td>
<td>36093</td>
<td>37279</td>
<td>42647</td>
<td>17.72</td>
</tr>
<tr>
<td>Ordinary wells</td>
<td>2023</td>
<td>1105</td>
<td>513</td>
<td>1214</td>
<td>0.50</td>
</tr>
<tr>
<td>Ordinary wells</td>
<td>29248</td>
<td>30259</td>
<td>30336</td>
<td>29948</td>
<td>12.44</td>
</tr>
<tr>
<td>Net area irrigated</td>
<td>181781</td>
<td>226962</td>
<td>224006</td>
<td>210916</td>
<td>87.62</td>
</tr>
<tr>
<td>Area irri more than once</td>
<td>25570</td>
<td>35814</td>
<td>27991</td>
<td>29792</td>
<td>12.38</td>
</tr>
<tr>
<td>Gross area irrigated</td>
<td>207351</td>
<td>262776</td>
<td>251997</td>
<td>240708</td>
<td>100.00</td>
</tr>
<tr>
<td>Irrigation intensity</td>
<td>114.07</td>
<td>115.78</td>
<td>112.50</td>
<td>114.12</td>
<td></td>
</tr>
</tbody>
</table>

Source: Season and Crop Reports, DES, Chennai.

The irrigation intensity worked out to nearly 114 per cent, which meant that the farmers have cultivated second crop of paddy under sizable area during the triennium period ending 2010-11.

The community development blocks or the Panchayat unions in the district are classified based on the level of exploitation of ground water potential and the data is presented in Table 3.14 and the table indicate five blocks are classified as safe blocks in terms of groundwater development, five blocks are classified as semi-critical and the four blocks are classified as critical and overexploited. This indicates
there is very limited scope for further expansion of area under irrigation in the district.

Table 3.14
CLASSIFICATION OF BLOCKS BASED ON LEVEL OF EXPLOITATION OF GROUND WATER POTENTIAL

<table>
<thead>
<tr>
<th>Over Exploited (above 100%)</th>
<th>Critical (90-100%)</th>
<th>Semi Critical (70-90%)</th>
<th>Safe (less than 100%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thirupanadal</td>
<td>Ammapet</td>
<td>Madukkur</td>
<td>Budalur</td>
</tr>
<tr>
<td>Thiruvaimarudur</td>
<td>Kumbakonam</td>
<td>Orathanadu</td>
<td>Papanasam</td>
</tr>
<tr>
<td>-</td>
<td>-</td>
<td>Peravurani</td>
<td>Pattukkottai</td>
</tr>
<tr>
<td>-</td>
<td>-</td>
<td>Thiruvaiaru</td>
<td>Sethubavachatram</td>
</tr>
<tr>
<td>-</td>
<td>-</td>
<td>Thiruvonam</td>
<td>Thanjavur</td>
</tr>
</tbody>
</table>

Source: Agristat 2006, Director of Agriculture, Chennai.

3.2.9. Agricultural Activity

The occupation of the people in the district is primarily agriculture, as the district depends on the Cauvery river water for the agricultural sector to grow, in a sustained way. The western part of the district is rain-fed. The ayacut area of the river Cauvery has been with paddy, sugarcane, rice fallow pulses and cotton. The river bed has lined with teak trees and bamboo bushes. In the padugai lands (river area), the farmers have been cultivating vegetables, where the soils are good in terms of soil texture and fertility. They cultivated coconut in bunds and as coconut groves. The cultivation of rice fallow pulses is
in the sense that it will be sown with the available moisture just a week
the harvest of paddy and grows with the available dew during the rest of
growing season. The rain-fed area of the district where red soil is
predominant, groundnut and gingelly are the major crops. Summing up
cultivation, the major crops of the district are Paddy, Pulses, Sugarcane,
Groundnut, Gingilly, Cotton and Coconut.

The district is benefited mainly from major canal irrigation
projects spread over the entire district. Groundwater is an important
source of irrigation during non-canal season as well as in areas outside
the command areas of canal irrigation projects. Given the variety of soil
types and irrigation sources, a number of crops are cultivated and the
pattern of crop diversification is well-suited to minimize the risks in
agricultural production given the low rainfall in the district. As the entire
activity of this delta district rests on the release of water from the Mettur
dam, it is obvious that the socio-economic conditions of the farmers
depend mostly on the timely release of water from the dam. The normal
date of release/opening of the dam was fixed as 12th June of every year.
The farmers often raise two paddy crops namely kuruvai and thaladi
when the reservoir is normally opened. They cultivate only one crop viz.
Samba when water release is delayed due to late arrival of south east
monsoon. In order to pay special attention and to give special assistance in
terms of subsidy and other management assistance, Intensive
District programme was implemented during the year 1962 and it was converted into Training and Visit system in 1981. By way of these programmes agriculture in this district got its launching pad and to the present position. The major crops cultivated in Thanjavur district are Paddy, Pulses, Gingelly, Cotton, Groundnut and Sugarcane. The minor crops like Maize, Soyabean, and Redgram are also grown in uplands. Rice is the principal crop grown in three seasons viz. Kuruvai, Samba and Thaladi. Pulses like Blackgram, Greengram and cash crops like Cotton and Gingelly are grown in rice fallows. In new delta area, the Groundnut is the principal crop. Sugarcane is cultivated both in new delta and old delta. Banana is primarily grown in Padugai lands.

The area coverage of different food and non-food crops cultivated in Thanjavur district is furnished below in Table 3.15. It could be observed from the table that the predominant crop was paddy which occupied nearly 64 percent of the gross cropped area of the district. It could also be seen that the area under sugarcane has increased considerably to the tune of 15353 ha. Among the various crops, one could witness the area under coconut is also substantial and is being cultivated in an area of 26287 ha. during 2009-10. During these three years the cropping intensity was observed to be the highest in 2009-10 at 132.84 percent which meant that the area cropped more than once was more. This could be attributed to the normal monsoon and normal date of the opening of the Mettur reservoir.
### Table 3.15

**AREA OF THE CROPS IN THE DISTRICT**

*(in ha.)*

<table>
<thead>
<tr>
<th>Name of the Crop</th>
<th>Area of the Crop</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2007-08</td>
<td>2008-09</td>
<td>2009-10</td>
</tr>
<tr>
<td>Paddy</td>
<td>123293</td>
<td>160608</td>
<td>154901</td>
</tr>
<tr>
<td>Blackgram</td>
<td>6354</td>
<td>13708</td>
<td>8951</td>
</tr>
<tr>
<td>Greengram</td>
<td>2776</td>
<td>8709</td>
<td>7392</td>
</tr>
<tr>
<td>Total food grains</td>
<td>133503</td>
<td>183976</td>
<td>171834</td>
</tr>
<tr>
<td>Sugarcane</td>
<td>9711</td>
<td>12000</td>
<td>15353</td>
</tr>
<tr>
<td>Banana</td>
<td>4158</td>
<td>4764</td>
<td>4921</td>
</tr>
<tr>
<td>Mango</td>
<td>777</td>
<td>849</td>
<td>842</td>
</tr>
<tr>
<td>Cotton</td>
<td>1738</td>
<td>2225</td>
<td>785</td>
</tr>
<tr>
<td>Groundnut</td>
<td>8065</td>
<td>8217</td>
<td>7274</td>
</tr>
<tr>
<td>Gingilly</td>
<td>4089</td>
<td>7243</td>
<td>5999</td>
</tr>
<tr>
<td>Coconut</td>
<td>24240</td>
<td>24893</td>
<td>26287</td>
</tr>
<tr>
<td>Total non food crops</td>
<td>41279</td>
<td>45726</td>
<td>44087</td>
</tr>
<tr>
<td>Total food and non food</td>
<td>194004</td>
<td>251454</td>
<td>241292</td>
</tr>
<tr>
<td>Net cropped area</td>
<td>157160</td>
<td>189295</td>
<td>192030</td>
</tr>
<tr>
<td>Area cropped more than once</td>
<td>36844</td>
<td>62159</td>
<td>49262</td>
</tr>
<tr>
<td>Cropping intensity</td>
<td>123.4</td>
<td>132.84</td>
<td>125.65</td>
</tr>
</tbody>
</table>

*Source: Season and Crop Report, DES, Chennai.*

### 3.2.10. Horticulture

Thanjavur is predominantly a rice growing tract and hence the for horticultural crops is very much limited. Most of the farmers are holders of land and cultivating less remunerative crops like paddy,
and groundnut. The farmers are very progressive and enthusiastic to new technologies and new crops such as medicinal crops in pockets. After intervention of Horticulture Department in this district, the farmers are to go in for cultivation of Horticulture crops which prove remunerative. Constraint in horticulture crop cultivation involves high cost and technologies, for which they need some support from Government in the form of subsidies and training. Only two horticultural crops viz; Mango Banana dominate the horticultural scene. The details on area, production productivity of these horticulture crops in the district are given in Table below.
Table 3.16

AREA, PRODUCTION AND PRODUCTIVITY OF MANGO AND BANANA IN THANJAVUR DISTRICT IN 2009-10

<table>
<thead>
<tr>
<th>Name of the Crop</th>
<th>Area in ha</th>
<th>Production in MT</th>
<th>Productivity (tonnes / ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Banana</td>
<td>4921</td>
<td>242589</td>
<td>49291</td>
</tr>
<tr>
<td>Mango</td>
<td>842</td>
<td>3521</td>
<td>4182</td>
</tr>
<tr>
<td>Total Fruits</td>
<td>5258</td>
<td>NA</td>
<td>NA</td>
</tr>
</tbody>
</table>

Source: Season and Report, DES, Chennai

It could be seen from the table that the area under banana was nearly 94 per cent of the fruit crops in the district. The area under mango was very little. The farmers cultivate banana as a change crop in the cropping pattern and the attention paid is also very little which could have its impact on productivity and the resultant production.

3.2.10. Livestock Activities in the District

Livestock growth in the district has shown a marginal increase over the decade. Animal Husbandry is an allied activity of Agriculture and cannot grow as fast as agriculture since its breeding programme is a slow process. The district has more indigenous cattle than any special breed of cattle. It could be seen from the Table 3.17 that the livestock population of the district has increased which is a very good sign of development in the district.
Table 3.17
LIVESTOCK POPULATION CENSUS
(in numbers)

<table>
<thead>
<tr>
<th>Particulars</th>
<th>2004</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cattle</td>
<td>318436</td>
<td>442000</td>
</tr>
<tr>
<td>Buffalo</td>
<td>57641</td>
<td>59300</td>
</tr>
<tr>
<td>Sheep</td>
<td>27190</td>
<td>23300</td>
</tr>
<tr>
<td>Goats</td>
<td>244471</td>
<td>273500</td>
</tr>
<tr>
<td>Pigs</td>
<td>2794</td>
<td>1800</td>
</tr>
<tr>
<td>Total</td>
<td>726627</td>
<td>800000</td>
</tr>
</tbody>
</table>

Source: Census of India Reports, 2011.

Further, the growth rates for the cattle population from 2004-2010 were estimated presented in Table 3.18. During the period under consideration, it could be observed that the cattle population has grown in numbers at the rate of 6.34 percent. The growth rate was the highest for the cross-breed cows, which stood at nearly 25 per cent and it augers well for the subsidiary income of the farming community in addition to their main source of income viz. income from crop enterprises. Buffaloes, both male and female and the poultry population have witnessed a negative growth rate.
Table 3.18

LIVESTOCK POPULATION GROWTH RATES (2004 – 2010) – THANJAVUR DISTRICT

<table>
<thead>
<tr>
<th>Cattle</th>
<th>Buffalo</th>
<th>Sheep</th>
<th>Goat</th>
<th>Poultry</th>
<th>Draught Bovine</th>
<th>Female Cross</th>
<th>Female Indigenous</th>
<th>She Buffalos</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.34</td>
<td>-7.08</td>
<td>6.45</td>
<td>4.82</td>
<td>-1.07</td>
<td>-5.198</td>
<td>24.368</td>
<td>-5.536</td>
<td>-7.130</td>
</tr>
</tbody>
</table>

Note: Annual Compound Growth Rate in per cent.

Thanjavur poled cattle are distinguished by the possession of dehorned head and clipped ears. The breed is known as Umbalacherry. The main stream of the district is fed by Cauvery River, when the river is dry, flock owners of the sheep from Ramnathapuram and Southern Districts are coming with their migratory stock for pasturing temporarily. The cattle/sheep would be penned in the dry paddy fields for a monetary value so as to improve the soil fertility and soil health of the cultivable lands. The Cattle Breeding and Fodder Development schemes have been replaced as Intensive Cattle Development Project, which functions from Thanjavur. Under Cattle Breeding and Fodder Development a Semen Bank is established at Ammapettai about 19 Kms from Thanjavur from which Liquid Nitrogen and Frozen Semen straws are being supplied to various institutions and Veterinary Sub-centers of the Animal Husbandry Department in this district.

Since, January, 2000, the Hon’ble Chief Minister's Special Animal Husbandry campaigns are being held in various Panchayat Union where Livestock breeders are not having access to Veterinary aid. The
veterinary aids include, Artificial Insemination (at free of cost) and investigation works. Demonstration of Urea enrichment of paddy Audio Visuals are exhibited in the special camps by ICDP. Cattle in remote villages are benefited by the various departmental activities of district.

The district has two livestock farms. One exotic cattle Breeding Farm located at Eachenkottai, in Orathanad taluk and one Progeny Testing Scheme (Buffalo) District Livestock Farm, Orathanad. There are two Poultry Extension Centres one at Orathanad and another...

The Animal Husbandry Department of this District looks after the welfare of the livestock through 2 clinician Centres, 6 Veterinary Hospitals, 45 Veterinary Dispensaries, 73 Sub-Centres, 14 Extension Veterinary Dispensaries, 3 Mobile Veterinary Dispensaries and 16 visiting Sub-centres in the district. Work done particulars of the department during 1999-2000 are as follows:

1. No. of Artificial Inseminations done : 178514
2. No. of Calves Born : 57382
3. No. of Mass contact Programmes conducted : 881
4. No. of Vaccinations done : 982964
5. No. of Castrations done : 38061
6. No. of cases treated : 597423
3.2.12. FISHERIES

i) Coastal Fisheries

Thanjavur is one of the 13 maritime districts of Tamil Nadu state engaged in Marine Fishing and its fish production is about five per cent of the total catch in the state. The State has a total coastal line running to 1076 Kms embedded with 442 fishermen villages of which Thanjavur District occupies 45.1 Kms stretch in Palk Strait with 27 fishing villages in from Thambikkottai in Pattukkottai Taluk in the North and Sembagamadevi Pattinam in Peravurani taluk in the South. The coastal aquaculture is being done in an area of 822 ha. whereas the inland aquaculture has an area of 2400ha. The following statement shows the fishermen population details of the District.

- Total Number of Families : 4899
- Total Number of male children : 4858
- Total Number of Female Children : 5050
- Total Number of Adult male : 8094
- Total Number of Adult Female : 7376
- Total Number of Male : 12952
- Total Number of female : 12426
- Total Population : 25373

Table 3.19 given below shows the employment status of Fisher Folk
Table 3.19

ACTIVITY-WISE EMPLOYMENT STATUS OF FISHER FOLK

<table>
<thead>
<tr>
<th>Activity</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fishing</td>
<td>5503</td>
<td>-</td>
<td>5503</td>
</tr>
<tr>
<td>Fresh Fish Trade</td>
<td>90</td>
<td>122</td>
<td>212</td>
</tr>
<tr>
<td>Dry Fish Trade</td>
<td>57</td>
<td>598</td>
<td>655</td>
</tr>
<tr>
<td>Net Making</td>
<td>21</td>
<td>1</td>
<td>22</td>
</tr>
<tr>
<td>Diving</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Allied Activities</td>
<td>42</td>
<td>89</td>
<td>131</td>
</tr>
<tr>
<td>Unemployed</td>
<td>2125</td>
<td>6533</td>
<td>8658</td>
</tr>
<tr>
<td>Employed in Govt</td>
<td>27</td>
<td>6</td>
<td>33</td>
</tr>
<tr>
<td>Employed in Private</td>
<td>44</td>
<td>1</td>
<td>45</td>
</tr>
<tr>
<td>Others</td>
<td>286</td>
<td>23</td>
<td>309</td>
</tr>
</tbody>
</table>

Source: District Agriculture Plan – Thanjavur District 2013

The census data further reveal that there are 370 mechanized boats which are operated from Kallivayalthottam, Mallippattinam and Sethubavachathram fishing villages. There is a “T” Jetty in Mallippattinam coastal village constructed in 1980 facilitate the easy landing of the catches of mechanized Boats. About 2500 fishermen were involved in mechanized fishing operations. In addition to the mechanized boats, 924 Plank Built Boats and 107 Cattamarans are also operated from the coastal villages and provide employment opportunity for more than 3000 fisherman of this district. There are 23 Fishermen C0-operative Societies and Nine Fisherwomen Co-operative Societies functioning in Thanjavur District.
Table 3.20
MARINE FISH PRODUCTION IN THANJAVUR DISTRICT
(in tonnes)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>17.150</td>
<td>17.550</td>
<td>8.030</td>
<td>23.450</td>
</tr>
</tbody>
</table>

Source: District Agriculture Plan – Thanjavur District 2013

ii) Inland Fisheries

Thanjavur district is also the richest in inland fishing due to the presence of Cauvery river system. The irrigation channels, canals major and minor tanks are richest in many varieties of fish. The inland fishing consists mostly of local Carps, Major Carps and other varieties such as Cat fish, Murrells, Tilapia etc.,

About 5,000 inland fishermen are engaged in fishing and the production of fish form inland water sources. Seeds of Catla, Rohu, Mirgal and Common Carp, early fry are also produced by the Fisheries Department. Fish seed production centre Silver Carp, and grass carps early fry were brought from West Bengal and reared by private fish seed producers. Enormous numbers of fishermen are indulged in fish production by culture methods.
3.2.13. Agricultural Marketing

There are 15 regulated markets, spread all over the district. The total arrival of commodities in the market committee of Thanjavur was 49237 tonnes during 2005-06 fetching a revenue of Rs.438.78 lakhs. As regards performance of regulated markets, they are yet to make a headway. No co-op marketing society is functioning in the district at present. There are four Farmers’ Markets (Uzhavar Sandhai) functioning in the district.

3.2.14. Rural Industries / Agro Industries

Thanjavur district has 1329 food products industries as on 31st March 2005 (Source: Tamil Nadu – An Economic Appraisal2005-06). Besides this there are about 122 small scale industrial units engaged in the production of beverages and tobacco-based products. There are two sugar mills being operated under cooperative sector one sugar mill under private sector which caters to the need of sugarcane growing farmers.

3.2.15. Electrification

The electrification of villages play a vital role in the development of rural economy. The status of electrification process in Thanjavur district is given below.

- Towns electrified : 31
- Villages electrified : 1728
- Hamlets electrified : 3866
- Adi dravidal colonies electrified: 6671
- Pump sets energized : 56129

The above details indicated the intensity with which the electrification process is going on Thanjavur district and this could be the accelerator of growth for Thanjavur district.

3.2.16. Banking

The banking activity of any district is a good indicator of commercialization of the region as these institutions provide the impetus for the economic activities (agriculture and industry) to flourish. These banks are either nationalized or scheduled banks that provide credit and capital requirements for agriculture and allied activities as well to industrial sector which both combine together to boost the economic growth of any particular region. Hence, details regarding the baking sector have been provided in the following Table 3.21, that follows.
Table 3.21
 DETAILS ON BANKING SECTOR IN THANJAVUR DISTRICT

<table>
<thead>
<tr>
<th>Particulars</th>
<th>2009-10</th>
<th>2010-11</th>
<th>2011-12</th>
<th>2012-13</th>
</tr>
</thead>
<tbody>
<tr>
<td>No.of banks / offices</td>
<td>165</td>
<td>163</td>
<td>164</td>
<td>164</td>
</tr>
<tr>
<td>Aggregate deposits (Rs.Lakhs)</td>
<td>189005</td>
<td>204100</td>
<td>217900</td>
<td>254500</td>
</tr>
<tr>
<td>Gross bank credit</td>
<td>104481</td>
<td>125000</td>
<td>157200</td>
<td>196900</td>
</tr>
<tr>
<td>Population served per</td>
<td>13481</td>
<td>13596</td>
<td>13513</td>
<td>13513</td>
</tr>
<tr>
<td>Per capita deposit</td>
<td>8591</td>
<td>9210</td>
<td>9832</td>
<td>11484</td>
</tr>
<tr>
<td>Per capital credit</td>
<td>4749</td>
<td>5610</td>
<td>7093</td>
<td>8885</td>
</tr>
<tr>
<td>Credit deposit ratio</td>
<td>55.30</td>
<td>61.20</td>
<td>72.10</td>
<td>77.40</td>
</tr>
</tbody>
</table>

Source: Tamil Nadu – An Economic Appraisal, 2013

The above table indicated that all the parameters of banking development in relation to the population has been increasing and shows that the banking sector is going to be the best instrument for the development of the economy of the district.

Besides the nationalized, commercial and scheduled banks operating in the district, there are banks under cooperative sector and their details as on 2012-13 are given below.

No. of branches : 21
Share Capital : Rs. 34.08 crores
Reserves : Rs. 35.84 crores
Deposits : Rs. 127.95 crores
Borrowings : Rs. 143.62 crores
The details regarding the number of cooperative societies and banks are given in the following table.

<table>
<thead>
<tr>
<th>Cooperative</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Central Cooperative Bank</td>
<td>2</td>
</tr>
<tr>
<td>Cooperative Wholesale Stores</td>
<td>1</td>
</tr>
<tr>
<td>Cooperative Training Institute</td>
<td>1</td>
</tr>
<tr>
<td>Cooperative Printing Press</td>
<td>1</td>
</tr>
<tr>
<td>District Cooperative Union</td>
<td>1</td>
</tr>
<tr>
<td>Primary Coop.Agri.&amp; Rural Development Bank</td>
<td>8</td>
</tr>
<tr>
<td>Primary Agricultural Cooperative Bank</td>
<td></td>
</tr>
<tr>
<td>Cooperative Marketing Society</td>
<td>6</td>
</tr>
<tr>
<td>Cooperative Urban Bank</td>
<td>6</td>
</tr>
<tr>
<td>Primary Cooperative Stores</td>
<td>13</td>
</tr>
<tr>
<td>Students Coop.Stores</td>
<td>116</td>
</tr>
<tr>
<td>Vegetable Growers Coop.Societies</td>
<td>1</td>
</tr>
<tr>
<td>Cooperative Farm Societies</td>
<td>5</td>
</tr>
<tr>
<td>Employees Cooperative Societies</td>
<td>56</td>
</tr>
<tr>
<td>Land Colonization Cooperative Society</td>
<td>5</td>
</tr>
<tr>
<td>Labour Contract Cooperative Society</td>
<td>2</td>
</tr>
<tr>
<td>Youngman Literary Association Cooperative Society</td>
<td>1</td>
</tr>
<tr>
<td>Homeopathy Medicine Practioners Coop.Society</td>
<td>1</td>
</tr>
<tr>
<td>Physically Handicapped Cooperative Society</td>
<td>1</td>
</tr>
<tr>
<td>Cooperative Canteen</td>
<td>1</td>
</tr>
</tbody>
</table>
3.2.17. Education

The literacy level of the people in the district is an important factor and is very crucial for the economic prosperity of the district. The numbers and the places where the population are educated is the deciding factor to the above said economic criteria by which the economic development could be triggered. The details on educational institutions as could be seen from the district website are given below.

Universities : 1
Arts & Science College : 15
Medical College : 1
Engineering & Technology Colleges : 4
College for Special Education : 3
Schools for General Education : 1535
Schools for Professional Education : 2
Schools for Special Education : 13
Institution for other professional Education : 14

3.2.18. District Income

The gross and net domestic product of the district as a measure of the district’s income is given below, in Table 3.22.
### Table 3.22

**GROSS AND NET DOMESTIC PRODUCT OF THANJAVUR DISTRICT**

(Rs. In Lakhs)

<table>
<thead>
<tr>
<th>Year</th>
<th>Net Domestic Product</th>
<th>Gross Domestic Product</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Current Prices</td>
<td>Constant Prices</td>
</tr>
<tr>
<td>2003-04</td>
<td>137753</td>
<td>137753</td>
</tr>
<tr>
<td>2004-05</td>
<td>171347</td>
<td>163946</td>
</tr>
<tr>
<td>2005-06</td>
<td>179200</td>
<td>159531</td>
</tr>
<tr>
<td>2006-07</td>
<td>210135</td>
<td>162507</td>
</tr>
<tr>
<td>2007-08</td>
<td>271576</td>
<td>203255</td>
</tr>
<tr>
<td>2008-09</td>
<td>288598</td>
<td>192398</td>
</tr>
<tr>
<td>2009-10</td>
<td>302483</td>
<td>202109</td>
</tr>
<tr>
<td>2010-11</td>
<td>350079</td>
<td>223866</td>
</tr>
<tr>
<td>2011-12</td>
<td>346390</td>
<td>213335</td>
</tr>
<tr>
<td>2012-13</td>
<td>368710</td>
<td>213785</td>
</tr>
<tr>
<td>Growth rate (in %)</td>
<td>12.00</td>
<td>5.00</td>
</tr>
</tbody>
</table>

Source: An Economic Appraisal 2012-13, Department of Evaluation and Applied Research Tamil Nadu.

The growth rate was estimated to be 12 per cent at current prices and 5.00 per cent at constant prices, which is an indication of the better income growth in the district. The growth rates estimated for the gross district domestic product was also exhibiting the same trend as that of net district domestic product.
3.3 SELECTION OF BLOCKS

3.3.1 THIRUVIDAIMARUTHUR

Tiruvidaimarudur is a town in Thanjavur District, Tamil Nadu state, India. About 9 km (5.6 mi) north-east of the Temple City Kumbakonam, this is one of the Taluk H.Q. in the Tanjore District. Tiruvidaimarudur has a rich heritage of fertility and people have habit of harvesting thrice in a year. Sometimes the River Cauvery makes a fourth harvest possible.

Figure 4
Map showing the Panchyat Villages of Thiruvidaimaruthur Block
### Tiruvaidaimarudur Block - Panchayat Villages

<table>
<thead>
<tr>
<th>Number of Panchayat Villages</th>
<th>48</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ammangudi</td>
<td>Andalampettai</td>
</tr>
<tr>
<td>Elandurai</td>
<td>Enanallur</td>
</tr>
<tr>
<td>Injikollai</td>
<td>Keeranur</td>
</tr>
<tr>
<td>Kothankudi</td>
<td>Kovanur</td>
</tr>
<tr>
<td>Malayappanallur</td>
<td>Mallapuram</td>
</tr>
<tr>
<td>Manjamalli</td>
<td>Mathur</td>
</tr>
<tr>
<td>Nachiarkoil</td>
<td>Nagarasanpetta</td>
</tr>
<tr>
<td>Paruthicheri</td>
<td>Paruthikudi</td>
</tr>
<tr>
<td>Poundarigapuram</td>
<td>Puthagaram</td>
</tr>
<tr>
<td>Sathanur</td>
<td>Sembiyaverambal</td>
</tr>
<tr>
<td>Sooriyanarkoil</td>
<td>Srinivasanallur</td>
</tr>
<tr>
<td>Thendanthottam</td>
<td>Thepperumanallur</td>
</tr>
<tr>
<td>Thirumangalakudi</td>
<td>Thirunaraiyur</td>
</tr>
<tr>
<td>Thiruppanthurai</td>
<td>Thiruvisanallur</td>
</tr>
<tr>
<td>Vanduvancheri</td>
<td>Vannakudi</td>
</tr>
<tr>
<td>Villiavarambal</td>
<td>Visalur</td>
</tr>
</tbody>
</table>

3.3.2 PAPANASAM

Papanasam is a panchayat town in Thanjavur district in the Indian state of Tamil Nadu. The town is 25 km from Tanjore and 15 km from Kumbakonam. There are 4 rivers named Cauvery, Thirumalairajan, Arasalaru and KudaMurutti.
Figure 5
Map showing the Panchayat Villages of Papanasam Block

<table>
<thead>
<tr>
<th>Number of Panchayat Villages</th>
<th>34</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adhanur</td>
<td>Alavandipuram</td>
</tr>
<tr>
<td>Eachangudi</td>
<td>Ganapathiagraram</td>
</tr>
<tr>
<td>Govindanattucheri</td>
<td>Iluppaikorai</td>
</tr>
<tr>
<td>Kondhagai</td>
<td>Koonancheri</td>
</tr>
<tr>
<td>Melakabistalam</td>
<td>Olaipadi</td>
</tr>
<tr>
<td>Pasupathikoil</td>
<td>Perumalkoil</td>
</tr>
<tr>
<td>Ramanujapuram</td>
<td>Regunathapuram</td>
</tr>
<tr>
<td>Sarukkai</td>
<td>Sathiyamangalam</td>
</tr>
<tr>
<td>Soolamangalam</td>
<td>Thirumandangudi</td>
</tr>
<tr>
<td>Thiyagasamudram</td>
<td>Thurumbur</td>
</tr>
<tr>
<td>Umayalpuram</td>
<td>Umbalappadi</td>
</tr>
<tr>
<td>Veeramangudi</td>
<td></td>
</tr>
</tbody>
</table>

Source: Secondary Data
3.3.3 PERAVURANI

Peravurani is a block in Thanjavur district in the Indian State of Tamil Nadu. Peravurani is located at 10°18’N 79°11’E10.3°N 79.18°E. It has an average elevation of 16 metres (52 feet).

At the 2001 India census, Peravurani had a population of 21,025. Males constituted 49Percentage of the population and females 51Percentage. Peravurani has an average literacy rate of 70Percentage, higher than the national average of 59.5Percentage: male literacy is 79Percentage, and female literacy is 63Percentage. In Peravurani, 11Percentage of the population is under 6 years of age.

The surrounding villages of this town are very beautiful covered with coconut plantations. Manora, an eight storeyed victory tower built by the Maratha King Saraboji in 1814 to commemorate the victory of the British over Napoleon Bonaparte at Waterloo, is a well known tourist center locally. The name Manora is derived from the minaret meaning small minar. From the top of this tower, one has a panoramic view of the palm-fringed Bay of Bengal. The tower has also served as a light house. Manora is located about 15km east of Peravurani. Lord Sri Neelakanda Moorthy Temple is very famous in Peravurani. Banana and coconuts are exported from here to other states in India. There are 8 schools and 1 college respectively.
3.3.4 Pattukkottai

Pattukkottai Block is an urban town in Thanjavur district, Chola region, in the Indian state of Tamil Nadu. Pattukkottai is the 3rd largest
the Thanjavur district and is located in the Southern part of the district. It is a peaceful town situated in the Cauvery delta and comes under the Tropical Evergreen Forest region. It receives maximum rainfall during winter months.

Pattukkottai 10°26’N 79°19’E10.43°N 79.32°E is located along the southeast coast of India in the East-central region of Tamil Nadu. Pattukkottai Municipality covers an area of 21.83km², and has an average elevation of 5 meters (16 feet). Pattukkottai is 48 km from the city of Thanjavur. The coast of the Bay of Bengal is just 12 km away, with Manora fort 15 km away from this town.

Pattukkottai comes under the “As” region of the Koppen climate classification, as it is situated in Tropical region and receive its maximum rainfall during the winter months from October, November and December. Due to its geographical position, Pattukkottai experiences Hot and Humid climate and there is no extreme variation in seasonal temperature. As it is nearer to equator, the summer season starts from April and extends till early June. This period observes the hottest part of the year, locally known as “Agni Nakshatram” or “Khatri”.

Pattukkottai is a Taluk headquarter in the Thanjavur District. With a population of 3,70,288 Pattukkottai Taluk has the highest number of 175 Revenue villages in the district. Once Pattukkottai Taluk (Area : 906
miles or 2,350 square kms) was the largest Taluk in the Old Tanjore Madras Presidency.

Agriculture, using water from the Kaveri River for irrigation, is the mainstay of the area, though the town hosts a number of other businesses. Paddy and Coconut are the major crops. In Tamil Nadu after Pollachi, coconut cultivation has been extensively done in Pattukkottai surroundings on 30,000 hectares. Pattukkottai has been declared a Coir Cluster under a Central scheme called “Scheme Fund for Regeneration of Traditional industries” A coconut complex at Ponnavarayankottai near Pattukkottai is to be constructed at a cost of Rs.4 crore which will have sections for trading, grading coconuts and separating copra, drying yard, shops for traders, restrooms, information centre and parking lots. It would be extended in future depending upon the needs of farmers. There are also demands to set up industries to promote Coir-related products with value addition.

The city, which was historically ruled by Raja raja Cholas and Maratha King Serfoji Maharaja, is known for its ancient sculptures and temples. The Nadiyamman Koil temple is in the town itself.

There are 15 temples in Pattukkottai. There are 21 Primary Schools, 7 Middle Schools, 7 Secondary Schools, 7 higher secondary schools and 5 colleges respectively.
Figure 7

Map showing the Panchayat Villages of Pattukkottai Block

Pattukkottai Block - Panchayat Villages

<table>
<thead>
<tr>
<th>Number of Panchayat Villages</th>
<th>43</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aladikkumulai</td>
<td></td>
</tr>
<tr>
<td>Anaikkadu</td>
<td></td>
</tr>
<tr>
<td>Athikkottai</td>
<td></td>
</tr>
<tr>
<td>Enathi</td>
<td></td>
</tr>
<tr>
<td>Eripurakkarai</td>
<td></td>
</tr>
<tr>
<td>Kalugupulikkadu</td>
<td></td>
</tr>
<tr>
<td>Karambayam</td>
<td></td>
</tr>
<tr>
<td>Kargavayal</td>
<td></td>
</tr>
<tr>
<td>Kondikulam</td>
<td></td>
</tr>
<tr>
<td>Mahilankottai</td>
<td></td>
</tr>
<tr>
<td>Malavenirkadu</td>
<td></td>
</tr>
<tr>
<td>Maliakkadu</td>
<td></td>
</tr>
<tr>
<td>Mudalcheri</td>
<td></td>
</tr>
<tr>
<td>Naduvikkottai</td>
<td></td>
</tr>
<tr>
<td>Nambivayal</td>
<td></td>
</tr>
<tr>
<td>Narasingapuram</td>
<td></td>
</tr>
<tr>
<td>Nattuchalai</td>
<td></td>
</tr>
<tr>
<td>Othiadikkadu</td>
<td></td>
</tr>
<tr>
<td>Palamuthi</td>
<td></td>
</tr>
<tr>
<td>Palanjur</td>
<td></td>
</tr>
<tr>
<td>Pallikondan</td>
<td></td>
</tr>
<tr>
<td>Pannavayal</td>
<td></td>
</tr>
<tr>
<td>Parakkalkkottai</td>
<td></td>
</tr>
<tr>
<td>Ponnavarayankottai</td>
<td></td>
</tr>
<tr>
<td>Pudukkottai Ullur</td>
<td></td>
</tr>
<tr>
<td>Rajamadam</td>
<td></td>
</tr>
<tr>
<td>Santhankadu</td>
<td></td>
</tr>
</tbody>
</table>
3.3.5 THANJAVUR

Thanjavur block is a revenue block in the Thanjavur taluk of Thanjavur district, Tamil Nadu, India. There are a total of 61 villages in this block.

Figure 8

Map showing the Panchayat Villages of Thanjavur Block
### Thanjavur Block - Panchayat Villages

<table>
<thead>
<tr>
<th>Number of Panchayat Villages</th>
<th>61</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alakudi</td>
<td>Chitrakudi</td>
</tr>
<tr>
<td>K.vallundampattu</td>
<td>Kadakadappai</td>
</tr>
<tr>
<td>Kandithampattu</td>
<td>Kasanadu Pudur</td>
</tr>
<tr>
<td>Kollangarai</td>
<td>Kondavittanthidal</td>
</tr>
<tr>
<td>Kulichapattu</td>
<td>Kurungulur</td>
</tr>
<tr>
<td>Kurungulam West</td>
<td>Kuruvadipatti</td>
</tr>
<tr>
<td>Manakkarambai</td>
<td>Manangorai</td>
</tr>
<tr>
<td>Marudhakudi</td>
<td>Marungulam</td>
</tr>
<tr>
<td>Mathur West</td>
<td>Melaveli</td>
</tr>
<tr>
<td>N.vallundampattu</td>
<td>Nagathi</td>
</tr>
<tr>
<td>Nanjikkottai</td>
<td>Narasanayagipuram</td>
</tr>
<tr>
<td>Palliyeri</td>
<td>Perambur I Sethi</td>
</tr>
<tr>
<td>Pillaiyarpatti</td>
<td>Pillayarnatham</td>
</tr>
<tr>
<td>Rajendram</td>
<td>Ramanathapuram</td>
</tr>
<tr>
<td>Rayanthur</td>
<td>Sakkarasamandam</td>
</tr>
<tr>
<td>Siralur</td>
<td>Soorakkottai</td>
</tr>
<tr>
<td>Thenperambur</td>
<td>Thirumalaisamudram</td>
</tr>
<tr>
<td>Thittai</td>
<td>Thottakadu</td>
</tr>
<tr>
<td>Thuraiyur</td>
<td>Uamayaval Arcadu</td>
</tr>
<tr>
<td>Valamirankottai</td>
<td>Vallampudur</td>
</tr>
<tr>
<td>Vilar</td>
<td>Vallampur</td>
</tr>
</tbody>
</table>

### 3.4. METHODOLOGY

Though Thanjavur district is predominantly an agricultural area, recent infrastructural development in the district has paved the way for industrial growth and also for the emergence of entrepreneurs in large numbers, including a significant number of women entrepreneurs. It is also apt to and area in which the entrepreneurial activity has its beginning. Thus,
Thanjavur district obviously became the natural choice to take up a study the problems of women entrepreneurs.

3.5. SELECTION OF RESPONDENTS

In order to determine the total size of the universe in Thanjavur District the researcher approached District Industries Centre (DIC) to get the record or registered women entrepreneurs. The record showed 2130 registered women entrepreneurs in 2005-06. Further, to include the women entrepreneurs who were not under the fold of DIC the researcher adopted snowball method of investigation by asking the known women entrepreneurs to help in locating others. By this method 994 women entrepreneurs form different areas were identified. Thus, a total of 3124 women entrepreneurs formed the universe. Of them 2130 were registered women entrepreneurs of DIC and 994 were unregistered women entrepreneurs to study the prospects and problems of women Thanjavur district, stratified random sampling technique was adopted to the women respondents from the universe. The sample for the study of 300 women entrepreneurs selected by stratified random sampling from the universe of 3124 women entrepreneurs. The selection of sample been made at three levels viz. taluk-wise, sector-wise and business unit. The following tree chart and table explains the method of selection of in these three levels.
Distribution of sample women entrepreneurs in Thanjavur District

(300)

Thiruvidaimaruthur
(37)
M  T  S
9  16  12

Papanasam
(45)
M  T  S
15 13 17

Peravurani
(64)
M  T  S
10 37 17

Thanjavur
(99)
M  T  S
47 32 20

Pattukkottai
(55)
M  T  S
15 25 15

M – Manufacturing ; T – Trading ; S - Service
TABLE NO. 3.23

TALUK-DISTRIBUTION OF SAMPLE WOMEN ENTREPRENEURS

<table>
<thead>
<tr>
<th>Sl. No</th>
<th>Taluk</th>
<th>Manufacturing</th>
<th>Trading</th>
<th>Service</th>
<th>Total</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Thiruvaidamaruthur</td>
<td>9</td>
<td>16</td>
<td>12</td>
<td>37</td>
<td>12.3</td>
</tr>
<tr>
<td>2.</td>
<td>Papanasam</td>
<td>15</td>
<td>13</td>
<td>17</td>
<td>45</td>
<td>15.0</td>
</tr>
<tr>
<td>3.</td>
<td>Peravurani</td>
<td>10</td>
<td>37</td>
<td>17</td>
<td>64</td>
<td>21.3</td>
</tr>
<tr>
<td>4.</td>
<td>Thanjavur</td>
<td>47</td>
<td>32</td>
<td>20</td>
<td>99</td>
<td>33.1</td>
</tr>
<tr>
<td>5.</td>
<td>Pattukkottai</td>
<td>15</td>
<td>25</td>
<td>15</td>
<td>55</td>
<td>18.3</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>96</td>
<td>123</td>
<td>81</td>
<td>300</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Compiled from the records of DIC

Since the women entrepreneurs are involved in various entrepreneurial activities, the sample entrepreneurs ought to represent different kinds of business units. Hence, all these units were classified under the three major categories namely Manufacturing, Trading and Service to proportionately select sample respondents. Subsequent Table explains the manner of selection of samples from three kinds of business.

TABLE NO. 3.24

SECTOR-WISE OF WOMEN ENTREPRENEURS

<table>
<thead>
<tr>
<th>Sector</th>
<th>Number of Women entrepreneurs</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturing</td>
<td>96</td>
<td>32</td>
</tr>
<tr>
<td>Trading</td>
<td>123</td>
<td>41</td>
</tr>
<tr>
<td>Service</td>
<td>81</td>
<td>27</td>
</tr>
<tr>
<td>Total</td>
<td>300</td>
<td>100</td>
</tr>
</tbody>
</table>

Sources: Compiled from records of DIC
In addition to the above, care was taken to ensure that adequate representation had been given for different types of Manufacturing, Trading and Service related activities.

**TABLE NO 3.25**

**UNIT-WISE SAMPLE OF WOMEN ENTREPRENEURS**

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Units</th>
<th>Number of Units</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Manufacturing</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>Household articles</td>
<td>16</td>
<td>5.3</td>
</tr>
<tr>
<td>2.</td>
<td>Food items</td>
<td>6</td>
<td>2.0</td>
</tr>
<tr>
<td>3.</td>
<td>Tailoring</td>
<td>41</td>
<td>13.6</td>
</tr>
<tr>
<td>4.</td>
<td>Fabrication</td>
<td>11</td>
<td>3.7</td>
</tr>
<tr>
<td>5.</td>
<td>Gem cutting</td>
<td>5</td>
<td>1.6</td>
</tr>
<tr>
<td>6.</td>
<td>Rexin bag</td>
<td>3</td>
<td>1.1</td>
</tr>
<tr>
<td>7.</td>
<td>Flour mill</td>
<td>5</td>
<td>1.6</td>
</tr>
<tr>
<td>8.</td>
<td>Gift item</td>
<td>3</td>
<td>1.1</td>
</tr>
<tr>
<td>9.</td>
<td>Foot wear</td>
<td>3</td>
<td>1.1</td>
</tr>
<tr>
<td>10.</td>
<td>Hand gloves</td>
<td>3</td>
<td>1.1</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>96</strong></td>
<td><strong>32.2</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Trading</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>Saree and textile</td>
<td>35</td>
<td>11.6</td>
</tr>
<tr>
<td>2.</td>
<td>Grocery/Petty shop</td>
<td>31</td>
<td>10.3</td>
</tr>
<tr>
<td>3.</td>
<td>Departmental/Stationery/fancy</td>
<td>15</td>
<td>5.0</td>
</tr>
<tr>
<td>4.</td>
<td>Ready made garments</td>
<td>12</td>
<td>4.1</td>
</tr>
<tr>
<td>5.</td>
<td>Vegetable and flower</td>
<td>10</td>
<td>3.3</td>
</tr>
</tbody>
</table>
6. Gift and Handicraft  |  8  |  2.6  
7. Gold covering      |  5  |  1.6  
8. Plastic            |  4  |  1.3  
9. Medical            |  3  |  1.1  

| Total                | 123 |  40.9 |

**Service**

1. Beauty parlour      |  14 |  4.6  
2. Computer            |  28 |  9.3  
3. Catering            |  15 |  5.0  
4. Photostat/STD       |  24 |  8.0  

| Total                |  81 |  26.9 |

| Total                |  300|  100 |

Source: Compiled from the records of DIC

### 3.6. NATURE OF DATA

This study primarily depended on primary data collected from the sample respondent by the method of interview for analysis of data leading to the accomplishment of objectives and to the testing of hypotheses. These data were collected with the help of a structured interview schedule consisting of two parts. Part A included personal data of the respondents. Part B included queries related to the performance of the women entrepreneurs and access for the views of the women entrepreneurs regarding various issues. The required secondary data were also collected from various reports. A pilot study was conducted for the purpose of pre-testing the schedule. Among 30 women entrepreneurs selected from the three...
businesses. After analyzing the responses of the 30 women entrepreneurs with the suggestions of the experts, necessary addition and deletion were in the interview schedule for the final study.

The collected data through the above mentioned interview schedule were analysed with the help of predetermined statistical tools like frequency distribution mean, and Categorical Principal Component Analysis (CATPCA). The results were classified and tabulated to study the objectives.

3.7. PERIOD OF THE STUDY

The collection of data was started in June 2012. Since the study was spread over the entire Thanjavur district, it took twelve months to collect information from all the respondents.