

**NATURAL RESOURCES DATA BANK
THRISSUR**

**KERALA STATE LAND USE BOARD
VIKAS BHAVAN THIRUVANANTHAPURAM-33
2014**

P. MARYKUTTY IAS
Commissioner
Kerala State Land Use Board



KERALA STATE LAND USE BOARD

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PREFACE

Land Use planning is a process of determining future action through systematic evaluation of Land Resources. Through proper study of natural resources like land, water, biomass etc., land use planning can be effectively implemented for various purposes. For NRM basic information on natural resources, both spatial and nonspatial is absolutely essential. Planning reveals the scope of resources and how they can be meaningfully used in future. This publication, "Natural Resources Data Bank" will help in understanding the natural resources of the district especially in the context of decentralized planning.

Though many gaps might be there in this publication, I hope it would serve as an effective tool for planning at microlevel.

Thiruvananthapuram
26-02-2014

A handwritten signature in green ink, appearing to read 'P. Marykutty I.A.S.', with a horizontal line underneath.

P. MARYKUTTY I.A.S.
Land Use Commissioner

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GENERAL INFORMATION

Thrissur district the cultural capital of Kerala State came into existence on 1st July 1949. District has an area of 302919 ha consisting 16 blocks, 6 municipalities and 1 corporation. Being central region of the State, Thrissur lies between 10^o 10' and 10^o 46' North latitude and 75^o 57' and 76^o 54' East longitude. Based on physiographical features district is classified into four micro regions viz Thrissur coast, Thrissur plain, Wadakkanchery uplands and Kodassery forested hills. Forest is classified as moist deciduous and semi evergreen and covers an area of 81438 ha. Large forest reserves favourably affect the climate and induce more rain in the district. With vast stretches of evergreen forest Thrissur is blessed with natural habitat for variety of plants and animals. Mineral resources are not rich except fire clay and sand. Sandy, Alluvial, Laterite and forest soil are the four types of soil cover the whole area. Main river systems are Bharathapuzha, Keecheri, Puzhakkal, Karuvannur, Chalakkudy. Bharathapuzha is the second longest river of the State. Besides the conventional sources of irrigation like tanks, wells and private canals, Thrissur has five major irrigation schemes and a lot of minor irrigation schemes. Peringalkuth and Sholayar are the two major hydro electric projects. Watershed has become an acceptable unit of planning for optimum use and conservation of soil and water resources. Agriculture plays a vital role and total cropped area is 181287 ha during 2011-12 report. District stands 1st position in nutmeg cultivation and Plantation crops are also grown here. Thrissur has long tradition in the field of fishing and area extends 54 Km consisting 25 fishing villages. Animal husbandry also play a crucial role and there were 320675 live stock population and 1267838 poultry population during 2010-11 Animal husbandry reports. Land use categories observed in this district are builtup land, forest, water bodies, agriculture land, waste land and wet land. Major category of wasteland falls in miscellaneous polygon, land with dense scrub and land with open scrub. Wetland has a vital role in maintaining the fragile environmental balance. With its rich history and cultural heritage Thrissur is known as 'Cultural Capital' and 'Land of Poorams'. This revenue district is known for many famous industries including traditional industries and mills. Thrissur is rich with beautiful tourist spots, backwaters and pilgrim centres.

HISTORY

The word 'TRICHUR' is the anglicised version of Thrissur which again is the abbreviated form of 'Thrissivaperur' meaning the abode of Lord Siva. The district got its name from the headquarters town. It has recently shed its anglicized name and is now known as "Thrissur".

The district played a very important role in fostering trade relations between Kerala and outside world in the ancient and medieval periods. The sea port of Muziris of the Sangam age is the modern Kodungallur of Thrissur district. It had the unique distinction of being 'Primum Emporium India'. It played host to the three communities of Christians, Jews and the Muslims who contributed to the prosperity of "Malabar". During the Sangam age (the first four or five centuries of the Christian era) the whole of the present Thrissur district came under the early Chera Empire. The history of the district from the 9th to the 12th centuries is the history of Kulasekhara of Mahodayapuram and the history since the 12th century is synonymous with the history of the rise and growth of Perumpadappu Swarupam. But Mahodayapuram continues to enjoy its importance as the seat of Perumpadappu Swarupam for three more centuries from the 13th to the 15th century.

The 14th and the centuries constituted periods of aggressive wars. During this period the Zamorin of Calicut (belonging to Nedyiruppa Swarupam) was aiming at the political suzerainty of the region, which led to war between the Perumpadappu and the Nedyiruppa Swarupams. The Portuguese continued to dominate the scene till the beginning of the 17th century when its power in Kerala started declining.

The Dutch conquered the port of Cranganore (Kodungallur) and installed Prince Vira Kerala Varma Mootha Thavazhy on the throne of Cochin and entered into a treaty with him. The Zamorin along with the Dutch fought against Portuguese and conquered them from places like Mapranam, Arattupuzha, Urakam, Korattikara, Kadavallur etc.. From 1769 to 1805 Raja Varma popularly known as Sakthan Thampuran, was at the helm of affairs of Cochin State, though he actually ascended the throne in 1790. Thrissur district was in the forefront of the freedom struggle also. The State experimented on a type of diarchal system of government in which the administration of certain departments was entrusted with an elected member of the legislature to be nominated by Maharaja.

The present Thrissur district is a part of erstwhile Cochin State. Cochin State had formerly been divided into 'Nadus'. Each Nadu was under a chief. This position continued till the regaining of territories from Zamorin in 1763. These Nadus were subsequently divided into 'Kovilakathumvathukkals' or taluks. Each taluk was under the control of 'Karyakkar' exercising both judicial and executive powers. The taluks were further divided into 'Pravarthis'. This lowest unit of administration was managed by 'Pravarthiars' assisted by 'Menons' or accountants and 'Chandrakkars' or cash-keepers. The taluks were grouped into two divisions – Vadakkemugham and Thekkemugham. Each division was under the control of a 'Sarvadhikaryakkar'. The Cochin areas in the present Thrissur district formed part of the Vakakkemugham or the Northern subdivision. Valiya Sarvadhikaryakkar or Prime Minister was the head of the administration. Then Cochin State comprised of 10 Kovilakathumvathukkals (or taluks) viz., Cochin, Kanayannur, Cranganore (Kodungallur), Mukundapuram, Kodasseri, Talappilly, Chelakkara, Eramakkal, Thrissur and Chittoor. In 1860 the number of taluks was reduced. With effect from the 1st July 1949 a new district named Thrissur was formed with 6 taluks of the erstwhile Cochin State viz. Talappilly, Chittoor, Thrissur, Mukundapuram, Cranganore and Cochin-Kanayannur and taluks of erstwhile Travancore areas, namely, Kunnathunad and Parur.

KERALA AT A GLANCE

| | |
|---|---|
| Location | : North Latitude between 8 ⁰ 18' and 12 ⁰ 48' East Longitude between 74 ⁰ 52' and 77 ⁰ 22' |
| Area | : 38863 sq.km. |
| Forests | : 11309.42 sq.km. |
| Wetlands | : 1941 sq.km. |
| Percentage of area to the area of Indian Union | : 1.18 |
| Length of Coastal Line | : 590 km. |
| Highest Peak | : Anamudi (2694 metres) |
| Longest River | : Periyar (244 km.) |
| Rivers | |
| West flowing | : 41 Nos. |
| East flowing | : 3 Nos. |
| Administration | |
| Districts | : 14 Nos. |
| Taluks | : 63 Nos. |
| Revenue Villages | : 1478 Nos. |
| Village Panchayats | : 978 Nos. |
| Corporations | : 5 Nos. |
| Municipalities | : 60 Nos. |
| Cantonments | : 1 No. |
| Community Development Blocks | : 152 Nos. |
| Average Annual Rainfall | : 2900 m.m. |
| Cultivated Area | : 2.292 m.ha. |
| Per capita land | : 0.13 ha. |
| Per capita cultivated land | : 0.10 ha. |
| Per capita production food grain | : 37 kg/annum |
| Members in State Legislature | |
| Elected | : 140 Nos. |
| Nominated | : 1 No. |
| Members of Parliament from the State | |
| Lok Sabha | : 20 Nos. |
| Rajya Sabha | : 9 Nos. |

Table: 1.1

| Population | 1991 Census | 2001 Census | 2011 Census |
|------------------------------------|------------------------|------------------------|------------------------|
| Total population (lakhs) | 290.99 | 318.41 | 333.88 |
| Male population (lakhs) | 142.89 | 154.69 | 160.21 |
| Female Population (lakhs) | 148.10 | 163.73 | 173.66 |
| Density per sq.km. | 749 | 819 | 859 |
| Sex ratio (Females per 1000 males) | 1036 | 1058 | 1084 |
| Literacy (%) | 89.81 | 90.86 | 93.91 |
| Male Literacy | 93.62 | 94.24 | 96.02 |
| Female Literacy | 86.17 | 87.72 | 91.98 |
| Rural population (lakhs) | 214.18 | 235.75 | 174.56 |
| Urban population (lakhs) | 78.80 | 82.67 | 159.32 |
| Increase of population (%) | 13.88 | 9.43 | 4.86 |
| Life Expectancy (Years) | 68 | | 74 |
| Infant Mortality (per 1000) | 22 | 16 | 12 |
| Birth Rate (per 1000) | 19.8 | 18.3 | 14.7 |

THRISSUR AT A GLANCE

Table: 1.2

ADMINISTRATIVE SET UP

| Sl. No. | Particulars | Thrissur | State |
|---------|----------------------------------|----------|-------|
| 1 | No. of Revenue Divisions | 1 | 21 |
| 2 | No. of Taluks | 5 | 63 |
| 3 | No. of Revenue Villages | 254 | 1478 |
| 4 | No. of Corporations | 1 | 5 |
| 5 | No. of Municipalities | 6 | 60 |
| 6 | No. of Municipality Wards | 233 | 2216 |
| 7 | No. of Block Panchayat | 16 | 152 |
| 8 | No. of Block Panchayat Wards | 213 | 2095 |
| 9 | No. of Grama Panchayat | 88 | 978 |
| 10 | No. of Grama Panchayat Wards | 1501 | 16680 |
| 11 | No. of Assembly Constituencies | 13 | 140 |
| 12 | No. of Parliament Constituencies | 2 | 20 |
| 13 | No. of District Panchayat Wards | 29 | 332 |

Table: 1.3

DEMOGRAPHY

| Sl. No. | Particulars | Thrissur | State |
|---------|------------------|----------|----------|
| 1 | Total Population | 3110327 | 33387677 |
| 2 | No. of Literates | 2689229 | 28234227 |
| 3 | No. of Migrant | 174447 | 1625653 |

Table: 1.4

GEOGRAPHICAL PARTICULARS

| Sl. No. | Area Categorization | Thrissur | State |
|---------|------------------------------|----------|---------|
| 1 | Total Area (Ha) | 302919 | 3886287 |
| 2 | Forest Area (Ha) | 103619 | 1081509 |
| 3 | Length of Coastal Line (Kms) | 54 | 590 |

Table: 1.5

AGRICULTURE

| Sl. No. | Land Utilization Pattern | Thrissur | State |
|----------------|---|-----------------|--------------|
| 1 | Total geographical area | 302919 | 3886287 |
| 2 | Forest area | 103619 | 1081509 |
| 3 | Land put to non agricultural use | 37998 | 399924 |
| 4 | Barren & uncultivable land | 206 | 17552 |
| 5 | Permanent pastures and other grazing land | 0 | 85 |
| 6 | Land under misc. tree crops | 272 | 3366 |
| 7 | Cultivable waste | 6428 | 95437 |
| 8 | Fallow other than current fallow | 7927 | 57670 |
| 9 | Current fallow | 11241 | 77056 |
| 10 | Net area sown | 128895 | 2040132 |
| 11 | Area sown more than once | 52392 | 621625 |
| 12 | Total cropped area | 181287 | 2661757 |

Table: 1.6

ANIMAL HUSBANDRY

| Sl. No. | Livestock Population | Thrissur | State |
|----------------|-----------------------------|-----------------|--------------|
| 1 | Cattle | 134669 | 1740117 |
| 2 | Buffaloes | 8102 | 58145 |
| 3 | Goats | 170263 | 1729127 |
| 4 | Pigs | 7615 | 59017 |
| 5 | Sheep | 6 | 965 |
| 6 | Ducks | 57380 | 865331 |
| 7 | Fowls | 1146088 | 11820376 |

Table: 1.7

FISHERIES

| Sl. No. | Particulars | Thrissur | State |
|----------------|-------------------------|-----------------|--------------|
| 1 | Length of coastal line | 54 | 590 |
| 2 | No. of fishing villages | | |
| a) | Marine | 18 | 222 |
| b) | Inland | 8 | 113 |
| 3 | Fisher folk population | | |
| a) | Marine | 70182 | 957929 |
| b) | Inland | 20442 | 282344 |

Table: 1.8

INDUSTRIES

| Sl. No. | Industrial Units | Thrissur | State |
|----------------|---|-----------------|--------------|
| 1 | Number of Factories | 1082 | 18525 |
| 2 | Number of SSI units registered | 27465 | 205987 |
| 3 | Number of Women SSI units | 5525 | 52294 |
| 4 | Number of Industrial Co-operative Societies | 119 | 1113 |

Table: 1.9

COMMUNICATION

| Sl. No. | Communication Divisions | Thrissur | State |
|----------------|-------------------------------------|-----------------|--------------|
| 1 | Total Number of Post Offices | 485 | 5054 |
| a) | Number of Head Office | 3 | 51 |
| b) | Number of Sub Office | 71 | 1455 |
| c) | Number of ED Branch Office | 185 | 3560 |
| d) | Number of ED Sub Office | 0 | 2 |
| 2 | Total Number of Telephone Exchanges | 87 | 1245 |

Table: 1.10

HEALTH

| Sl. No. | Institutions | Thrissur | State |
|----------------|---------------------------------------|-----------------|--------------|
| 1 | General Hospital | 0 | 11 |
| 2 | Women & Children Hospital | 0 | 8 |
| 3 | District Hospital | 1 | 15 |
| 4 | Taluk Hospital | 8 | 80 |
| 5 | Primary Health Centre | 68 | 660 |
| 6 | Leprosy Control Unit/Hospitals | 0 | 3 |
| 7 | TB Centre/Clinic | 1 | 17 |
| 8 | Mental Health Centre | 1 | 3 |
| 9 | Number of Govt. Ayurvedic Hospitals | 16 | 119 |
| 10 | Number of Govt. Homeopathic Hospitals | 1 | 30 |

Table: 1.11

EDUCATION

| Sl. No. | Institutions | Thrissur | State |
|----------------|--|-----------------|--------------|
| 1 | Government Lower Primary Schools | 120 | 2607 |
| 2 | Government Upper Primary Schools | 55 | 924 |
| 3 | Government High Schools | 82 | 1089 |
| 4 | Government Higher Secondary Schools | 67 | 769 |
| 5 | Government Vocational Higher Secondary Schools | 26 | 261 |
| 6 | Teachers Training Institute | 17 | 222 |
| 7 | Kendriya Vidyalaya | 1 | 27 |
| 8 | Jawahar Navodaya Vidyalaya | 1 | 14 |
| 9 | CBSE School | 68 | 797 |
| 10 | ICSE School | 10 | 108 |
| 11 | Government Engineering Colleges | 1 | 9 |
| 12 | Government Medical Colleges | 1 | 5 |
| 13 | Government Polytechnic Colleges | 7 | 49 |

Table: 1.12

DRINKING WATER FACILITIES

| Sl. No. | Water Supply Connections | Thrissur | State |
|----------------|---------------------------------|-----------------|--------------|
| 1 | Number of Public Canals | 14690 | 85825 |
| 2 | Number of Public Wells | 203 | 603 |
| 3 | Number of Public Tanks | 260 | 1777 |
| 4 | Number of Tube Wells | 700 | 19716 |
| 5 | Number of Dug Wells | 37 | 423 |

Table: 1.13

POWER

| Sl.No. | Particulars | State |
|---------------|------------------------------|--------------|
| 1 | No. of Pump sets Energised | 524568 |
| 2 | No. of Streetlight Energised | 1202988 |
| 3 | No. of Transformers | 58104 |

Table: 1.14

WATER RESOURCES

| | |
|-----------------------|---------------|
| River | Bharathapuzha |
| | Keecheri |
| | Puzhakkal |
| | Karuvannur |
| | Chalakkudy |
| Brackish Water | Azhikode |
| | Kodungalloor |
| | Chettuva |
| | Pattikkara |
| | Manakkady |

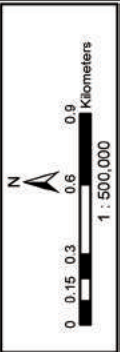
Table: 1.15

MAJOR TOURIST SPOTS

| Sl.No. | Tourist Centre | Focus |
|---------------|-----------------------|--------------------|
| 1 | Athirapilly | Water fall |
| 2 | Chavakkad | Beach |
| 3 | Cheppara | Rock group |
| 4 | Peruvanmala | Hillock |
| 5 | Snehatheeram | Beach |
| 6 | Vadanapilly | Beach |
| 7 | Vilangankunnu | Hillock |
| 8 | Punnathur cotta | Elephant sanctuary |



Based upon Survey of India map with the permission of the Surveyor General of India. The territorial waters of India extend into the sea to a distance of twelve nautical miles measured from the appropriate base line. © Government of India copyright, 2001



**ADMINISTRATIVE BOUNDARY
THRISSUR DISTRICT**

Legend

Blocks

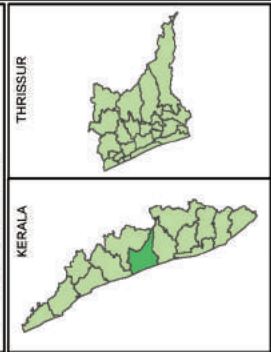
- ANTHIKKAD BLOCK
- CHALAKKUDI BLOCK
- CHAVAKKAD BLOCK
- CHEPPUBLOCK
- CHOWANNOOR BLOCK
- RINGALAKUDA BLOCK
- KODAKARA BLOCK
- MALA BLOCK
- MATHILAKOM BLOCK
- MULLASSERI BLOCK
- OLLOORHARA BLOCK
- RAZHAYANNUR BLOCK
- THALIKULAM BLOCK
- WIDAKKANCHERY BLOCK
- VELANGALLUR BLOCK
- PUZHAKKAL BLOCK

Municipalities

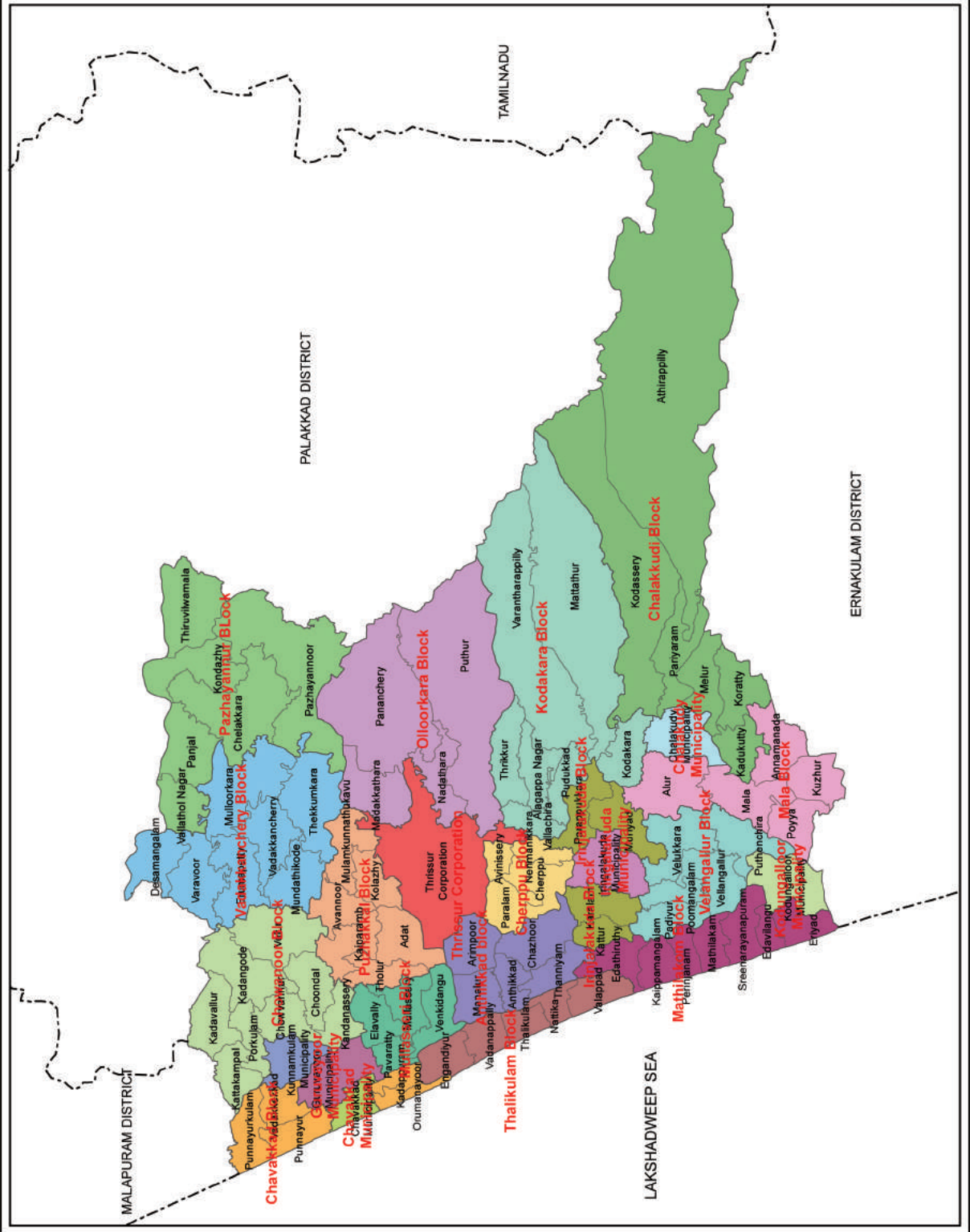
- CHALAKUDY MUNICIPALITY
- KODUNGALLOOR MUNICIPALITY
- KUNNAMKULAM MUNICIPALITY
- GURUWAYOOR MUNICIPALITY
- CHAVAKKAD MUNICIPALITY
- RINGALAKUDA MUNICIPALITY

Corporation

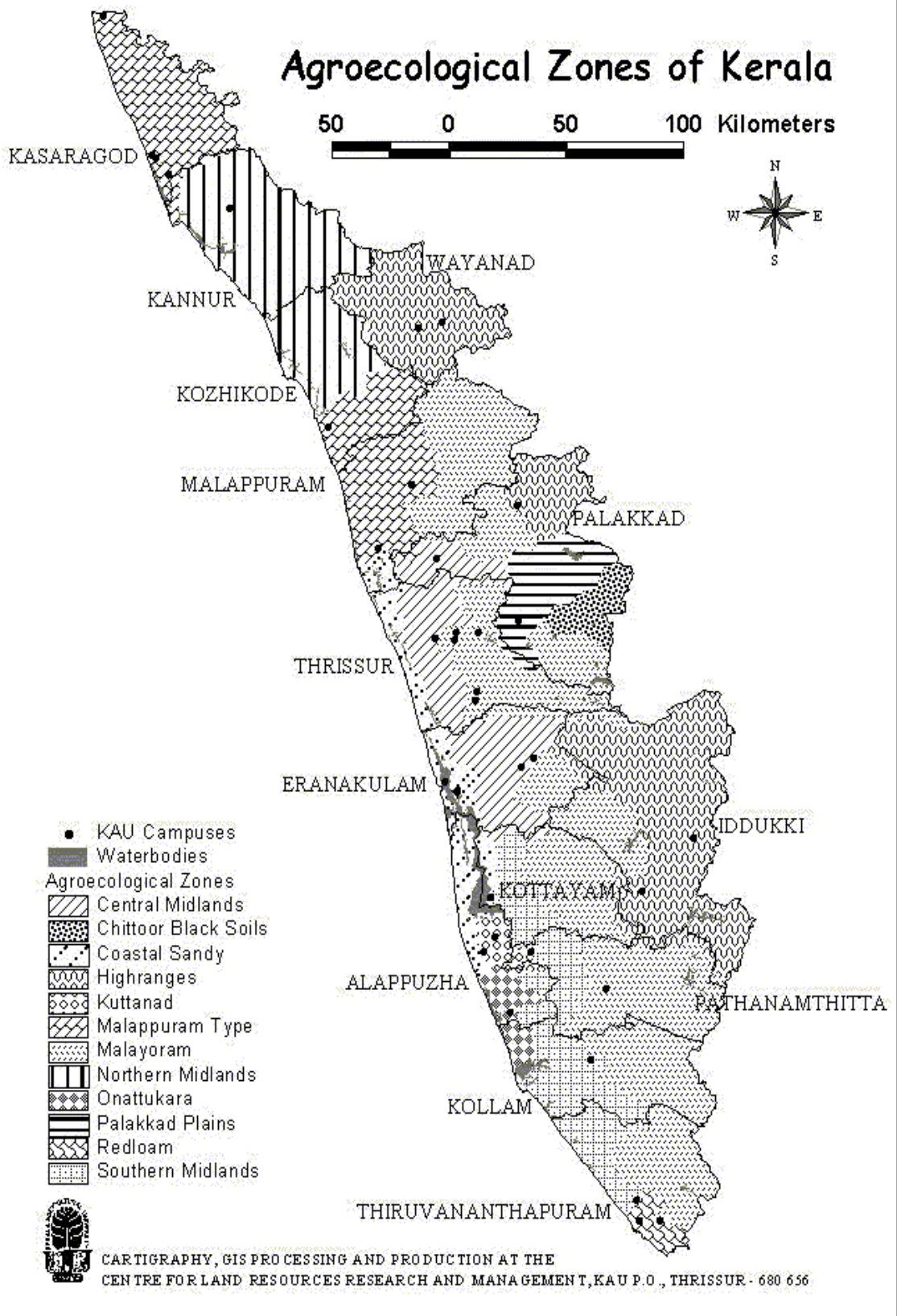
- THRISSUR CORPORATION



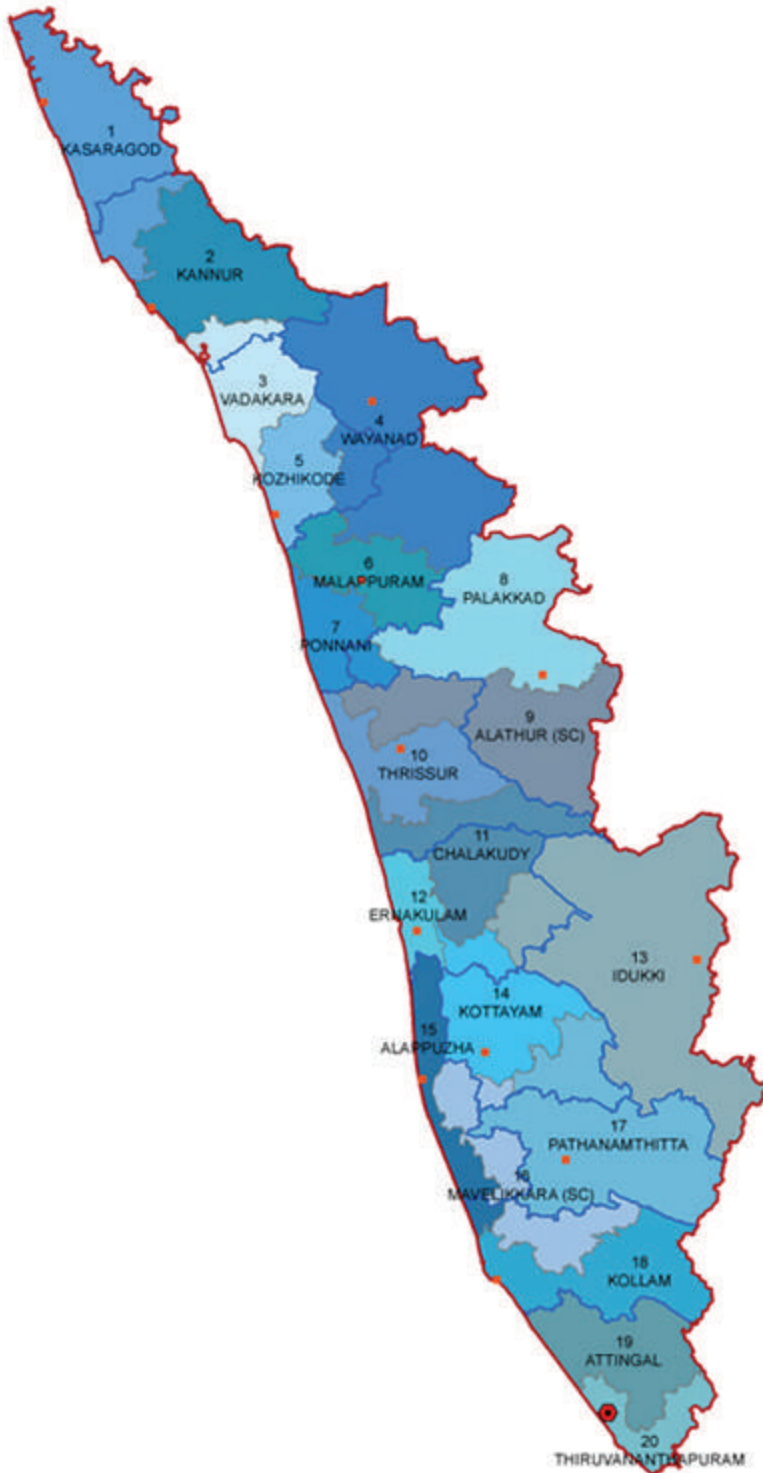
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Agroecological Zones of Kerala



Parliamentary Constituencies Kerala



Legend

- State Head Quarter
- District Head Quarters
- State Boundary
- District Boundary

Map compiled by NIC

DEMOGRAPHY

INDIA'S POPULATION – CENSUS 2011

Table: 4.1

| | |
|--|-----------------------------------|
| Current Population of India in 2011 | 1,210,193,422 (1.21 billion) |
| Total Male Population in India | 623,700,000 (623.7 million) |
| Total Female Population in India | 586,500,000 (586.5 million) |
| Sex Ratio | 940 females per 1,000 males |
| Age structure | |
| 0 to 25 years | 50% of India's current population |
| Currently, there are about 51 births in India in a minute. | |
| India's Population in 2001 | 1.02 billion |
| Population of India in 1947 | 350 million |

KEY FINDINGS OF THE CENSUS

- Population grows to 1.21 billion
- 181 million people added during 2001-11
- Growth declines to 17.64% from 21.15% during 1991-2001
- There are 623.7 million males and 586.5 million females
- India accounts for 17.5% of the world's population, China 19.4%
- First decade (with exception of 1911-1921) which saw addition of lesser people than the previous decade.
- Child sex ratio — 914 females against 1,000 males — lowest since independence
- Overall sex ratio rises by seven points — 940 females per 1,000 males
- Literacy rate goes up from 64.83% to 74.04%
- 74% people aged seven and above are literate
- 82.14% male literacy, 65.46% female literacy
- In 2001, male literacy was 75.26%, female literacy was 53.67%
- Delhi (11,297 people per square km) has the highest population density, followed by Chandigarh (9,252)
- Uttar Pradesh is the most populous state with 199 million people while Lakshadweep is the least populated at 64,429

Source: Census Report 2011

Table:4.2

CENSUS OF INDIA 2011-PROVISIONAL POPULATION TOTALS INDIA, KERALA STATE AND DISTRICTS

| India/State/ District | Area in sq.km. | Total Population | | | Population in age group 0-6 | | | Number of Literates | | |
|--------------------------|-------------------|------------------|------------------|------------------|-----------------------------|-----------------|-----------------|---------------------|------------------|------------------|
| | | Persons | Males | Females | Persons | Males | Females | Persons | Males | Females |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| INDIA | 31,66,285 | 1,21,01,93,422 | 62,37,24,248 | 58,64,69,174 | 15,87,89,287 | 8,29,52,135 | 7,58,37,152 | 77,84,54,120 | 444,203,762 | 334,250,358 |
| KERALA | 38,863 | 3,33,87,677 | 1,60,21,290 | 1,73,66,387 | 33,22,247 | 16,95,935 | 16,26,312 | 2,82,34,227 | 1,37,55,888 | 1,44,78,339 |
| Kasaragod | 1,992 | 13,02,600 | 6,26,617 | 6,75,983 | 1,49,280 | 76,149 | 73,131 | 10,36,289 | 5,17,031 | 5,19,258 |
| Kannur | 2,966 | 25,25,637 | 11,84,012 | 13,41,625 | 2,65,276 | 1,35,189 | 1,30,087 | 21,56,575 | 10,22,972 | 11,33,603 |
| Wayanad | 2,131 | 8,16,558 | 4,01,314 | 4,15,244 | 89,720 | 45,776 | 43,944 | 6,49,186 | 3,30,093 | 3,19,093 |
| Kozhikode | 2,344 | 30,89,543 | 14,73,028 | 16,16,515 | 3,23,511 | 1,64,800 | 1,58,711 | 26,34,493 | 12,76,384 | 13,58,109 |
| Malappuram | 3,550 | 41,10,956 | 19,61,014 | 21,49,942 | 5,52,771 | 2,81,958 | 2,70,813 | 33,28,658 | 16,08,229 | 17,20,429 |
| Palakkad | 4,480 | 28,10,892 | 13,60,067 | 14,50,825 | 2,88,366 | 1,46,947 | 1,41,419 | 22,32,190 | 11,19,360 | 11,12,830 |
| Thrissur | 3,032 | 31,10,327 | 14,74,665 | 16,35,562 | 2,89,126 | 1,48,428 | 1,40,698 | 26,89,229 | 12,86,141 | 14,03,088 |
| Ernakulam | 3,068 | 32,79,860 | 16,17,602 | 16,62,258 | 2,89,281 | 1,48,047 | 1,41,234 | 28,61,509 | 14,27,572 | 14,33,937 |
| Idukki | 4,358 | 11,07,453 | 5,51,944 | 5,55,509 | 1,00,107 | 51,132 | 48,975 | 9,28,774 | 4,74,988 | 4,53,786 |
| Kottayam | 2,208 | 19,79,384 | 9,70,140 | 10,09,244 | 1,68,563 | 86,113 | 82,450 | 17,45,694 | 8,59,038 | 8,86,656 |
| Alappuzha | 1,414 | 21,21,943 | 10,10,252 | 11,11,691 | 1,86,022 | 95,565 | 90,466 | 18,63,558 | 8,95,476 | 9,68,082 |
| Pathanamthi | 2,637 | 11,95,537 | 5,61,620 | 6,33,917 | 91,501 | 46,582 | 44,919 | 10,70,120 | 5,03,171 | 5,66,949 |
| Kollam | 2,491 | 26,29,703 | 12,44,815 | 13,84,888 | 2,38,062 | 1,21,484 | 1,16,581 | 22,42,757 | 10,76,509 | 11,66,248 |
| Thiruvananthapuram | 2,192 | 33,07,284 | 15,84,200 | 17,23,084 | 2,90,661 | 1,47,777 | 1,42,884 | 27,95,195 | 13,58,924 | 14,36,271 |

| India/State/ District | Literacy rate (in Percentage) | | | Percentage decadal growth rate of population 2001-11 | Sex Ratio (Number of Females per 1000 Males) | Sex Ratio 0-6 population |
|--------------------------|----------------------------------|--------------|-------------|---|--|--------------------------|
| | Persons | Males | Females | | | |
| 1 | 12 | 13 | 14 | 15 | 16 | 17 |
| INDIA | 74.04 | 82.14 | 65.46 | 17.64 | 940 | 914 |
| KERALA | 93.91 | 96.02 | 91.98 | 4.86 | 1084 | 959 |
| Kasaragod | 89.95 | 93.93 | 86.13 | 8.18 | 1079 | 960 |
| Kannur | 95.41 | 97.54 | 93.57 | 4.84 | 1133 | 962 |
| Wayanad | 89.32 | 92.84 | 85.94 | 4.6 | 1035 | 960 |
| Kozhikode | 95.24 | 97.57 | 93.16 | 7.31 | 1097 | 963 |
| Malappuram | 93.55 | 95.78 | 91.55 | 13.39 | 1096 | 960 |
| Palakkad | 88.49 | 92.27 | 84.99 | 7.39 | 1067 | 962 |
| Thrissur | 95.32 | 96.98 | 9385 | 4.58 | 1109 | 948 |
| Ernakulam | 95.68 | 97.14 | 94.27 | 5.6 | 1028 | 954 |
| Idukki | 92.2 | 94.84 | 89.59 | 1.93 | 1006 | 958 |
| Kottayam | 96.4 | 97.14 | 95.67 | 1.32 | 1040 | 957 |
| Alappuzha | 96.26 | 97.9 | 94.8 | 0.61 | 1100 | 947 |
| Pathanamthi | 96.93 | 97.7 | 96.26 | 3.12 | 1129 | 964 |
| Kollam | 93.77 | 95.83 | 91.95 | 1.72 | 1113 | 960 |
| Thiruvananthapuram | 92.66 | 94.6 | 90.89 | 2.25 | 1088 | 967 |

Source : Census Report 2011

CENSUS OF INDIA 2011-PROVISIONAL POPULATION TOTALS- RURAL AND URBAN DISTRIBUTION (INDIA, KERALA, DISTRICTS)

| INDIA/ STATE/ DISTRICT | Total / Rural/ Urban | Population | | | Percentage of child population in the age-group 0-6 | | | Literacy Rate | | | Sex ratio of total population | Sex ratio of child population in the age group 0-6 | Percentage share of urban population | |
|-----------------------------|----------------------|----------------|--------------|--------------|---|---------|---------|---------------|---------|---------|-------------------------------|--|--------------------------------------|--|
| | | Persons | Males # | Females | Persons | Males # | Females | Persons | Males # | Females | | | | |
| | | | | | | | | | | | | | | Percentage of decadal growth 2001-2011 |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| INDIA | T | 1,21,01,93,422 | 62,37,24,248 | 58,64,69,174 | 17.64 | 13.12 | 13.30 | 12.93 | 74.04 | 82.14 | 65.46 | 940 | 914 | 31.16 |
| | R | 83,30,87,662 | 42,79,17,052 | 40,51,70,610 | 17.19 | 14.11 | 14.32 | 13.90 | 68.91 | 78.57 | 65.75 | 947 | 919 | |
| | U | 37,71,05,760 | 19,58,07,196 | 18,12,98,564 | 18.12 | 10.93 | 11.07 | 10.78 | 84.98 | 89.67 | 79.92 | 926 | 902 | |
| KERALA | T | 3,33,87,677 | 1,60,21,290 | 1,73,66,387 | 4.86 | 9.95 | 10.59 | 9.36 | 93.91 | 96.02 | 91.98 | 1,084 | 959 | 47.72 |
| | R | 1,74,55,506 | 84,03,706 | 90,51,800 | -25.96 | 10.01 | 10.61 | 9.45 | 92.92 | 95.29 | 90.74 | 1,077 | 960 | |
| | U | 1,59,32,171 | 76,17,584 | 83,14,587 | 92.72 | 9.88 | 10.56 | 9.27 | 94.99 | 96.83 | 93.33 | 1,091 | 958 | |
| Kasaragod District | T | 13,02,600 | 6,26,617 | 6,75,983 | 8.18 | 11.46 | 12.15 | 10.82 | 89.85 | 93.93 | 86.13 | 1,079 | 960 | 38.78 |
| | R | 7,97,424 | 3,87,324 | 4,10,100 | -17.82 | 11.07 | 11.61 | 10.56 | 88.71 | 93.11 | 84.61 | 1,059 | 964 | |
| | U | 5,05,176 | 2,39,293 | 2,65,883 | 116.16 | 12.07 | 13.03 | 11.21 | 91.67 | 95.27 | 88.49 | 1,111 | 956 | |
| Kannur District | T | 25,25,637 | 11,84,012 | 13,41,625 | 4.84 | 10.50 | 11.42 | 9.70 | 95.41 | 97.54 | 93.57 | 1,133 | 962 | 65.05 |
| | R | 8,82,745 | 4,26,243 | 4,56,502 | -26.20 | 10.46 | 11.07 | 9.89 | 93.88 | 96.50 | 91.48 | 1,071 | 956 | |
| | U | 16,42,892 | 7,57,769 | 8,85,123 | 35.45 | 11.61 | 12.61 | 9.60 | 96.23 | 98.12 | 94.64 | 1,168 | 965 | |
| Wayanad District | T | 8,16,558 | 4,01,314 | 4,15,244 | 4.60 | 10.99 | 11.41 | 10.58 | 89.32 | 92.84 | 85.94 | 1,035 | 960 | 3.87 |
| | R | 7,84,981 | 3,85,922 | 3,99,059 | 4.52 | 10.99 | 11.40 | 10.59 | 89.22 | 92.77 | 85.82 | 1,034 | 960 | |
| | U | 31,577 | 15,392 | 16,185 | 6.64 | 11.03 | 11.58 | 10.52 | 91.63 | 94.58 | 88.87 | 1,052 | 955 | |
| Kozhikode District | T | 30,89,543 | 14,73,028 | 16,16,515 | 7.31 | 10.47 | 11.19 | 9.82 | 95.24 | 97.57 | 93.16 | 1,097 | 963 | 67.15 |
| | R | 10,14,765 | 4,85,654 | 5,29,111 | -42.33 | 10.91 | 11.63 | 10.25 | 94.79 | 97.42 | 92.41 | 1,089 | 961 | |
| | U | 20,74,778 | 9,87,374 | 10,87,404 | 88.42 | 10.26 | 10.97 | 9.61 | 95.47 | 97.64 | 93.52 | 1,101 | 964 | |
| Malappuram District | T | 41,10,956 | 19,61,014 | 21,49,942 | 13.39 | 13.45 | 14.38 | 12.60 | 93.65 | 95.78 | 91.55 | 1,096 | 960 | 44.19 |
| | R | 22,94,473 | 10,95,465 | 11,99,008 | -29.82 | 13.40 | 14.31 | 12.56 | 92.67 | 94.97 | 90.61 | 1,099 | 961 | |
| | U | 18,16,483 | 8,65,549 | 9,50,934 | 410.00 | 13.51 | 14.47 | 12.64 | 94.66 | 96.81 | 92.74 | 1,099 | 959 | |
| Palakkad District | T | 28,10,892 | 13,60,067 | 14,50,825 | 7.39 | 10.26 | 10.80 | 9.75 | 88.49 | 92.27 | 84.99 | 1,067 | 962 | 24.09 |
| | R | 21,33,689 | 10,31,940 | 11,01,789 | -5.63 | 10.39 | 10.94 | 9.88 | 87.23 | 91.27 | 83.49 | 1,068 | 964 | |
| | U | 6,77,193 | 3,28,127 | 3,49,066 | 89.92 | 9.84 | 10.37 | 9.34 | 92.45 | 95.41 | 89.70 | 1,064 | 958 | |
| Thrissur District | T | 31,10,327 | 14,74,665 | 16,35,662 | 4.58 | 9.30 | 10.07 | 8.60 | 96.32 | 96.96 | 93.95 | 1,109 | 948 | 67.19 |
| | R | 10,20,537 | 4,85,875 | 5,34,662 | -52.20 | 9.43 | 10.13 | 8.79 | 93.99 | 96.09 | 92.11 | 1,100 | 955 | |
| | U | 20,89,790 | 9,88,790 | 11,01,000 | 148.95 | 9.23 | 10.03 | 8.51 | 95.97 | 97.41 | 94.70 | 1,113 | 944 | |
| Ernakulam District | T | 32,79,860 | 16,17,602 | 16,62,258 | 5.60 | 8.82 | 9.16 | 8.50 | 95.68 | 97.14 | 94.27 | 1,028 | 954 | 68.07 |
| | R | 10,47,296 | 5,18,040 | 5,29,256 | -35.70 | 8.44 | 8.74 | 8.16 | 94.34 | 95.96 | 92.76 | 1,022 | 954 | |
| | U | 22,32,564 | 10,99,562 | 11,33,002 | 51.15 | 9.00 | 9.35 | 8.65 | 96.32 | 97.70 | 94.98 | 1,030 | 954 | |
| Idukki District | T | 11,07,453 | 5,51,944 | 5,55,509 | -1.93 | 9.04 | 9.26 | 8.82 | 92.03 | 94.84 | 89.59 | 1,006 | 956 | 4.70 |
| | R | 10,55,428 | 5,26,420 | 5,29,008 | -1.51 | 9.02 | 9.24 | 8.80 | 92.03 | 94.73 | 89.34 | 1,005 | 957 | |
| | U | 52,025 | 25,524 | 26,501 | -9.67 | 9.49 | 9.83 | 9.16 | 95.74 | 97.10 | 94.45 | 1,038 | 968 | |
| Kottayam District | T | 19,79,384 | 9,70,140 | 10,09,244 | 1.32 | 8.52 | 8.88 | 8.17 | 96.40 | 97.17 | 95.67 | 1,040 | 957 | 28.58 |
| | R | 14,13,773 | 6,94,308 | 7,19,465 | -14.52 | 8.56 | 8.91 | 8.23 | 97.17 | 97.97 | 96.40 | 1,036 | 957 | |
| | U | 5,65,611 | 2,75,832 | 2,89,779 | 88.66 | 8.41 | 8.80 | 8.03 | 94.49 | 95.16 | 93.98 | 1,051 | 956 | |
| Alappuzha District | T | 21,21,943 | 10,10,252 | 11,11,691 | 0.61 | 8.77 | 9.46 | 8.14 | 96.26 | 97.90 | 94.80 | 1,100 | 947 | 54.06 |
| | R | 9,74,916 | 4,62,571 | 5,12,346 | -34.47 | 9.08 | 9.82 | 8.42 | 96.72 | 98.24 | 95.38 | 1,108 | 950 | |
| | U | 11,47,027 | 5,47,681 | 5,99,346 | 84.57 | 8.50 | 9.16 | 7.90 | 95.87 | 97.62 | 94.30 | 1,094 | 944 | |
| Pathanamthitta District | T | 11,95,537 | 5,61,620 | 6,33,917 | -3.12 | 7.65 | 8.29 | 7.09 | 96.93 | 97.70 | 96.26 | 1,129 | 964 | 11.00 |
| | R | 10,64,076 | 4,99,745 | 5,64,331 | -4.16 | 7.65 | 8.29 | 7.08 | 96.87 | 97.64 | 96.19 | 1,129 | 964 | |
| | U | 1,31,461 | 61,875 | 69,586 | 6.19 | 7.70 | 8.32 | 7.15 | 97.42 | 98.15 | 96.79 | 1,125 | 967 | |
| Kollam District | T | 26,29,703 | 12,44,815 | 13,84,888 | 1.72 | 9.05 | 9.76 | 8.42 | 93.77 | 95.83 | 91.95 | 1,113 | 960 | 45.11 |
| | R | 14,43,363 | 6,78,989 | 7,64,394 | -31.89 | 9.02 | 9.78 | 8.35 | 94.10 | 96.15 | 92.30 | 1,126 | 961 | |
| | U | 11,86,340 | 5,65,846 | 6,20,494 | 154.59 | 9.09 | 9.73 | 8.50 | 93.38 | 95.46 | 91.52 | 1,097 | 958 | |
| Thiruvananthapuram District | T | 35,07,284 | 15,64,200 | 17,23,084 | 2.25 | 8.79 | 9.33 | 8.29 | 92.66 | 94.60 | 90.89 | 1,088 | 967 | 53.80 |
| | R | 15,28,030 | 7,25,230 | 8,02,800 | -28.69 | 9.15 | 9.82 | 8.55 | 91.98 | 94.27 | 89.95 | 1,107 | 963 | |
| | U | 17,79,254 | 8,58,970 | 9,20,284 | 62.99 | 8.48 | 8.91 | 8.07 | 93.24 | 94.89 | 91.71 | 1,071 | 970 | |

Males include both males and others

| ADMINISTRATIVE UNITS-KERALA | | | | |
|--------------------------------|------|----|-------|-------|
| No. of Districts | 2001 | | 2011 | |
| | 14 | 14 | 63 | 63 |
| No. of Sub-Districts (Talukas) | | | | |
| No. of Towns | | | 199 | 520 |
| No. of Villages | | | 1,364 | 1,018 |
| Percentage of urban population | | | 25.96 | 47.72 |

| NUMBER OF TOWNS AND URBAN POPULATION IN KERALA | |
|--|------------------|
| Census Year | Urban population |
| 1901 | 21 |
| 1911 | 27 |
| 1921 | 44 |
| 1931 | 53 |
| 1941 | 62 |
| 1951 | 94 |
| 1961 | 92 |
| 1971 | 88 |
| 1981 | 106 |
| 1991 | 197 |
| 2001 | 159 |
| 2011 | 520 |

| GROWTH IN NO. OF TOWNS (KERALA) | | |
|----------------------------------|------|------|
| Towns | 2001 | 2011 |
| STs | 60 | 59 |
| CTs | 99 | 461 |
| Total | 159 | 520 |
| % Growth (Rounded to next digit) | | -2% |
| | | 366% |
| | | 227% |

Some Concepts and Definitions

What is census?

Population census is the total process of collecting, compiling, analyzing or otherwise disseminating demographic, economic and social data pertaining, at a specific time, to all persons in a country or a well defined part of a country. As such, the census provides a snapshot of the country's population and housing at a given point of time.

Classification of Area:

For Census purposes total geographical area is broadly classified into Rural and Urban.

Urban: Constituents of urban areas are Statutory Towns, Census Towns and Outgrowths.

Statutory Town (ST): All places with a municipality, corporation, cantonment board or notified town area committee etc. No. of STs in Kerala: 59*

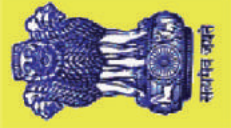
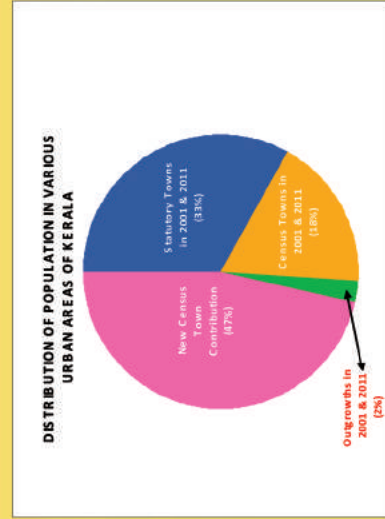
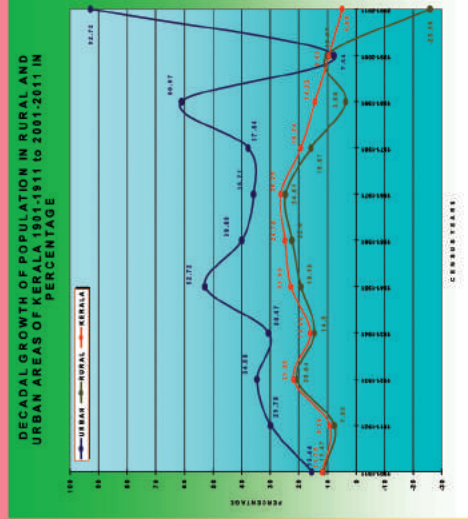
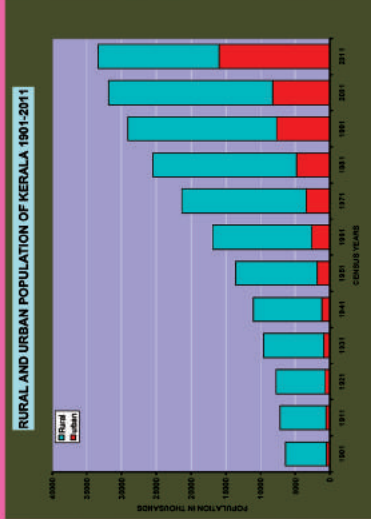
Census Town (CT): Places that satisfy the following criteria are termed as Census Towns (CTs). (a) A minimum population of 5000 (b) At least 75% of the male main working population engaged in non-agricultural pursuits (c) A density of population of at least 400 per sq.km No. of CTs in Kerala: 461 *

Out Growth (OG): Out Growth should be a viable unit such as a village or part of a village contiguous to a statutory town and possess the urban features in terms of infrastructure and amenities such as pucca roads, electricity, taps, drainage system, education institutions, post offices, medical facilities, banks, etc. Examples of OGs are Railway colonies, University campuses, Port areas, that may come up near a city or statutory towns outside its statutory limits but within the revenue limit of a village or villages contiguous to the town or city. No. of OGs in Kerala: 16 *

Urban Agglomeration (UA): It is a continuous urban spread constituting a town and its adjoining urban outgrowths (OGs) or two or more physically contiguous towns together and any adjoining urban out-growths of such towns. No. of UAs in Kerala: 19 *

Rural: All areas other than urban are rural. The basic unit for rural areas is the revenue village. No. of Villages in Kerala: 1018 *

* All administrative units are as on 31.12.2009, the date of freezing of administrative boundaries for Census.



CENSUS OF INDIA 2011

SUMMARY OF PROVISIONAL POPULATION FIGURES KERALA

RURAL - URBAN DISTRIBUTION

Census of India, 2011 is the second Census of the 21st century and 7th Census after Independence. The provisional results of 2011 show that Population of Kerala as on 1st March 2011 is 3,33,87,677 with 1,74,55,506 in Rural and 1,59,32,171 in Urban.



Our Census, Our Future

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METEOROLOGY

Meteorology is the interdisciplinary scientific study of the atmosphere. Meteorology, climatology, atmospheric physics and atmospheric chemistry are sub-disciplines of the atmospheric sciences. Meteorology and hydrology compose the interdisciplinary field of hydrometeorology. Interactions between Earth's atmosphere and the oceans are part of coupled ocean-atmosphere studies. Weather information and forecasts are of vital importance to many activities like agriculture, aviation, shipping, fisheries, tourism, defense, industrial projects, water management and disaster mitigation. Kerala's climate condition is divided into four seasons viz Winter, Summer, South-West monsoon and North-East monsoon.

Thrissur district has a tropical climate with an oppressive hot season, plentiful and seasonal rainfall. The summer season is from March to end of May and average temperature is 33⁰ c while the minimum temperature recorded is 22⁰ c. The large forest reserves favourably affect the climate and induce more rain in the district. South-West monsoon season (Edavapathi) begins by the end of May or early June. District receives most of its annual rainfall in this season and average annual rainfall is 3000 mm. Second rainy season is North-East monsoon season (Thulavarsham) starts from October to November. December, January, February is the coolest months of the year.

Table: 5.1

RAINFALL DISTRIBUTION 2011-12

(Rainfall in m.m)

| 2011 | | | | | | |
|----------------|-------|-------|-------|-------|-------|------|
| District/State | Jul | Aug | Sep | Oct | Nov | Dec |
| Thrissur | 537.6 | 584.6 | 479.7 | 247.3 | 173.1 | 4.0 |
| Kerala | 539.3 | 496.9 | 389.7 | 232.3 | 168.1 | 49.9 |

| 2012 | | | | | | |
|----------------|-----|-----|------|-------|-------|-------|
| District/State | Jan | Feb | Mar | Apr | May | June |
| Thrissur | 1.5 | 0.1 | 8.6 | 185.4 | 129.8 | 598.1 |
| Kerala | 7.3 | 9.1 | 29.5 | 197.5 | 83.5 | 444.9 |

| 2011-12 | | | |
|----------------|--------|---------|-----------|
| District/State | Actual | Normal | Departure |
| Thrissur | 2949.8 | 3063.4 | -3.7 |
| Kerala | 2639.4 | 2939.75 | -10.2 |

Source: Agricultural Statistics, 2012 (DES)

Table: 5.2

NORTH EAST & SOUTH WEST MONSOON RAINFALL

| 1 Oct - 31 Dec 2012 (N.E) | | | |
|---------------------------|-----------------|-----------------|-------------|
| Thrissur | Actual Rainfall | Normal Rainfall | % Departure |
| | | 295.4 | 469.5 |

| 1 Jun - 30 Sep 2013 (S.W) | | | |
|---------------------------|-----------------|-----------------|-------------|
| Thrissur | Actual Rainfall | Normal Rainfall | % Departure |
| | | 2457.5 | 2197.5 |

Source: IMD

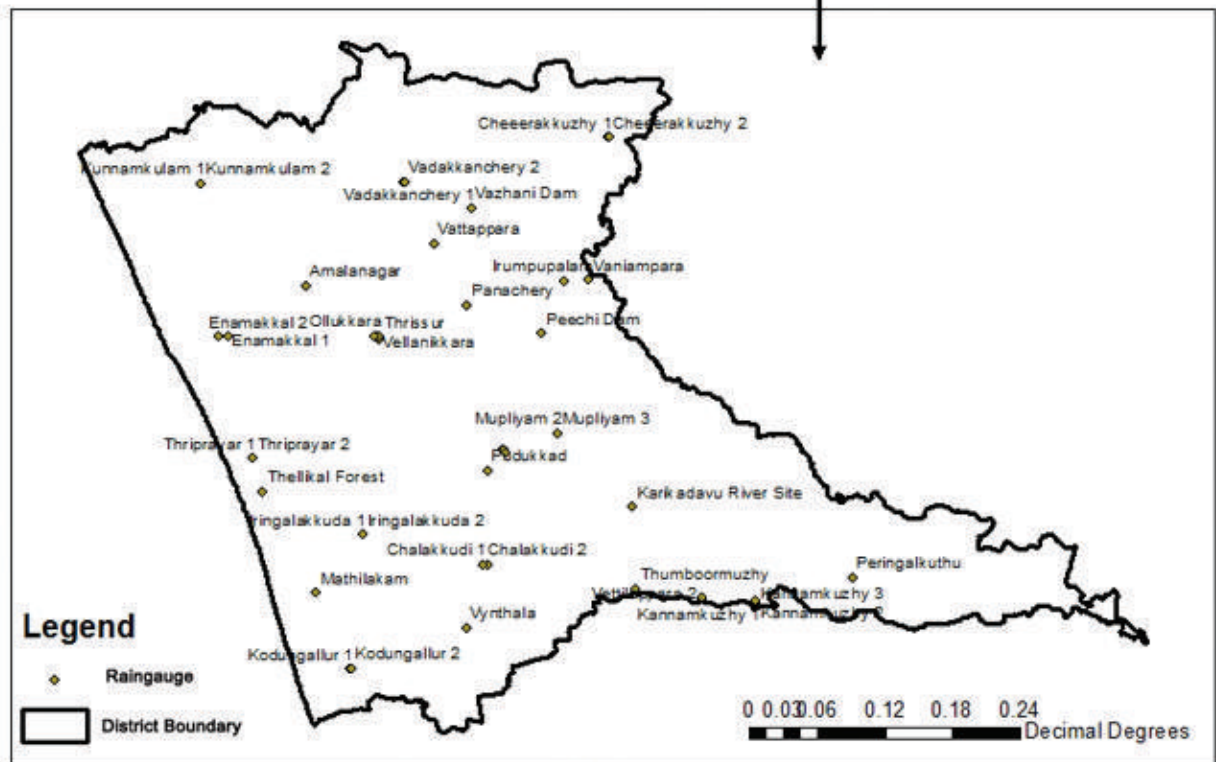
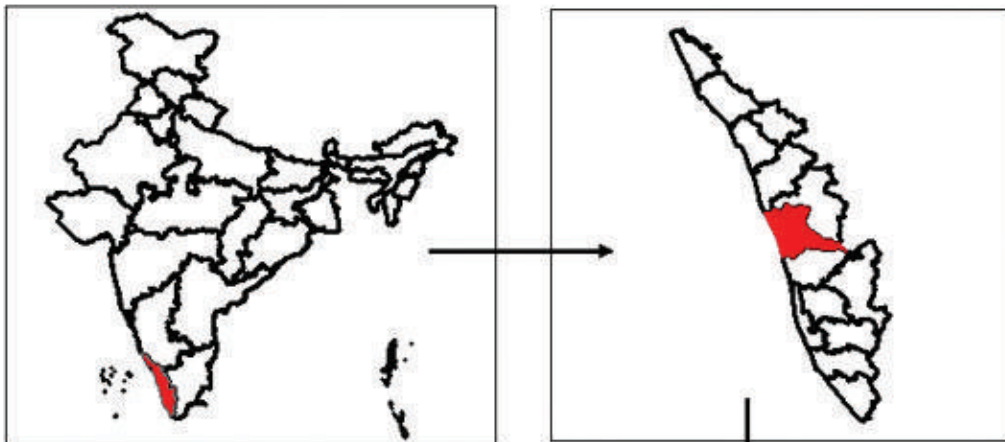
Table: 5.3

District wise Actual Rainfall, Normal Rainfall and Percentage of Departure for the year 2012

| Sl. No. | Districts/ Sub division | Pre-Monsoon Rainfall (Mar to May) | | | South West Monsoon Rainfall (Jun to Sep) | | | North East Monsoon Rainfall (Oct to Dec) | | |
|-----------|----------------------------|--------------------------------------|----------------------------|--------------------------------|---|----------------------------|--------------------------------|---|----------------------------|--------------------------------|
| | | Actual Rainfall (mm) | Normal Rainfall (mm) | Percentage departure (%) | Actual Rainfall (mm) | Normal Rainfall (mm) | Percentage departure (%) | Actual Rainfall (mm) | Normal Rainfall (mm) | Percentage departure (%) |
| 1 | Alappuzha | 430.2 | 477.3 | -10 | 1089.7 | 1745.9 | -38 | 261.7 | 571.7 | -54.0 |
| 2 | Kannur | 95.9 | 300.4 | -68 | 2317.9 | 2669.0 | -13 | 247.3 | 344.8 | -28.0 |
| 3 | Ernakulam | 544 | 443.7 | 23 | 1554.3 | 2065.0 | -25 | 485.1 | 489.1 | -1.0 |
| 4 | Idukki | 432.1 | 426.6 | 1 | 1804.1 | 2276.3 | -21 | 355.4 | 564.5 | -37.0 |
| 5 | Kasaragod | 134.6 | 272.5 | -51 | 2739.3 | 3007.1 | -9 | 172.5 | 337.4 | -49.0 |
| 6 | Kollam | 452.0 | 469.3 | -4 | 800.5 | 1332.1 | -40 | 368.7 | 638.9 | -42.0 |
| 7 | Kottayam | 429.8 | 460.1 | -7 | 1397.7 | 1897.9 | -26 | 423.7 | 535.4 | -21.0 |
| 8 | Kozhikode | 155.6 | 352.9 | -56 | 2359.5 | 2602.8 | -8 | 374.1 | 422.1 | -11.0 |
| 9 | Malappuram | 203.3 | 320.6 | -37 | 1558.8 | 2060.7 | -24 | 221.8 | 448.2 | -51.0 |
| 10 | Palakkad | 212.4 | 279.5 | -24 | 1223.1 | 1572.0 | -22 | 262.6 | 427.5 | -39.0 |
| 11 | Pathanamthitta | 450.6 | 553.3 | -19 | 1040.1 | 1715.0 | -39 | 305.0 | 623.7 | -51.0 |
| 12 | Thiruvananthapuram | 279.5 | 368.8 | -24 | 492.7 | 871.4 | -43 | 332.7 | 522.6 | -36.0 |
| 13 | Thrissur | 315.0 | 385.2 | -18 | 1739.6 | 2197.5 | -21 | 295.4 | 469.5 | -37.0 |
| 14 | Wayanad | 225.0 | 275.1 | -18 | 1354.8 | 2631.9 | -49 | 254.6 | 331.5 | -23.0 |
| 15 | Lakshadweep | 308.5 | 232.4 | -57 | 1147.1 | 998.5 | 15 | 167.3 | 333.6 | -50.0 |
| | Kerala | 308.5 | 379.7 | -19 | 1551.3 | 2039.6 | -24 | 310.8 | 480.7 | -35 |

Source: Economic Review, 2012

Thrissur Raingauge - Location Map



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GEOLOGY & GEOMORPHOLOGY

The district of Thrissur falling between 10° 10' and 10° 46' North latitude and 75° 57' and 76° 54' East longitude is bounded on the North by Palakkad district on the East by Coimbatore district of Tamil Nadu on the South by Kottayam and Ernakulam district and on the West by the Lakshadweep Sea. The total extent of the district is 3,032 Km². The district has in general an undulating topography with a regional westerly slope.

GEOLOGY

Thrissur district can be broadly divided into four geological belts.

1. Charnockite belt which is wide spread and most prominent in the district.
2. Gneissic belt represented by biotite gneiss hornblende biotite gneiss and quartzo-feldspathic gneiss.
3. Granitic gneiss (PGC) restricted to the South Eastern part and
4. Quaternaries of the coastal tract.

Pink granite (granite gneiss) of Peninsular Gneissic Complex is seen along the South Eastern border. The major part of which extends to the adjacent Idukki district in the East. The rock is seen to occur interbanded with the associated rocks. It consists of varying proportions of orthoclase, plagioclase, quartz, green hornblende and brown biotite. Calc-silicate rock belonging to the Khondalite Group occurs as small out crops near Vadakkethara in the North Eastern part of the district. The distribution in the area is very limited and it occurs as thin bands within the Charnockite. Charnockite is the wide spread rock of the area. It is generally massive but when foliated has a gneissic look. Varieties like medium and coarse grained, highly feldspathic and migmatitic are also not rare. Pyroxene granulite, a member of the Charnockite Group, occurs as thin bands enclosed by Charnockite and Biotite Gneiss. These bands are a few meters in width and a few tens of meters in length. Biotite Gneiss of Migmatite Complex is next to Charnockite in abundance. This is the major rock in the Western part extending from Thrissur in the North to Kottapuram in the South. Small lenticular bodies of biotite gneiss are seen within the Charnockite terrain as well. The rock is well foliated and is characterized by banding due to alternate foliae rich in biotite and quartzofeldspathic material. In places they tend to become massive and granitic.

The other members of the Migmatite Group namely quartzo-feldspathic gneiss and hornblende biotite gneiss have restricted distributions. Fairly large area around Vellani mala and Peechi are occupied by hornblende biotite gneiss. The major part of the quartzo-feldspathic gneiss seen as linear band in the North Eastern part is extending to adjacent Palakkad district in the East. Linear bands of this rock are seen in the South Eastern part also. Near Ambalapara in the South Eastern part there is a quartz syenite acid intrusive body. It is leucocratic, medium to coarse grained, composed of feldspars with rare green pyroxene. Dolerite and gabbro dykes are seen cutting across these older rocks and are generally aligned in NNW-SSE trend. Migmatites and quartz veins occur within the Charnockite and gneisses, mostly as fracture fillings. They are of small dimension and show no concentration in specific locality. A small patch of Warkalli bed is seen near the coast in the Northern part. Unconsolidated Quarternary sediments overlie these basements unconformably. The sediments are classified into different morphostratigraphic units based in their lithic content and environment of formation. Guruvayur formation is an older marine deposit while Periyar formation, Viyyam formation and Kadappuram formation are the contemporary fluvial, fluviomarine and marine deposits.

The Quarternary clay along the coastal tract near Irumbanallur contains shell deposit. China clay is known to occur near Thrissur and Koratty. The flood plain/paddy field near Thrissur, Chalakkudy and Wadakkanchery has good tile clay deposit. The district has rich resource of construction materials like laterite and granite. The Quarternary deposits of the coastal plain near Chavakkad is reported to have concentration of ilmenite the laterite capping in the area NW of Thrissur is rich in alumina and in places is bauxite Iron ore, allanite and gold are reported from the district.

GEOMORPHOLOGY & GEOHYDROLOGY

Physiographically the district is divisible into three zones from West to East as the coastal plain, followed by the midland region and then the hilly region. The coastal plain having an average width of 5km and height varying from 0-8m is a depositional landscape characterized by landforms of marine, fluvial and fluviomarine origin. A number of strand lines (Palaeobeach ridges) alternating with swales, aligned more or less parallel to the trend of present day shore line can be seen in the area which could

be representing successive still stand positions of the retreating sea. The level of crests of this ridges show an overall descends towards the sea suggestive of progradation of an advancing coast. The midland region has an average width of 30km and has elevation from 20-300m. The terrain is characterized by laterite mesas and laterite interfluves and has a rolling or gently undulating landscape. The terrain has been dissected to give rise to narrow valley flats. Remnants of four former erosion surfaces are ranging in age from Late Tertiary to Early Quaternary has been reported from this area. Along the Eastern margin of the midland relatively high and resistant structural hill ranges can be seen. The hill ranges in the Eastern most part are the resultant of structural cum denudational process. This terrain comprises of rocks of Archaean age and has a thin soil cover. Along the North Eastern part of the district the topography is highly natured with a very gently sloping terrain. This probably represents a dissected pediment. Some of the highest peaks along the Eastern boundary are 926m. hill, 1160m.hill (Pappatapara hill) and 1439m. high Karimalai. Bharathapuzha, Puzhakkal and Chalakkudy River are the major Rivers draining the area.

The district can be divided into 4 provinces based on the ground water resource and its quality. In the coastal plain the yield water is high with shallow aquifer but in places the water is brackish. In the midland area with laterite cover dug wells are more promising for domestic needs. The foot hills and highly undulating terrain further east can sustain limited domestic wells in selected areas. Here fracture zones are potential but wells are site specific. The Eastern most mountainous area is generally unsuitable for good water development.

Table:6.1

GEOLOGY DETAILS
ANTHIKKAD BLOCK

| Sl.No. | Rock Type | Anthikkad | Arimpoor | Chazhoor | Manaloor | Thanniyam |
|--------|---------------------------|----------------|----------------|----------------|----------------|----------------|
| 1 | Metamorphic Rocks | 207 | 1835.67 | 1425.00 | 123.16 | 66.45 |
| 2 | Plutonic Rocks | | 12.45 | | | |
| 3 | Semiconsolidated Sediment | | | | | |
| 4 | Tank/WB/River | | | | | |
| 5 | Unconsolidated Sediments | 1062.83 | 338.85 | 1250.45 | 1706.17 | 1519.36 |
| | Panchayath Total | 1269.83 | 2186.97 | 2675.45 | 1829.33 | 1585.81 |
| | Block Total | | 9547.39 | | | |

Table:6.2

CHAVAKKAD BLOCK

| Sl.No. | Rock Type | Kadappuram | Orumanayoor | Punnayoor | Punnayoorkulam | Vadakkakkad |
|--------|---------------------------|---------------|----------------|----------------|----------------|----------------|
| 1 | Metamorphic Rocks | | | | | |
| 2 | Plutonic Rocks | 60.18 | 5.5 | | | |
| 3 | Semiconsolidated Sediment | | | | 161.09 | 65.08 |
| 4 | Tank/WB/River | | | | | |
| 5 | Unconsolidated Sediments | 722.41 | 750.82 | 1643.23 | 1801.66 | 1304.67 |
| | Panchayath Total | 782.59 | 756.32 | 1643.23 | 1962.75 | 1369.75 |
| | Block Total | | 6514.64 | | | |

Table:6.3

CHALAKKUDY BLOCK

| Sl.No. | Rock Type | Athirappilly | Kadukutty | Kodassery | Koratty | Meloor | Pariyaram |
|--------|---------------------------|-----------------|----------------|-----------------|----------------|----------------|----------------|
| 1 | Metamorphic Rocks | 36935.86 | 1730.64 | 13238.93 | 2171.80 | 2339.99 | 2735.97 |
| 2 | Plutonic Rocks | 655.76 | | 401.31 | 163.46 | 23.73 | 25.03 |
| 3 | Semiconsolidated Sediment | | | | | | |
| 4 | Tank/WB/River | | | | | | |
| 5 | Unconsolidated Sediments | | | | | | |
| | Panchayath Total | 37591.62 | 1730.64 | 13640.24 | 2335.26 | 2363.72 | 2761.00 |
| | Block Total | | | 60422.48 | | | |

(Area in Ha)

Table:6.4

PAZHAYANNOOR BLOCK

| Sl.No. | Rock Type | Chelakkara | Kondazhy | Panjai | Pazhayannoor | Thiruvilwamala | Vallathol Nagar |
|--------|---------------------------|----------------|----------------|-----------------|----------------|----------------|-----------------|
| 1 | Metamorphic Rocks | 6038.13 | 3026.8 | 2797.80 | 9126.96 | 3843.21 | 1900.96 |
| 2 | Plutonic Rocks | 13.04 | | 32.20 | | | |
| 3 | Semiconsolidated Sediment | | | | | | |
| 4 | Tank/WB/River | | | | | | |
| 5 | Unconsolidated Sediments | | | | | | |
| | Panchayath Total | 6051.17 | 3026.80 | 2830.00 | 9126.96 | 3843.21 | 1900.96 |
| | Block Total | | | 26779.10 | | | |

(Area in Ha)

Table:6.5

PUZHAKKAL BLOCK

| Sl.No. | Rock Type | Adat | Avannoor | Kaiparamb | Kolazhy | Mulamkunnathu kavu | Tholloor |
|--------|---------------------------|----------------|----------------|-----------------|----------------|--------------------|----------------|
| 1 | Metamorphic Rocks | 1232.61 | 1715.13 | 2037.83 | 1448.84 | 2114.10 | 1335.43 |
| 2 | Plutonic Rocks | | 15.40 | 1.88 | | | |
| 3 | Semiconsolidated Sediment | | | | | | |
| 4 | Tank/WB/River | | | | | | |
| 5 | Unconsolidated Sediments | 1133.27 | | 23.2 | 234.01 | | 220.44 |
| | Panchayath Total | 2365.88 | 1730.53 | 2062.91 | 1682.85 | 2114.10 | 1555.87 |
| | Block Total | | | 11512.14 | | | |

(Area in Ha)

Table:6.6

CHERPPU BLOCK

| SI.No. | Rock Type | Avinissery | Cherppu | Paralam | Vallachira | (Area in Ha) |
|--------|---------------------------|---------------|----------------|----------------|---------------|--------------|
| 1 | Metamorphic Rocks | 772.94 | 2081.48 | 1707.77 | 944.25 | |
| 2 | Plutonic Rocks | | 40.26 | | 28.38 | |
| 3 | Semiconsolidated Sediment | | | | | |
| 4 | Tank/WB/River | | | | | |
| 5 | Unconsolidated Sediments | | | | | |
| | Panchayath Total | 772.94 | 2121.74 | 1707.77 | 972.63 | |
| | Block Total | | 5575.08 | | | |

Table:6.7

IRINGALAKUDA BLOCK

| SI.No. | Rock Type | Karalam | Kattoor | Muriyad | Parappukkara | (Area in Ha) |
|--------|---------------------------|----------------|----------------|----------------|----------------|--------------|
| 1 | Metamorphic Rocks | 1377.26 | 151.39 | 2358.85 | 2067.90 | |
| 2 | Plutonic Rocks | | | | | |
| 3 | Semiconsolidated Sediment | | | | | |
| 4 | Tank/WB/River | | | | | |
| 5 | Unconsolidated Sediments | 546.17 | 953.02 | | | |
| | Panchayath Total | 1923.43 | 1104.41 | 2358.85 | 2067.90 | |
| | Block Total | | 7454.59 | | | |

Table:6.8

MULLASSERY BLOCK

| SI.No. | Rock Type | Elavally | Mullassery | Pavaratty | Venkidangu | (Area in Ha) |
|--------|---------------------------|----------------|----------------|---------------|----------------|--------------|
| 1 | Metamorphic Rocks | 1207.31 | 842.99 | | | |
| 2 | Plutonic Rocks | 10.95 | | | | |
| 3 | Semiconsolidated Sediment | | | | | |
| 4 | Tank/WB/River | | | | | |
| 5 | Unconsolidated Sediments | 519.05 | 925.04 | 947.50 | 2106.14 | |
| | Panchayath Total | 1737.31 | 1768.03 | 947.50 | 2106.14 | |
| | Block Total | | 6558.98 | | | |

Table:6.9

CHOWANNOOR BLOCK

| Sl. No. | Rock Type | (Area in Ha) | | | | | | | | | |
|---------|---------------------------|----------------|----------------|----------------|-----------------|----------------|----------------|----------------|----------------|--|--|
| | | Choondal | Chowannoor | Kadangode | Kadavallloor | Kandana ssery | Katta kampoal | Porkulam | Velloor | | |
| 1 | Metamorphic Rocks | 2049.30 | 1909.62 | 3229.66 | 1916.40 | 1501.84 | 753.97 | 984.94 | 3495.92 | | |
| 2 | Plutonic Rocks | | | 49.67 | 6.36 | | | | | | |
| 3 | Semiconsolidated Sediment | | | | | | 2.36 | | | | |
| 4 | Tank/WB/River | | | | | | | | | | |
| 5 | Unconsolidated Sediments | | | | 506.84 | | 942.77 | 345.34 | | | |
| | Panchayath Total | 2049.30 | 1909.62 | 3279.33 | 2429.60 | 1501.84 | 1699.10 | 1330.28 | 3495.92 | | |
| | Block Total | | | | 17694.99 | | | | | | |

Table:6.10

KODAKARA BLOCK

| Sl. No. | Rock Type | (Area in Ha) | | | | | | | |
|---------|---------------------------|----------------|----------------|-----------------|-----------------|----------------|----------------|-------------------|--|
| | | Alagappa Nagar | Kodakara | Mattathoor | Nenmani kkarra | Pudukkad | Thrikkoor | Varanthara ppilly | |
| 1 | Metamorphic Rocks | 1808.73 | 2213.91 | 14528.61 | 1287.37 | 1544.91 | 2427.88 | 11325.72 | |
| 2 | Plutonic Rocks | | | 305.34 | | | 1.11 | 187.51 | |
| 3 | Semiconsolidated Sediment | | | | | | | | |
| 4 | Tank/WB/River | | | | | | | | |
| 5 | Unconsolidated Sediments | | | | | | | | |
| | Panchayath Total | 1808.73 | 2213.91 | 14833.95 | 1287.37 | 1544.91 | 2428.99 | 11513.23 | |
| | Block Total | | | | 35631.09 | | | | |

Table:6.11

MALA BLOCK

| Sl.No. | Rock Type | Aloor | Annamanada | Kuzhoor | Mala | Poyya |
|--------|---------------------------|----------------|----------------|-----------------|----------------|----------------|
| 1 | Metamorphic Rocks | 3596.45 | 2462.81 | 1948.55 | 2768.16 | 1851.54 |
| 2 | Plutonic Rocks | | | 12.56 | 29.83 | 5.52 |
| 3 | Semiconsolidated Sediment | | | | | 89.93 |
| 4 | Tank/WB/River | | | | | 5.76 |
| 5 | Unconsolidated Sediments | | | | | |
| | Panchayath Total | 3596.45 | 2462.81 | 1961.11 | 2797.99 | 1952.75 |
| | Block Total | | | 12771.11 | | |

Table:6.12

THALIKULAM BLOCK

| Sl.No. | Rock Type | Engandiyur | Nattika | Thalikkulam | Vadanappilly | Valappad |
|--------|---------------------------|----------------|---------------|----------------|----------------|----------------|
| 1 | Metamorphic Rocks | | | | | |
| 2 | Plutonic Rocks | | | | | |
| 3 | Semiconsolidated Sediment | | | | | |
| 4 | Tank/WB/River | | | | | |
| 5 | Unconsolidated Sediments | 1620.65 | 942.36 | 1014.49 | 1346.24 | 1619.86 |
| | Panchayath Total | 1620.65 | 942.36 | 1014.49 | 1346.24 | 1619.86 |
| | Block Total | | | 6543.60 | | |

Table:6.13

VELLANGALLOOR BLOCK

| Sl.No. | Rock Type | Padiyoor | Poomangalam | Puthenchira | Vellangalloor | Velookkara |
|--------|---------------------------|----------------|----------------|-----------------|----------------|----------------|
| 1 | Metamorphic Rocks | | 37.60 | 2359.14 | 1181.22 | 2476.89 |
| 2 | Plutonic Rocks | | | | 14.57 | |
| 3 | Semiconsolidated Sediment | | | | | |
| 4 | Tank/WB/River | 21.18 | | 15.46 | 179.92 | |
| 5 | Unconsolidated Sediments | 1768.43 | 1155.36 | 12.97 | 962.79 | 308.76 |
| | Panchayath Total | 1789.61 | 1192.96 | 2387.57 | 2338.50 | 2785.65 |
| | Block Total | | | 10494.29 | | |

Table:6.14

WADAKKANCHERY BLOCK

| Sl. No. | Rock Type | (Area in Ha) | | | | | | |
|---------|---------------------------|-----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| | | Desamangalam | Erumapetty | Mulloorkara | Mundathi kode | Thekkum kara | Wadakkanchery | Varavoor |
| 1 | Metamorphic Rocks | 2268.36 | 2874.37 | 4601.95 | 2395.37 | 4038.74 | 2593.98 | 2936.17 |
| 2 | Plutonic Rocks | | 32.67 | | | | | 41.21 |
| 3 | Semiconsolidated Sediment | | | | | | | |
| 4 | Tank/WB/River | | | | | | | |
| 5 | Unconsolidated Sediments | | | | | | | |
| | Panchayath Total | 2268.36 | 2907.04 | 4601.95 | 2395.37 | 4038.74 | 2593.98 | 2977.38 |
| | Block Total | 21782.82 | | | | | | |

Table:6.15

OLLOOKARA BLOCK

| Sl. No. | Rock Type | (Area in Ha) | | | | |
|---------|---------------------------|-----------------|----------------|-----------------|-----------------|--|
| | | Madakkathara | Nadathara | Pananchery | Puthoor | |
| 1 | Metamorphic Rocks | 2933.68 | 2026.72 | 9980.04 | 12972.06 | |
| 2 | Plutonic Rocks | 15.49 | 22.57 | 135.89 | 886.50 | |
| 3 | Semiconsolidated Sediment | | | | | |
| 4 | Tank/WB/River | | | | | |
| 5 | Unconsolidated Sediments | | 35.33 | | | |
| | Panchayath Total | 2949.17 | 2084.62 | 10115.93 | 13858.56 | |
| | Block Total | 29008.28 | | | | |

Table:6.16

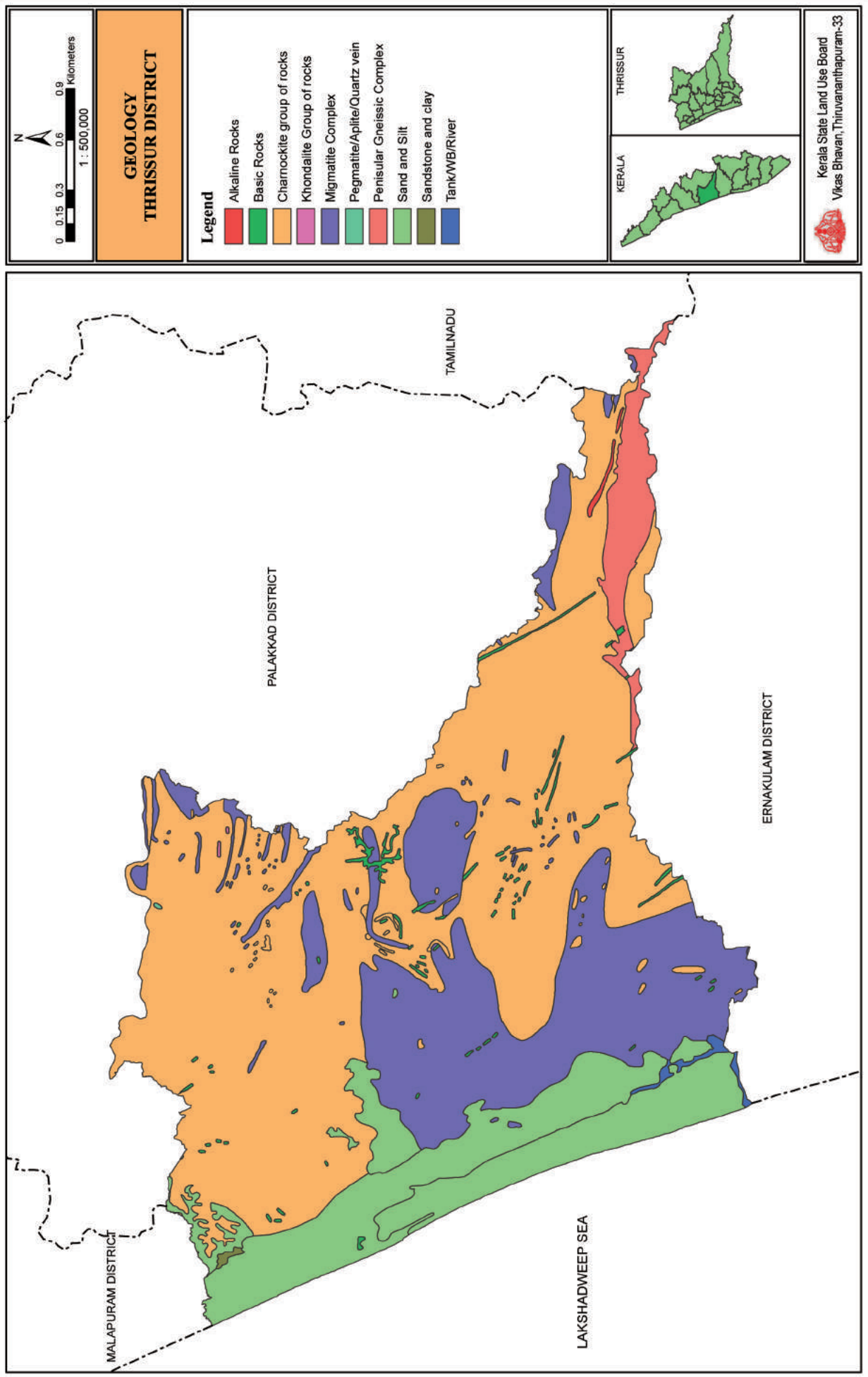
MATHILAKOM BLOCK

| Sl. No. | Rock Type | Edathiruthy | Edavilangu | Eriyad | Kaippaman galam | Mathilakom | Perinjanam | Sreenarayana puram |
|---------|---------------------------|----------------|---------------|----------------|-----------------|----------------|---------------|--------------------|
| 1 | Metamorphic Rocks | | | | | | | |
| 2 | Plutonic Rocks | | | | | | | |
| 3 | Semiconsolidated Sediment | | | | | | | |
| 4 | Tank/WB/River | | | 84.73 | | | | 89.21 |
| 5 | Unconsolidated Sediments | 1678.80 | 712.04 | 1463.44 | 1457.55 | 1327.53 | 883.85 | 1844.75 |
| | Panchayath Total | 1678.80 | 712.04 | 1548.17 | 1457.55 | 1327.53 | 883.85 | 1933.96 |
| | Block Total | | | | 9541.90 | | | |

Table:6.17

MUNICIPALITY/CORPORATION

| Sl. No. | Rock Type | Chalakkudy (M) | Chavakkad (M) | Guruvayoor Township (M) | Iringalakuda (M) | Kodungalloor (M) | Kunnamkulam (M) | Thrissur (C) |
|---------|---------------------------|----------------|----------------|-------------------------|------------------|------------------|-----------------|-----------------|
| 1 | Metamorphic Rocks | 2533.44 | | 565.91 | 2842.31 | 166.60 | 1355.85 | 9587.42 |
| 2 | Plutonic Rocks | | | | | | 68.08 | |
| 3 | Semiconsolidated Sediment | | | | | | 3.92 | |
| 4 | Tank/WB/River | | | | | 493.97 | | |
| 5 | Unconsolidated Sediments | | 1240.98 | 2373.49 | 154.90 | 2242.75 | 543.17 | 888.47 |
| | Total | 2533.44 | 1240.98 | 2939.40 | 2997.21 | 2903.32 | 1971.02 | 10475.89 |



GEOMORPHOLOGY DETAILS

ANTHIKKAD BLOCK

Table:6.18

| Sl. No. | Rock Type | Anthikkad | Arimpoor | Chazhoor | Manaloor | Thanniyam |
|---------|---------------------------------------|----------------|----------------|----------------|----------------|----------------|
| 1 | Beach (Coastal Plain) | | | | | |
| 2 | Coastal Plain | 806.88 | | 1187.99 | 1080.89 | 1200.44 |
| 3 | Channel Bar (Flood Plain) | | 0.71 | | 3.26 | |
| 4 | Denudational Hills | | | | | |
| 5 | Denudational Structural Hills | | | | | |
| 6 | Linear Ridge (Lower Platerau) | | | | | |
| 7 | Linear Ridge (Piedmont Zone) | | | | | |
| 8 | Lower Plateau (Lateritic) - Dissected | | 788.88 | 11.54 | | |
| 9 | Mud Flat (Coastal Plain) | 291.36 | 1351.23 | 1394.61 | 457.80 | 206.12 |
| 10 | Marshy | | | | | |
| 11 | Piedmont Zone | | | | | |
| 12 | Point Bar (Flood Plain) | | | | | |
| 13 | Residual Hill | | | | | |
| 14 | Residual Mount | | | | | |
| 15 | Residual Mount (Pediment) | | | | | |
| 16 | Rock Exposure | | | | | |
| 17 | Structural Valley | | | | | |
| 18 | Structural Hills | | | | | |
| 19 | Swale (Coastal Plain) | 139.21 | | 22.77 | 175.20 | 140.34 |
| 20 | Valley | | | | | |
| 21 | Valley Fill | | | | | |
| 22 | Water Body | 32.37 | 46.16 | 58.55 | 112.18 | 38.91 |
| | Panchayath Total | 1269.82 | 2186.98 | 2675.46 | 1829.33 | 1585.81 |
| | Block Total | | | 9547.40 | | |

(Area in Ha)

Table:6.19

CHALAKKUDY BLOCK

| Sl. No. | Rock Type | Athirappilly | Kadukutty | Kodassery | Koratty | Melloor | Pariyaram |
|---------|---------------------------------------|-----------------|----------------|-----------------|----------------|----------------|----------------|
| 1 | Beach (Coastal Plain) | | | | | | |
| 2 | Coastal Plain | | | | | | |
| 3 | Channel Bar (Flood Plain) | 23.27 | | | | | 4.39 |
| 4 | Denudational Hills | 69.81 | | | | | 15.08 |
| 5 | Denudational Structural Hills | 33354.80 | | 7077.63 | | | 153.97 |
| 6 | Linear Ridge (Lower Platerau) | | | | | | |
| 7 | Linear Ridge (Piedmont Zone) | | | | | | |
| 8 | Lower Plateau (Lateritic) - Dissected | | 980.58 | 433.97 | 2141.48 | 1781.18 | 495.58 |
| 9 | Mud Flat (Coastal Plain) | | | | | | |
| 10 | Marshy | | | | | | |
| 11 | Piedmont Zone | 2794.19 | | 4013.56 | | | 1520.80 |
| 12 | Point Bar (Flood Plain) | | 46.38 | | | 33.08 | 69.39 |
| 13 | Residual Hill | | | | | | |
| 14 | Residual Mount | | | 172.32 | 63.90 | | |
| 15 | Residual Mount (Pediment) | | | | | | |
| 16 | Rock Exposure | 109.36 | | 8.65 | | | 7.01 |
| 17 | Structural Valley | | | | | | |
| 18 | Structural Hills | | | 987.14 | | | |
| 19 | Swale (Coastal Plain) | | | | | | |
| 20 | Valley | 47.49 | | 62.97 | | | |
| 21 | Valley Fill | 13.83 | 654.14 | 712.46 | 129.07 | 510.19 | 445.38 |
| 22 | Water Body | 1178.86 | 49.53 | 171.55 | 0.81 | 39.28 | 49.40 |
| | Panchayath Total | 37591.61 | 1730.63 | 13640.25 | 2335.26 | 2363.73 | 2761.00 |
| | Block Total | | | 60422.48 | | | |

Table:6.20

CHAVAKKAD BLOCK

| Sl. No. | Rock Type | Kadappuram | Orumanayoor | Punnayoor | Punnayoorkulam | Vadakkakkad |
|---------|---------------------------------------|---------------|---------------|----------------|----------------|----------------|
| 1 | Beach (Coastal Plain) | | 0.01 | | | |
| 2 | Coastal Plain | 588.47 | 659.95 | 1174.41 | 1129.72 | 946.62 |
| 3 | Channel Bar (Flood Plain) | 5.24 | | | | |
| 4 | Denudational Hills | | | | | |
| 5 | Denudational Structural Hills | | | | | |
| 6 | Linear Ridge (Lower Platerau) | | | | | |
| 7 | Linear Ridge (Piedmont Zone) | | | | | |
| 8 | Lower Plateau (Lateritic) - Dissected | | | | 145.08 | 79.83 |
| 9 | Mud Flat (Coastal Plain) | 17.55 | 12.51 | 443.32 | 235.22 | 131.23 |
| 10 | Marshy | | | | | |
| 11 | Piedmont Zone | | | | | |
| 12 | Point Bar (Flood Plain) | | | | | |
| 13 | Residual Hill | | | | | |
| 14 | Residual Mount | | | | | |
| 15 | Residual Mount (Pediment) | | | | | |
| 16 | Rock Exposure | | | | | |
| 17 | Structural Valley | | | | | |
| 18 | Structural Hills | | | | | |
| 19 | Swale (Coastal Plain) | 5.63 | 26.58 | 3.50 | 41.93 | |
| 20 | Valley | | | | | |
| 21 | Valley Fill | | | | 311.02 | 212.06 |
| 22 | Water Body | 165.70 | 57.27 | 22.00 | 99.78 | |
| | Panchayath Total | 782.59 | 756.32 | 1643.23 | 1962.75 | 1369.74 |
| | Block Total | | | 6514.63 | | |

Table:6.21

CHERPPU BLOCK

| Sl. No. | Rock Type | Avinissery | Cherppu | Paralam | Vallachira |
|---------|---------------------------------------|---------------|----------------|----------------|---------------|
| 1 | Beach (Coastal Plain) | | | | |
| 2 | Coastal Plain | | 22.84 | 46.25 | 0.44 |
| 3 | Channel Bar (Flood Plain) | | | | |
| 4 | Denudational Hills | | | | |
| 5 | Denudational Structural Hills | | | | |
| 6 | Linear Ridge (Lower Platerau) | | | | |
| 7 | Linear Ridge (Piedmont Zone) | | | 39.24 | |
| 8 | Lower Plateau (Lateritic) - Dissected | 627.42 | 1076.92 | 748.99 | 706.44 |
| 9 | Mud Flat (Coastal Plain) | 96.30 | 979.12 | 831.55 | 89.16 |
| 10 | Marshy | | | | |
| 11 | Piedmont Zone | | | | |
| 12 | Point Bar (Flood Plain) | | | | |
| 13 | Residual Hill | | | | |
| 14 | Residual Mount | | 5.23 | 8.70 | 21.31 |
| 15 | Residual Mount (Pediment) | | | | |
| 16 | Rock Exposure | | | | |
| 17 | Structural Valley | | | | |
| 18 | Structural Hills | | | | |
| 19 | Swale (Coastal Plain) | | | | |
| 20 | Valley | | | | |
| 21 | Valley Fill | 48.19 | 1.05 | | 126.73 |
| 22 | Water Body | 1.03 | 36.58 | 33.03 | 28.56 |
| | Panchayath Total | 772.94 | 2121.74 | 1707.76 | 972.64 |
| | Block Total | | 5575.08 | | |

Table:6.22

CHOWANNOOR BLOCK

| Sl. No. | Rock Type | Choondal | Chowannoor | Kadangode | Kadavallloor | Kandana ssery | Katta kampil | Porkulam | Velloor |
|---------|---------------------------------------|----------------|----------------|----------------|-----------------|----------------|----------------|----------------|----------------|
| 1 | Beach (Coastal Plain) | | | | | 0.23 | | | |
| 2 | Coastal Plain | | | | | | | | |
| 3 | Channel Bar (Flood Plain) | | | | | | | | |
| 4 | Denudational Hills | | | | | | | | |
| 5 | Denudational Structural Hills | | | | | | | | |
| 6 | Linear Ridge (Lower Platerau) | | | | | | | | 94.49 |
| 7 | Linear Ridge (Piedmont Zone) | | | | | | | | |
| 8 | Lower Plateau (Lateritic) - Dissected | 1193.39 | 1148.71 | 761.22 | 1690.19 | 916.78 | 873.97 | 795.63 | 1878.35 |
| 9 | Mud Flat (Coastal Plain) | | | | | | | | |
| 10 | Marshy | | | | | | | | |
| 11 | Piedmont Zone | | | 1271.07 | 71.50 | | | | 422.12 |
| 12 | Point Bar (Flood Plain) | | | | | | | | |
| 13 | Residual Hill | | | 327.53 | | | | | |
| 14 | Residual Mount | 21.11 | | 29.01 | 60.81 | 15.78 | | | 49.17 |
| 15 | Residual Mount (Pediment) | | | 50.39 | | | | | 23.54 |
| 16 | Rock Exposure | | | | | | | | |
| 17 | Structural Valley | | | | | | | | |
| 18 | Structural Hills | | | | | | | | |
| 19 | Swale (Coastal Plain) | | | | | | | | |
| 20 | Valley | | | | | | | | |
| 21 | Valley Fill | 815.99 | 760.91 | 832.53 | 607.10 | 557.49 | 825.05 | 534.64 | 988.66 |
| 22 | Water Body | 18.82 | | 7.58 | | 11.56 | 0.08 | | 39.60 |
| | Panchayath Total | 2049.31 | 1909.62 | 3279.33 | 2429.60 | 1501.84 | 1699.10 | 1330.27 | 3495.93 |
| | Block Total | | | | 17695.00 | | | | |

Table:6.23

IRINGALAKUDA BLOCK

| Sl. No. | Rock Type | Karalam | Kattoor | Muriyad | Parappukkara |
|---------|---------------------------------------|----------------|----------------|----------------|----------------|
| 1 | Beach (Coastal Plain) | | | | |
| 2 | Coastal Plain | 1093.60 | 739.22 | 0.45 | |
| 3 | Channel Bar (Flood Plain) | | | | |
| 4 | Denudational Hills | | | | |
| 5 | Denudational Structural Hills | | | | |
| 6 | Linear Ridge (Lower Platerau) | | | | |
| 7 | Linear Ridge (Piedmont Zone) | | | | |
| 8 | Lower Plateau (Lateritic) - Dissected | 0.15 | | 1442.72 | 923.77 |
| 9 | Mud Flat (Coastal Plain) | 782.31 | 335.28 | 832.86 | 629.98 |
| 10 | Marshy | | | | |
| 11 | Piedmont Zone | | | | 165.32 |
| 12 | Point Bar (Flood Plain) | | | | |
| 13 | Residual Hill | | | | |
| 14 | Residual Mount | | | | |
| 15 | Residual Mount (Pediment) | | | | |
| 16 | Rock Exposure | | | | |
| 17 | Structural Valley | | | | |
| 18 | Structural Hills | | | | |
| 19 | Swale (Coastal Plain) | | | | |
| 20 | Valley | | | | |
| 21 | Valley Fill | | | 61.16 | 297.86 |
| 22 | Water Body | 47.36 | 29.91 | 21.66 | 50.96 |
| | Panchayath Total | 1923.42 | 1104.41 | 2358.85 | 2067.89 |
| | Block Total | | 7454.57 | | |

Table:6.24

KODAKARA BLOCK

| Sl. No. | Rock Type | Alagappa Nagar | Kodakara | Mattathoor | Nenmani kkara | Pudukkad | Thrikkoor | Varanthara ppilly |
|---------|---------------------------------------|----------------|----------------|-----------------|-----------------|----------------|----------------|-------------------|
| 1 | Beach (Coastal Plain) | | | | | | | |
| 2 | Coastal Plain | | | | | | | |
| 3 | Channel Bar (Flood Plain) | | | | | | | |
| 4 | Denudational Hills | | | | | | 118.42 | |
| 5 | Denudational Structural Hills | | | 8662.30 | | | | 6060.74 |
| 6 | Linear Ridge (Lower Platerau) | 40.99 | | | | 17.05 | | 22.67 |
| 7 | Linear Ridge (Piedmont Zone) | | | | | | | |
| 8 | Lower Plateau (Lateritic) - Dissected | 1075.37 | 1459.57 | 16.32 | 696.49 | 1059.79 | 1.23 | 573.59 |
| 9 | Mud Flat (Coastal Plain) | | | | | | | |
| 10 | Marshy | | | | | | | |
| 11 | Piedmont Zone | 254.08 | 105.93 | 5069.58 | 0.01 | 0.23 | 1768.76 | 3962.11 |
| 12 | Point Bar (Flood Plain) | | | | | | | |
| 13 | Residual Hill | | | | | | | |
| 14 | Residual Mount | 16.90 | 54.56 | 26.21 | | 64.29 | 124.57 | 19.09 |
| 15 | Residual Mount (Pediment) | | | | | | | |
| 16 | Rock Exposure | | | 8.52 | | | | 105.69 |
| 17 | Structural Valley | | | | | | | |
| 18 | Structural Hills | | 0.58 | 34.74 | | | | |
| 19 | Swale (Coastal Plain) | | | | | | | |
| 20 | Valley | | | | | | | |
| 21 | Valley Fill | 419.97 | 592.78 | 663.45 | 554.93 | 374.61 | 379.46 | 495.73 |
| 22 | Water Body | 1.42 | 0.49 | 352.82 | 35.93 | 28.94 | 36.55 | 273.61 |
| | Panchayath Total | 1808.73 | 2213.91 | 14833.94 | 1287.36 | 1544.91 | 2428.99 | 11513.23 |
| | Block Total | | | | 35631.07 | | | |

Table:6.25

MALA BLOCK

| Sl. No. | Rock Type | Aloor | Annamanada | Kuzhoor | Mala | Poyya |
|---------|---------------------------------------|----------------|----------------|-----------------|----------------|----------------|
| 1 | Beach (Coastal Plain) | | | | | |
| 2 | Coastal Plain | | | 4.05 | | 41.65 |
| 3 | Channel Bar (Flood Plain) | | 2.00 | 12.46 | | |
| 4 | Denudational Hills | | | | | |
| 5 | Denudational Structural Hills | | | | | |
| 6 | Linear Ridge (Lower Plateau) | | | | | |
| 7 | Linear Ridge (Piedmont Zone) | | | | | |
| 8 | Lower Plateau (Lateritic) - Dissected | 2757.10 | 1500.24 | 953.39 | 1821.66 | 971.36 |
| 9 | Mud Flat (Coastal Plain) | 262.46 | | 3.55 | 83.72 | 731.03 |
| 10 | Marshy | | | | 1.73 | 16.18 |
| 11 | Piedmont Zone | | | | | |
| 12 | Point Bar (Flood Plain) | | 32.15 | | 0.11 | |
| 13 | Residual Hill | | | | | |
| 14 | Residual Mount | 0.58 | | | | |
| 15 | Residual Mount (Pediment) | | | | | |
| 16 | Rock Exposure | | | | | |
| 17 | Structural Valley | | | | | |
| 18 | Structural Hills | | | | | |
| 19 | Swale (Coastal Plain) | | | | | |
| 20 | Valley | | | | | |
| 21 | Valley Fill | 571.02 | 879.58 | 943.90 | 873.30 | 39.98 |
| 22 | Water Body | 5.29 | 48.84 | 43.76 | 17.47 | 152.55 |
| | Panchayath Total | 3596.45 | 2462.81 | 1961.11 | 2797.99 | 1952.75 |
| | Block Total | | | 12771.11 | | |

Table:6.26

MATHILAKOM BLOCK

| Sl. No. | Rock Type | Edathiruthy | Edavilangu | Eriyad | Kaippa mangalam | Mathilakom | Perinjanam | Sreenarayana puram |
|---------|---------------------------------------|----------------|---------------|----------------|-----------------|----------------|---------------|--------------------|
| 1 | Beach (Coastal Plain) | | | 3.12 | | 0.00 | 0.00 | |
| 2 | Coastal Plain | 1257.79 | 612.96 | 1420.71 | 1297.09 | 1123.20 | 787.01 | 1598.54 |
| 3 | Channel Bar (Flood Plain) | | | | | | | |
| 4 | Denudational Hills | | | | | | | |
| 5 | Denudational Structural Hills | | | | | | | |
| 6 | Linear Ridge (Lower Platerau) | | | | | | | |
| 7 | Linear Ridge (Piedmont Zone) | | | | | | | |
| 8 | Lower Plateau (Lateritic) - Dissected | | | | | | | |
| 9 | Mud Flat (Coastal Plain) | 337.16 | | | 27.71 | 16.24 | | 30.18 |
| 10 | Marshy | | | | | | | |
| 11 | Piedmont Zone | | | | | | | |
| 12 | Point Bar (Flood Plain) | | | | | | | |
| 13 | Residual Hill | | | | | | | |
| 14 | Residual Mount | | | | | | | |
| 15 | Residual Mount (Pediment) | | | | | | | |
| 16 | Rock Exposure | | | | | | | |
| 17 | Structural Valley | | | | | | | |
| 18 | Structural Hills | | | | | | | |
| 19 | Swale (Coastal Plain) | 32.60 | 99.08 | 37.15 | 122.38 | 171.17 | 79.27 | 209.23 |
| 20 | Valley | | | | | | | |
| 21 | Valley Fill | | | | | | | |
| 22 | Water Body | 51.26 | | 87.19 | 10.38 | 16.92 | 17.57 | 96.00 |
| | Panchayath Total | 1678.81 | 712.04 | 1548.17 | 1457.56 | 1327.53 | 883.85 | 1933.95 |
| | Block Total | | | | 9541.91 | | | |

Table:6.27

MULLASSERY BLOCK

| Sl. No. | Rock Type | (Area in Ha) | | | | |
|---------|---------------------------------------|----------------|----------------|---------------|----------------|--|
| | | Elavally | Mullassery | Pavaratty | Venkidangu | |
| 1 | Beach (Coastal Plain) | | | | | |
| 2 | Coastal Plain | 480.04 | 774.91 | 675.59 | 1049.12 | |
| 3 | Channel Bar (Flood Plain) | | 0.51 | 12.36 | 6.51 | |
| 4 | Denudational Hills | | | | | |
| 5 | Denudational Structural Hills | | | | | |
| 6 | Linear Ridge (Lower Plateau) | | | | | |
| 7 | Linear Ridge (Piedmont Zone) | | | | | |
| 8 | Lower Plateau (Lateritic) - Dissected | 489.89 | 48.39 | | | |
| 9 | Mud Flat (Coastal Plain) | 79.84 | 503.38 | 50.75 | 713.63 | |
| 10 | Marshy | | | | | |
| 11 | Piedmont Zone | | | | | |
| 12 | Point Bar (Flood Plain) | | | | | |
| 13 | Residual Hill | | | | | |
| 14 | Residual Mount | | | | | |
| 15 | Residual Mount (Pediment) | | | | | |
| 16 | Rock Exposure | | | | | |
| 17 | Structural Valley | | | | | |
| 18 | Structural Hills | | | | | |
| 19 | Swale (Coastal Plain) | 4.79 | | 17.77 | 13.12 | |
| 20 | Valley | | | | | |
| 21 | Valley Fill | 678.36 | 402.35 | | 69.94 | |
| 22 | Water Body | 4.37 | 38.49 | 191.04 | 253.82 | |
| | Panchayath Total | 1737.29 | 1768.03 | 947.51 | 2106.14 | |
| | Block Total | | 6558.97 | | | |

Table:6.28

OLLOOKARA BLOCK

| Sl. No. | Rock Type | Madakkathara | Nadathara | Pananchery | Puthoor |
|---------|---------------------------------------|----------------|-----------------|-----------------|-----------------|
| 1 | Beach (Coastal Plain) | | | | |
| 2 | Coastal Plain | | | | |
| 3 | Channel Bar (Flood Plain) | | | | |
| 4 | Denudational Hills | | 194.56 | 220.15 | 345.67 |
| 5 | Denudational Structural Hills | 796.76 | | 5481.40 | 6729.65 |
| 6 | Linear Ridge (Lower Platerau) | | | | |
| 7 | Linear Ridge (Piedmont Zone) | | | | |
| 8 | Lower Plateau (Lateritic) - Dissected | | 19.62 | | 304.90 |
| 9 | Mud Flat (Coastal Plain) | 326.83 | | | |
| 10 | Marshy | | | | |
| 11 | Piedmont Zone | 1755.63 | 1192.88 | 3274.43 | 4064.86 |
| 12 | Point Bar (Flood Plain) | | | | |
| 13 | Residual Hill | | 0.34 | 43.00 | 121.79 |
| 14 | Residual Mount | | | | 0.48 |
| 15 | Residual Mount (Pediment) | 69.27 | 70.69 | 114.95 | 196.68 |
| 16 | Rock Exposure | | | | 42.13 |
| 17 | Structural Valley | | | | |
| 18 | Structural Hills | | 3.42 | 35.79 | 189.22 |
| 19 | Swale (Coastal Plain) | | | | |
| 20 | Valley | | | | |
| 21 | Valley Fill | 0.51 | 577.72 | 861.69 | 1144.35 |
| 22 | Water Body | 0.17 | 25.37 | 84.52 | 718.82 |
| | Panchayath Total | 2949.17 | 2084.60 | 10115.93 | 13858.55 |
| | Block Total | | 29008.25 | | |

Table:6.29

PAZHAYANNOOR BLOCK

| Sl. No. | Rock Type | Chelakkara | Kondazhy | Panjaj | Pazhayannoor | Thiruvilwamala | Vallathol Nagar |
|---------|---------------------------------------|----------------|----------------|----------------|-----------------|----------------|-----------------|
| 1 | Beach (Coastal Plain) | | | | | | |
| 2 | Coastal Plain | | | | | | |
| 3 | Channel Bar (Flood Plain) | | | | | | |
| 4 | Denudational Hills | 777.17 | 21.38 | 202.82 | 693.14 | 191.68 | 308.05 |
| 5 | Denudational Structural Hills | 66.86 | | | 2696.95 | | |
| 6 | Linear Ridge (Lower Platerau) | | | | 0.08 | | |
| 7 | Linear Ridge (Piedmont Zone) | | | | | 33.51 | |
| 8 | Lower Plateau (Lateritic) - Dissected | | | | | | |
| 9 | Mud Flat (Coastal Plain) | | | | | | |
| 10 | Marshy | | | | | | |
| 11 | Piedmont Zone | 3362.12 | 1748.22 | 1814.17 | 3935.08 | 2245.83 | 1082.1 |
| 12 | Point Bar (Flood Plain) | 0.76 | 72.34 | 71.27 | | 13.53 | 28.19 |
| 13 | Residual Hill | 108.94 | | | | | |
| 14 | Residual Mount | 1.09 | 8.60 | 19.66 | 9.31 | 48.06 | |
| 15 | Residual Mount (Pediment) | 62.78 | 55.73 | 62.99 | 67.98 | | 7.46 |
| 16 | Rock Exposure | | 5.45 | | | 21.61 | |
| 17 | Structural Valley | 54.42 | | 3.06 | | | |
| 18 | Structural Hills | 564.04 | 96.31 | 38.35 | | | |
| 19 | Swale (Coastal Plain) | | | | | | |
| 20 | Valley | | | | 0.89 | | |
| 21 | Valley Fill | 1052.99 | 881.85 | 546.26 | 1703.69 | 1118.64 | 413.14 |
| 22 | Water Body | | 84.83 | 71.41 | 19.84 | 170.35 | 62.02 |
| | Panchayath Total | 6051.17 | 2974.71 | 2829.99 | 9126.96 | 3843.21 | 1900.96 |
| | Block Total | | | | 26727.00 | | |

(Area in Ha)

Table:6.30

PUZHAKKAL BLOCK

| Sl. No. | Rock Type | Adat | Avannoor | Kaiparamb | Kolazhy | Mulamkunnathu kavu | Tholloor |
|---------|---------------------------------------|----------------|----------------|----------------|-----------------|--------------------|----------------|
| 1 | Beach (Coastal Plain) | | | | | | |
| 2 | Coastal Plain | | | | | | 0.83 |
| 3 | Channel Bar (Flood Plain) | | | | | | 0.12 |
| 4 | Denudational Hills | | | | | 336.62 | |
| 5 | Denudational Structural Hills | | | | | | |
| 6 | Linear Ridge (Lower Platerau) | | | | | | |
| 7 | Linear Ridge (Piedmont Zone) | | | | | 19.06 | |
| 8 | Lower Plateau (Lateritic) - Dissected | 997.12 | 729.28 | 1359.44 | 0.00 | | 737.42 |
| 9 | Mud Flat (Coastal Plain) | 1262.04 | 97.36 | 353.95 | 278.83 | 8.46 | 536.67 |
| 10 | Marshy | | | | | | |
| 11 | Piedmont Zone | | 485.53 | | 930.06 | 1496.90 | |
| 12 | Point Bar (Flood Plain) | | | | | | |
| 13 | Residual Hill | | | | | | |
| 14 | Residual Mount | 53.20 | 7.57 | 8.70 | | | |
| 15 | Residual Mount (Pediment) | | | | | 28.08 | |
| 16 | Rock Exposure | | | | | | |
| 17 | Structural Valley | | | | | | |
| 18 | Structural Hills | | | | | | |
| 19 | Swale (Coastal Plain) | | | | | | |
| 20 | Valley | | | | | | |
| 21 | Valley Fill | | 410.79 | 325.23 | 473.96 | 208.86 | 235.6 |
| 22 | Water Body | 53.53 | | 15.59 | | 16.13 | 45.23 |
| | Panchayath Total | 2365.89 | 1730.53 | 2062.91 | 1682.85 | 2114.11 | 1555.87 |
| | Block Total | | | | 11512.16 | | |

Table:6.31

THALIKULAM BLOCK

| Sl. No. | Rock Type | Engandiyoor | Nattika | Thalikulam | Vadanappilly | Valappad |
|---------|---------------------------------------|----------------|----------------|----------------|----------------|----------------|
| 1 | Beach (Coastal Plain) | 0.00 | 0.04 | 0.00 | 0.00 | 0.00 |
| 2 | Coastal Plain | 1229.55 | 826.67 | 877.99 | 1206.19 | 1476.16 |
| 3 | Channel Bar (Flood Plain) | | | | | |
| 4 | Denudational Hills | | | | | |
| 5 | Denudational Structural Hills | | | | | |
| 6 | Linear Ridge (Lower Platerau) | | | | | |
| 7 | Linear Ridge (Piedmont Zone) | | | | | |
| 8 | Lower Plateau (Lateritic) - Dissected | | | | | |
| 9 | Mud Flat (Coastal Plain) | 75.45 | | | | |
| 10 | Marshy | | | | | |
| 11 | Piedmont Zone | | | | | |
| 12 | Point Bar (Flood Plain) | | | | | |
| 13 | Residual Hill | | | | | |
| 14 | Residual Mount | | | | | |
| 15 | Residual Mount (Peciment) | | | | | |
| 16 | Rock Exposure | | | | | |
| 17 | Structural Valley | | | | | |
| 18 | Structural Hills | | | | | |
| 19 | Swale (Coastal Plain) | 137.47 | 58.87 | 119.41 | 91.56 | 141.61 |
| 20 | Valley | | | 17.08 | 48.48 | |
| 21 | Valley Fill | | | | | |
| 22 | Water Body | 178.17 | 56.78 | | | 2.09 |
| | Panchayath Total | 1620.64 | 942.36 | 1014.48 | 1346.23 | 1619.86 |
| | Block Total | | 6543.57 | | | |

Table:6.32

WADAKKANCHERY BLOCK

| Sl. No. | Rock Type | Desaman galam | Erumapetty | Mulloor kara | Mundathi kode | Thekkum kara | Wadakkanchery | Varavoor |
|---------|---------------------------------------|----------------|----------------|-----------------|----------------|----------------|----------------|----------------|
| 1 | Beach (Coastal Plain) | | | | | | | |
| 2 | Coastal Plain | | | | | | | |
| 3 | Channel Bar (Flood Plain) | | | | | | | |
| 4 | Denudational Hills | | 560.08 | 366.98 | 3.33 | 230.71 | 178.78 | 565.31 |
| 5 | Denudational Structural Hills | | | 2159.96 | | 167.92 | 101.44 | |
| 6 | Linear Ridge (Lower Platerau) | | | | | 36.82 | | |
| 7 | Linear Ridge (Piedmont Zone) | 105.17 | 3.88 | | 7.61 | | 148.26 | |
| 8 | Lower Plateau (Lateritic) - Dissected | | 41.44 | | 353.92 | | | |
| 9 | Mud Flat (Coastal Plain) | | | | | | | |
| 10 | Marshy | | | | | | | |
| 11 | Piedmont Zone | 1223.23 | 1416.10 | 1623.74 | 1330.16 | 2778.85 | 1446.3 | 1552.33 |
| 12 | Point Bar (Flood Plain) | 105.01 | | | | | | |
| 13 | Residual Hill | | | | | | | 28.28 |
| 14 | Residual Mount | | | | 9.99 | | | |
| 15 | Residual Mount (Pediment) | 67.01 | 47.43 | 0.21 | 54.62 | 171.22 | 117.86 | 107.46 |
| 16 | Rock Exposure | | | | | | | |
| 17 | Structural Valley | | | | | | | |
| 18 | Structural Hills | | | | | | | |
| 19 | Swale (Coastal Plain) | | | | | | | |
| 20 | Valley | | | 2.03 | | 80.48 | | |
| 21 | Valley Fill | 696.73 | 810.4 | 449.04 | 635.73 | 542.92 | 584.69 | 693.58 |
| 22 | Water Body | 71.20 | 27.72 | | | 29.83 | 16.64 | 30.41 |
| | Panchayath Total | 2268.35 | 2907.05 | 4601.96 | 2395.36 | 4038.75 | 2593.97 | 2977.37 |
| | Block Total | | | 21782.81 | | | | |

Table:6.33

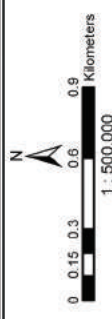
VELLANGALLOOR BLOCK

| Sl. No. | Rock Type | Padiyoor | Poomangalam | Puthenchira | Vellangalloor | Velookkara |
|---------|---------------------------------------|-----------------|----------------|----------------|----------------|----------------|
| 1 | Beach (Coastal Plain) | | | | | |
| 2 | Coastal Plain | 1056.05 | 651.76 | 11.16 | 172.69 | 8.79 |
| 3 | Channel Bar (Flood Plain) | | | | | |
| 4 | Denudational Hills | | | | | |
| 5 | Denudational Structural Hills | | | | | |
| 6 | Linear Ridge (Lower Platerau) | | | | | |
| 7 | Linear Ridge (Piedmont Zone) | | | | | |
| 8 | Lower Plateau (Lateritic) - Dissected | 7.96 | 51.25 | 1348.54 | 1426.86 | 2002.30 |
| 9 | Mud Flat (Coastal Plain) | 615.04 | 436.28 | 425.10 | 612.64 | 473.73 |
| 10 | Marshy | | | 2.60 | | |
| 11 | Piedmont Zone | | | | | |
| 12 | Point Bar (Flood Plain) | | | | | |
| 13 | Residual Hill | | | | | |
| 14 | Residual Mount | | | | | |
| 15 | Residual Mount (Pediment) | | | | | |
| 16 | Rock Exposure | | | | | |
| 17 | Structural Valley | | | | | |
| 18 | Structural Hills | | | | | |
| 19 | Swale (Coastal Plain) | | | | | |
| 20 | Valley | | | | | |
| 21 | Valley Fill | | | 402.67 | | 274.10 |
| 22 | Water Body | 110.57 | 53.66 | 197.48 | 126.31 | 26.74 |
| | Panchayath Total | 1789.62 | 1192.95 | 2387.55 | 2338.50 | 2785.66 |
| | Block Total | 10494.28 | | | | |

Table:6.34

MUNICIPALITY/CORPORATION

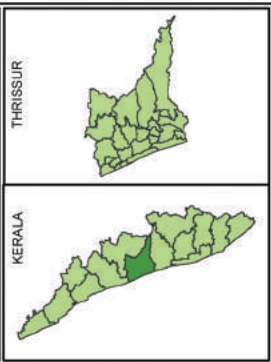
| SI. No. | Rock Type | Chalakkudy (M) | Chavakkad (M) | Guruvayoor Township (M) | Iringalakuda (M) | Kodungalloor (M) | Kunnamkulam (M) | Thrissur (C) |
|---------|---------------------------------------|----------------|----------------|-------------------------|------------------|------------------|-----------------|-----------------|
| 1 | Beach (Coastal Plain) | | 0.01 | | | | | |
| 2 | Coastal Plain | | 1074.81 | 2333.24 | 1592.93 | 1588.38 | 1.94 | 13.33 |
| 3 | Channel Bar (Flood Plain) | | | | | 38.32 | | |
| 4 | Denudational Hills | | | | | | | |
| 5 | Denudational Structural Hills | | | | | | | |
| 6 | Linear Ridge (Lower Platerau) | | | | | | | |
| 7 | Linear Ridge (Piedmont Zone) | | | | | | | |
| 8 | Lower Plateau (Lateritic) - Dissected | 1635.14 | | | 188.51 | 435.79 | 1207.53 | 4302.84 |
| 9 | Mud Flat (Coastal Plain) | | 68.43 | 206.82 | 1158.48 | 375.82 | | 3362.49 |
| 10 | Marshy | | | | | 3.78 | | |
| 11 | Piedmont Zone | | | | | | | 1966.47 |
| 12 | Point Bar (Flood Plain) | 40.38 | | | | | | |
| 13 | Residual Hill | | | | | | | |
| 14 | Residual Mount | 8.32 | | | | | | |
| 15 | Residual Mount (Pediment) | | | | | | | 24.42 |
| 16 | Rock Exposure | | | | | | | |
| 17 | Structural Valley | | | | | | | |
| 18 | Structural Hills | | | | | | | 269.15 |
| 19 | Swale (Coastal Plain) | | 71.87 | 45.69 | | 42.5 | | |
| 20 | Valley | | | | | | | |
| 21 | Valley Fill | 804.49 | | 266.26 | | 1.55 | 760.89 | 433.37 |
| 22 | Water Body | 45.1 | 25.86 | 87.41 | 57.29 | 417.19 | 0.66 | 103.82 |
| | Total | 2533.43 | 1240.98 | 2939.42 | 2997.21 | 2903.33 | 1971.02 | 10475.89 |



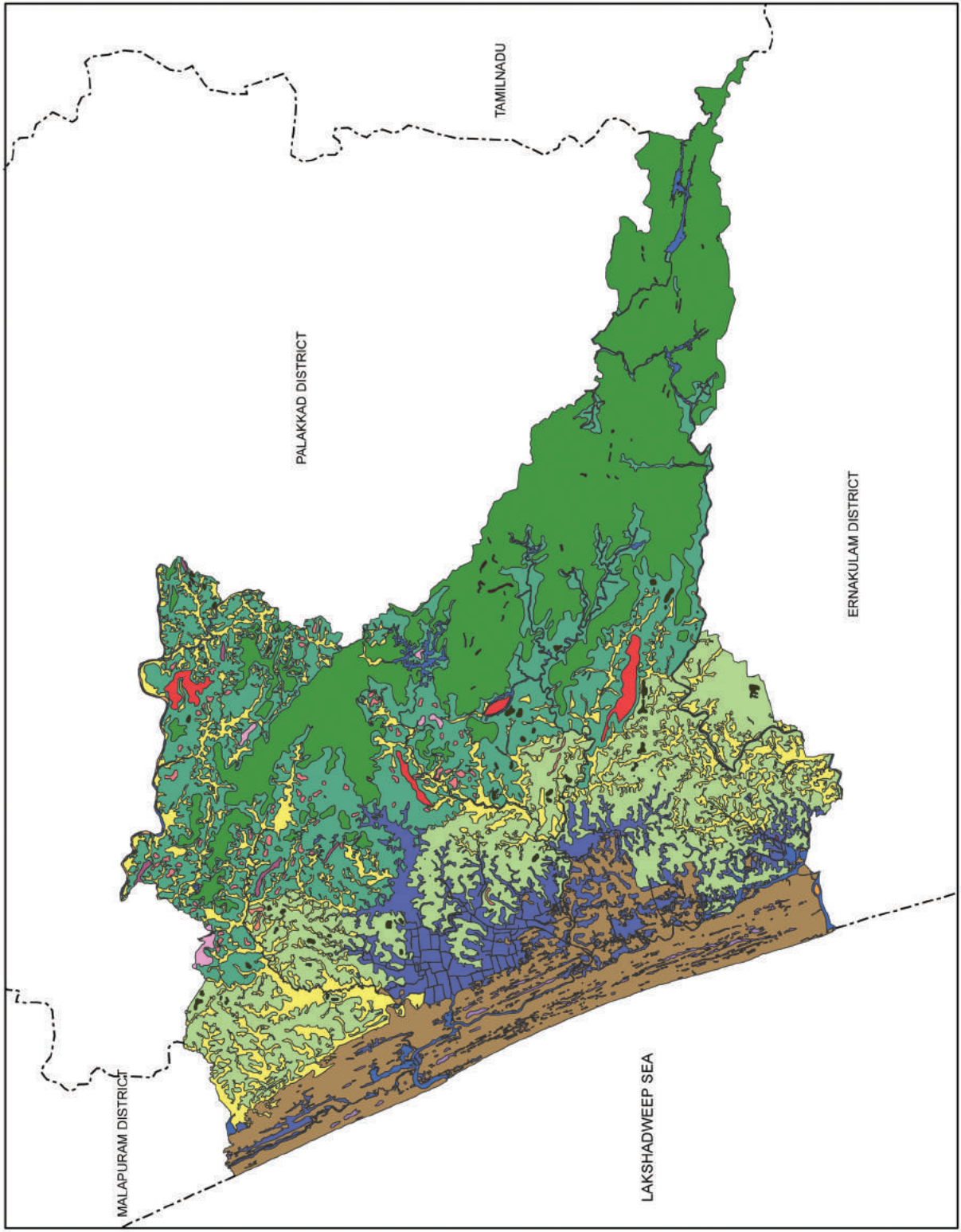
GEOMORPHOLOGY THRISSUR DISTRICT

Legend

| | |
|-----------------------------|-----------------------------|
| Valley | Beach(Coastal Plain) |
| Swale(Coastal Plain) | Residual Mount(Pediment) |
| Channel bar(Flood Plain) | Denudational Hills |
| Linear ridge(Lower Plateau) | Linear ridge(Piedmont Zone) |
| Lower Plateau (Lateritic) | Marshy |
| Mud flat(Coastal Plain) | Piedmont Zone |
| Point bar(Flood Plain) | Residual Hill |
| Residual Mount | Rock Exposure |
| Structural Hills | Water Body |



Kerala State Land Use Board
Vikas Bhavan, Thiruvananthapuram-33



PHYSIOGRAPHY

Based on the physiographic nature, Kerala is divided into three regions namely highland, midland and lowland then again it is further sub divided into four micro regions. Thrissur district consist of four such micro regions viz i) Thrissur Coast ii) Thrissur plain iii)Wadakkanchery Uplands iv) Kodassery Forested Hills. The first region Thrissur coast lies all along the coast of Thrissur district. It has its boundaries with Malappuram coast in the North, Thrissur plain in the East, Cochin coast in the South and the Lakshadweep Sea in the West. The maximum height (55 m) is found in the central-east portion i.e., at Kodannur village of Thrissur taluk. The low lying land known as kole land, lies as a continuous belt from the central portion towards the coast where the spot heights are 3 m, 10 m and 11 m etc. Second region Thrissur plain is bounded by Pattambi undulating plain in the North, Wadakkanchery Uplands and Kodassery Forested Hills in the East, Periyar-Muvattupuzha Rolling Plain in the South and Thrissur coast in the West. This region which is parallel to Thrissur coast has the maximum height of 118 m at Amballur village of Mukundapuram taluk and has the minimum height of 43 m at Muringur Thekkummuri village of Mukundapuram taluk. Third region Wadakkanchery Uplands has its boundaries with the Palakkad Gap on the North and the East, Kodassery Forested Hills in the South and Thrissur Plain in the West. It is not a high mountainous tract but only uplands having outlying hills in the Eastern extreme of this region. The maximum height of this region is 208 m in Kondazhy village of Talappilly taluk and the minimum height is 52 m in its Southern portion. Fourth region Kodassery forested hills lies in the South-Eastern portion of the district forming its boundaries with Wadakkanchery Uplands in the North, Chittur Forested Hills and Tamil Nadu in the East, Malayattoor Forested Hills and Anamalai Forested Hills in the South and Thrissur Plains in the West. This forested hill has wet semi-ever-green forest. In its Northern and Southern ends Peechi and Peringalkuthu reservoirs are located. This forest highland which is a part of the Western Ghats forms the catchment areas of the Manali, the Karuvannur and the Chalakkudy rivers. River terraces are seen in the middle portion. The maximum height (1439 m) is found in the Southern end of the reserve forest and the minimum height (416 m) is found in the Northern end at the Attur village of Talappilly taluk. It slopes towards the North.

Table:7.1

**NATURAL REGIONS OF THRISSUR - DETAILS OF TALUKS/VILLAGES AND WITH
AREA BY REGIONS**

(Area in ha)

| SI.No. | Taluks/Villages | Low land | Mid land | High land |
|-------------------------|-----------------|----------|----------|-----------|
| Talappally Taluk | | | | |
| 1 | Thichur | - | 756 | - |
| 2 | Arangottukara | - | 320 | - |
| 3 | Talasseri | - | 213 | - |
| 4 | Pallur | - | 953 | - |
| 5 | Desamangalam | - | 848 | - |
| 6 | Cheruthuruthy | - | 733 | - |
| 7 | Nedumpura | - | 1254 | - |
| 8 | Attur | - | 3042 | - |
| 9 | Paikulam | - | 1356 | - |
| 10 | Panjai | - | 672 | - |
| 11 | Killimangalam | - | 1011 | - |
| 12 | Vellangallur | - | 1994 | - |
| 13 | Thonukara | - | 780 | - |
| 14 | Palakkad | - | 1109 | - |
| 15 | Varuvor | - | 1112 | - |
| 16 | Mulloorkara | - | 1386 | - |
| 17 | Kanjirakode | - | 797 | - |
| 18 | Kumaranallur | - | 540 | - |
| 19 | Chittanda | - | 570 | - |
| 20 | Kottapuram | - | 646 | - |
| 21 | Nalluvayi | - | 667 | - |
| 22 | Kariannur | - | 531 | - |
| 23 | Kadangode | - | 1232 | - |
| 24 | Vellarakkad | - | 593 | - |
| 25 | Chiramanangad | - | 761 | - |
| 26 | Mangad | - | 374 | - |
| 27 | Porkulam | - | 468 | - |
| 28 | Akathiyoor | - | 497 | - |
| 29 | Kadavallor | - | 848 | - |
| 30 | Perumpilavu | - | 989 | - |
| 31 | Karikkad | - | 647 | - |
| 32 | Pazhanji | - | 796 | - |
| 33 | Kattakampal | - | 890 | - |
| 34 | Anjur(P) | - | 659 | - |
| 35 | Kunnamkulam(P) | - | 110 | - |
| 36 | Chowannur | - | 816 | - |
| 37 | Chemmanthatta | - | 472 | - |
| 38 | Eyyal | - | 619 | - |
| 39 | Vellattanjur | - | 609 | - |

| SI.No. | Taluks/Villages | Low land | Mid land | High land |
|-----------------------|----------------------|----------|--------------|--------------|
| 40 | Chiranellur | - | 633 | - |
| 41 | Thayyur | - | 735 | - |
| 42 | Velur | - | 1206 | - |
| 43 | Kirallur | - | 282 | - |
| 44 | Puthuruthy | - | 513 | - |
| 45 | Mundathicode | - | 645 | - |
| 46 | Wadakkanchery | - | 1498 | - |
| 47 | Parlikkad | - | 368 | - |
| 48 | Enkakkad | - | 759 | - |
| 49 | Karumathra | - | 186 | - |
| 50 | Viruppakka | - | 427 | - |
| 51 | Manalithara | - | 1083 | - |
| 52 | Thekkumkara | - | 2124 | - |
| 53 | Minalur | - | 400 | - |
| 54 | Peringandoor | - | 411 | - |
| 55 | Choondal | - | 839 | - |
| 56 | Kanipayoor(P) | - | 551 | - |
| 57 | Eranellur | - | 526 | - |
| 58 | Arthat | - | 571 | - |
| 59 | Kandanisseri | - | 818 | - |
| 60 | Alur | - | 709 | - |
| 61 | Kunnamkulam(M) | - | 696 | - |
| 62 | Mayannur | - | - | 899 |
| 63 | Kondozy | - | - | 1525 |
| 64 | Kaniyarkode | - | - | 1194 |
| 65 | Pampadi | - | - | 598 |
| 66 | Thiruvilwamala | - | - | 2002 |
| 67 | Vadakkethara | - | - | 908 |
| 68 | Chelakode | - | - | 565 |
| 69 | Chelakara | - | - | 368 |
| 70 | Pulakode | - | - | 1577 |
| 71 | Karumala | - | - | 475 |
| 72 | Pangarappally | - | - | 789 |
| 73 | Pazhayannur | - | - | 1989 |
| 74 | Vennur | - | - | 928 |
| 75 | Elanad | - | - | 2078 |
| 76 | Wadakkancherry Range | - | - | 1755 |
| | Total | - | 48650 | 17650 |
| Thrissur Taluk | | | | |
| 1 | Puzhakkal | 485 | - | - |
| 2 | Puranattukara | 633 | - | - |
| 3 | Manakkodi | 535 | - | - |
| 4 | Veluthur | 621 | - | - |
| 5 | Eravu | 573 | - | - |
| 6 | Parakad | 536 | - | - |
| 7 | Manalur | 1099 | - | - |

| SI.No. | Taluks/Villages | Low land | Mid land | High land |
|--------|-------------------|----------|----------|-----------|
| 8 | Karamukku | 723 | - | - |
| 9 | Padiyam | 551 | - | - |
| 10 | Anthikkad | 748 | - | - |
| 11 | Pulu | 382 | - | - |
| 12 | Alappad | 572 | - | - |
| 13 | Chuzhur | 467 | - | - |
| 14 | Kizhakkumuri | 243 | - | - |
| 15 | Vadakkumuri | 609 | - | - |
| 16 | Thanniyam | 530 | - | - |
| 17 | Kizhuppillikkara | 371 | - | - |
| 18 | Kurumpilavu | 768 | - | - |
| 19 | Inchamudi | 365 | - | - |
| 20 | Kaiparamba | - | 495 | - |
| 21 | Anjur | - | 678 | - |
| 22 | Thangalur | - | 542 | - |
| 23 | Tholur | - | 388 | - |
| 24 | Edakulathur | - | 693 | - |
| 25 | Avanur | - | 509 | - |
| 26 | Chooliseri | - | 328 | - |
| 27 | Velappaya | - | 446 | - |
| 28 | Killannur | - | 2122 | - |
| 29 | Kolazhi | - | 560 | - |
| 30 | Vilavattom town | - | 625 | - |
| 31 | Viyyur town | - | 509 | - |
| 32 | Kurichikkara | - | 318 | - |
| 33 | Madakkathara | - | 1351 | - |
| 34 | Vellanikkara | - | 491 | - |
| 35 | Nellisseri | - | 422 | - |
| 36 | Puttore | - | 464 | - |
| 37 | Kuttoor | - | 638 | - |
| 38 | Chittilapilli | - | 493 | - |
| 39 | Chalakkal | - | 636 | - |
| 40 | Adath | - | 691 | - |
| 41 | Pullazhi town | - | 788 | - |
| 42 | Aranattukara town | - | 584 | - |
| 43 | Ayyanthole town | - | 725 | - |
| 44 | Poonkunnam | - | 146 | - |
| 45 | Peringavu (R+U) | - | 279 | - |
| 46 | Thrissur | - | 151 | - |
| 47 | Mannuthy town | - | 1335 | - |
| 48 | Kozhukully | - | 428 | - |
| 49 | Mulayam | - | 1111 | - |
| 50 | Kainoor | - | 814 | - |
| 51 | Panancheri | - | 6671 | - |
| 52 | Mannamangalam | - | 859 | - |
| 53 | Puthur | - | 1544 | - |
| 54 | Nadathara town | - | 552 | - |

| Sl.No. | Taluks/Villages | Low land | Mid land | High land |
|--------------------------|--------------------------|--------------|--------------|--------------|
| 55 | Marathakara town | - | 691 | - |
| 56 | Ollur town | - | 933 | - |
| 57 | Edakunni town | - | 559 | - |
| 58 | Chiyaram town | - | 491 | - |
| 59 | Kanimangalam town | - | 855 | - |
| 60 | Koorkancherry town | - | 260 | - |
| 61 | Kodannur | - | 503 | - |
| 62 | Venginiseri | - | 302 | - |
| 63 | Palisseri | - | 313 | - |
| 64 | Pallipuram | - | 427 | - |
| 65 | Paralam | - | 472 | - |
| 66 | Chevr town | - | 608 | - |
| 67 | Avinissery town | - | 469 | - |
| 68 | Vallachira | - | 605 | - |
| 69 | Arattupuzha | - | 414 | - |
| 70 | Oorakam | - | 701 | - |
| 71 | Cherpu | - | 779 | - |
| 72 | Thrissur (M) | - | 1265 | - |
| 73 | Peramangalam | - | 876 | - |
| 74 | Peechi & Pattikkad range | - | - | 11844 |
| | Total | 10811 | 40909 | 11844 |
| Chavakkad Taluk | | | | |
| 1 | Punnayoor | 1660 | - | - |
| 2 | Pookode | 1002 | - | - |
| 3 | Guruvayoor(P) | 410 | - | - |
| 4 | Chavakkad(P) | 808 | - | - |
| 5 | Orumanayur | 1498 | - | - |
| 6 | Paravatty | 919 | - | - |
| 7 | Elavally | 1628 | - | - |
| 8 | Mullasery | 1770 | - | - |
| 9 | Venkitangu | 2047 | - | - |
| 10 | Engadiyoor | 1411 | - | - |
| 11 | Vadanappally | 1458 | - | - |
| 12 | Thalikulam | 1089 | - | - |
| 13 | Nattika | 960 | - | - |
| 14 | Edamuttom | 1633 | - | - |
| 15 | Chavakkad(M) | 1241 | - | - |
| 16 | Guruvayoor Township | 649 | - | - |
| 17 | Punnayoorkulam | - | 1871 | - |
| 18 | Vadakkedak | - | 1372 | - |
| | Total | 20183 | 3243 | - |
| Kodungallur Taluk | | | | |
| 1 | Idavilangu | 760 | - | - |
| 2 | Eriyad | 951 | - | - |
| 3 | Ala | 545 | - | - |
| 4 | Padinjare vemballur | 613 | - | - |

| SI.No. | Taluks/Villages | Low land | Mid land | High land |
|---------------------------|--------------------|--------------|-------------|-----------|
| 5 | Panangad | 768 | - | - |
| 6 | Azhikode | 724 | - | - |
| 7 | Pallipuram | - | 626 | - |
| 8 | Poyya | - | 944 | - |
| 9 | Madathumpady | - | 408 | - |
| 10 | Edathiruthy | 929 | - | - |
| 11 | Kaipamangalam | 1370 | - | - |
| 12 | Perinjanam | 930 | - | - |
| 13 | Pappinivattom | 636 | - | - |
| 14 | Chendrappinni | 734 | - | - |
| 15 | Koolimuttam | 656 | - | - |
| 16 | Kodungallur (M) | 1730 | - | - |
| 17 | Methala town | 1166 | - | - |
| | Total | 12512 | 1978 | - |
| Mukundapuram Taluk | | | | |
| 1 | Idathirinji | 1019 | - | - |
| 2 | Poomangalam | 923 | - | - |
| 3 | Vallivattom | 846 | - | - |
| 4 | Karumathara | 250 | - | - |
| 5 | Thrikkur | - | 869 | - |
| 6 | Kallur | - | 1769 | - |
| 7 | Nenmenikkara | - | 1041 | - |
| 8 | Peduckad town | - | 641 | - |
| 9 | Amballur | - | 1838 | - |
| 10 | Varandarapilly | - | 1332 | - |
| 11 | Mupliyam | - | 985 | - |
| 12 | Nandipulam | - | 470 | - |
| 13 | Chengallur | - | 900 | - |
| 14 | Nellayi | - | 720 | - |
| 15 | Parappukara | - | 765 | - |
| 16 | Thottippal | - | 717 | - |
| 17 | Porathisseri (P) | - | 1064 | - |
| 18 | Karalam (P) | - | 1429 | - |
| 19 | Kattoor | - | 1170 | - |
| 20 | Nanavalasserri (P) | - | 698 | - |
| 21 | Irinjalakuda (P) | - | 178 | - |
| 22 | Madayikonam | - | 991 | - |
| 23 | Pullur | - | 781 | - |
| 24 | Anandapuram | - | 608 | - |
| 25 | Muriyad | - | 776 | - |
| 26 | Kodkara | - | 2129 | - |
| 27 | Muttathur | - | 3454 | - |
| 28 | Kodasseri | - | 4033 | - |
| 29 | Pariyaram | - | 2449 | - |
| 30 | Ilanjipram | - | 216 | - |
| 31 | Alur | - | 1767 | - |
| 32 | Kallettumkara | - | 476 | - |

| Sl.No. | Taluks/Villages | Low land | Mid land | High land |
|--------|-----------------------|-------------|--------------|--------------|
| 33 | Thazhekkad | - | 1196 | - |
| 34 | Kaduppasseri | - | 764 | - |
| 35 | Velloorkara | - | 592 | - |
| 36 | Vadakkumkara | - | 664 | - |
| 37 | Padiyoor | - | 838 | - |
| 38 | Thekkumkara | - | 901 | - |
| 39 | Kottanellur | - | 1134 | - |
| 40 | Puthenchira | - | 2229 | - |
| 41 | Vakkumbhagam | - | 605 | - |
| 42 | Vadama | - | 1032 | - |
| 43 | Anallur | - | 581 | - |
| 44 | Muringur Vadakkummuri | - | 279 | - |
| 45 | Melur | - | 2027 | - |
| 46 | MuringurThekkummuri | - | 1013 | - |
| 47 | Kizhakkummuri | - | 1329 | - |
| 48 | Kallur-Vadakkummuri | - | 1763 | - |
| 49 | Kallur-Thekkummuri | - | 1250 | - |
| 50 | Alathur | - | 1258 | - |
| 51 | Kuruvilasseri | - | 617 | - |
| 52 | Kakkulasseri | - | 856 | - |
| 53 | Thirumukulam | - | 1055 | - |
| 54 | Iringalakuda (M) | - | 1124 | - |
| 55 | Chalakkudy (M) | - | 2523 | - |
| | Forest area | - | - | - |
| | Out side village | - | - | - |
| | Boundaries | - | - | 68663 |
| | Total | 3038 | 59896 | 68663 |

SOIL

Soil is an important natural resource, from it we obtain everything directly or indirectly. Its thickness varies from a few centimeters to a few meters on earth's surface, but it takes millions of years for its formation. Formation of soil is formed due to weathering by chemical, mechanical and biological forces. Formation is a very slow process as 21/2 cm of soil is formed in one thousand years. Soil is one of the major resources of land which determines the use of potential. Factors upon which formation of soil depend are (i) the parent rock (ii) topography or relief (soil cover is thin in hilly areas than on the plains) (iii) climate (it is the most important soil forming factor; weathering, i.e. breaking or disintegration of rocks depends upon the elements of climate, i.e. heat (hot/cold), rain, wind, etc.) (iv) vegetation. Soil is a natural body consisting of layers (soil horizons) that are primarily composed of minerals which differ from their parent materials in their texture, structure, consistency, colour, chemical, biological and other characteristics. The result soil is the end product of the influence of the climate (temperature, precipitation), relief (slope), organisms (flora and fauna), parent materials (original minerals), temperature and time. Kerala State is endowed with wide range of soil types.

Thrissur district covers mainly four types of soils sandy, alluvial, laterite, and forest. Coastal taluks of Kodungallur and Chavakkad have sandy soil. Alluvial soil is most important for agricultural purposes and low lying areas in the western region of Thrissur and Mukundapuram taluks have alluvial soil. Water holding capacity is very low in laterite soil and this type of soils is found in central region of Thrissur, Thalappally, Mukundapuram taluks. Forest soil is acidic in nature and which in organic carbon. Forest soil covers eastern regions of Thalappally, Thrissur and Mukundapuram taluks.

Table: 8.1

SOILS IN THRISSUR DISTRICT (COMPREHENSIVE LEGEND)

| Soil Mapping Unit | Description Major Soil | Classification | |
|-------------------|---|--|---|
| | | Major Soils | Inclusions |
| K01 | Very deep, moderately well drained, sandy soils with moderately shallow water table on very gently sloping subdued sand dunes, with slight erosion: Associated with very deep, moderately well drained, sandy soils. | Mixed, Aquic Ustipsamments Mixed Typic Ustipsamments | Fine-loamy, Mixed, Typic Dystrupepts Coarse-loamy, Mixed Aquic Ustorthents |
| K02 | Very deep, somewhat excessively drained sandy soils with moderately deep water table on very gently sloping beaches, with slight erosion: Associated with very deep, moderately well drained, sandy soils with moderately shallow water table. | Mixed, Typic Ustipsamments Mixed, Aquic Ustipsamments | Coarse-loamy, Mixed Aquic Ustorthents Fine, Mixed Aeric Tropaquepts |
| K03 | Very deep, very poorly drained, clayey soils with moderately shallow water table in nearly level broad valleys, with slight erosion: Associated with very deep imperfectly drained, clayey soils with moderately deep water table on very gentle slopes. | Fine, Mixed Typic Tropaquepts Fine, Mixed Aeric Tropaquepts | Fine, Mixed Typic Sulfaquepts Fine, Mixed Typic Dystrupepts |
| K05 | Very deep, imperfectly drained, clayey soils with shallow water table on level lands with valleys, with slight erosion. | Fine, Mixed Typic Dystrupepts Fine, Mixed Aeric Tropaquepts | Fine, Mixed Typic Tropaquepts Fine-loamy, Mixed Ustic Kanhaplohumults |

| Soil Mapping Unit | Description Major Soil | Classification | |
|-------------------|--|---|---|
| | | Major Soils | Major Soils |
| K07 | Very deep, well drained, gravelly clay soils on gently sloping coastal laterites, with moderate erosion: Associated with very deep, well drained, gravelly clay soils with moderate surface gravelliness | Clayey-skeletal, Kaolinitic, Typic Kandiuults Clayey-skeletal, Kaolinitic, Typic Kanhaplults | Loamy-skeletal, Mixed Ustoxic Dystropepts Clayey, Kaolinitic, Typic Kandiuults |
| K08 | Very deep, moderately well drained, clayey soils with moderately shallow water table in nearly level narrow valleys, with slight erosion: Associated with very deep, imperfectly drained clayey soils with moderately shallow water table on nearly level land. | Fine Mixed Typic Dystropepts Fine Mixed Typic Trophaquepts | Clayey, Kaolinitic, Typic Kanhaplults Fine Mixed Typic Ustropepts |
| K09 | Very deep, well drained, gravelly clay soils with moderate surface gravelliness on moderately steeply sloping laterite mounds, with moderate erosion: Associated with deep, well drained, gravelly clay soils on gentle slopes. | Clayey-skeletal, Kaolinitic, Oxidic Humitropepts Clayey-skeletal, Kaolinitic, Ustic Haplohumults | Clayey-skeletal, Kaolinitic, Ustic Kandihumults Fine-loamy, Mixed Typic Kandiuults |
| K11 | Very deep, well drained, gravelly clay soils on gently sloping midland laterites with valleys of central Kerala, with moderate erosion: Associated with deep, well drained, clayey soils with coherent material at 100 to 150 cm on gentle slopes. | Clayey, Kaolinitic, Ustic Kandihumults Clayey, Kaolinitic, Typic Kanhaplults | Fine Mixed Typic Dystropepts Clayey-skeletal, Kaolinitic, Oxidic Humitropepts |

| Soil Mapping Unit | Description Major Soil | Classification | |
|-------------------|---|--|--|
| | | Major Soils | Major Soils |
| K17 | Very deep, moderately well drained, loamy soils with moderately shallow water table on very gently sloping lands of Palghat Gap with valleys, with slight erosion: Associated with deep, well drained, gravelly loam soils with coherent material at 100 to 150 cm. on gentle slopes, moderately eroded. | Fine-loamy, Mixed, Typic Ustropepts Fine-loamy, Mixed Typic-Haplustalfs | Fine, Mixed, Aquic Ustropepts Fine montmorillonitic, Vertic Ustropepts |
| K31 | Very deep, well drained, gravelly loam soils on steeply sloping medium hills with thick vegetation, with moderate erosion: Associated with very deep, well drained, clayey soils on moderate slopes. | Fine-loamy, Mixed Ustic Humitropepts Clayey-mixed Ustic Palehumults | Rock land Clayey-mixed Ustic Haplohumults |
| K32 | Deep, well drained loamy soils on gently sloping low hills with isolated hillocks, with moderate erosion: Associated with deep, well drained, loamy soils with coherent material at 100 to 150 cm. on moderate slopes, severely eroded. | Fine-loamy, Mixed Ustic Humitropepts Fine-loamy, Mixed Ustic Haplohumults | Fine Mixed Ustic Humitropepts Clayey Skeletal, Mixed Ustic Humitropepts |
| K33 | Deep well drained, gravelly clay soils on moderately sloping medium hills with thin vegetation, with severe erosion: Associated with rock outcrops | Fine, Kaolinitic, Oxidic Humitropepts Rock land | Fine-loamy Mixed, Ustic Palehumults |

| Soil Mapping Unit | Description Major Soil | Classification | |
|-------------------------------|---|--|---|
| | | Major Soils | Major Soils |
| K35 | Deep, well drained, gravelly clay soils with coherent material at 100 to 150 cm. on moderately sloping isolated hillocks, with severe erosion: Associated with moderately shallow, well drained, gravelly loam soils with coherent material at 50 to 75 cm on very gently slopes, moderately eroded. | Clayey-skeletal, Kaolinitic, Oxid Humitropepts Fine-loamy Mixed Oxid Humitropepts | Clayey-skeletal, Mixed Ustic Humitropepts Clayey, Mixed Ustic Haplohumults |
| K36 | Very deep, well drained, clayey soils on moderately steeply sloping high hills with thick vegetation, with moderate erosion: Associated with deep, well drained, gravelly loam soils on gentle slopes. | Clayey, Mixed, Ustic Haplohumults Fine-loamy Mixed Oxid Humitropepts | Fine, Mixed, Ustic Humitropepts Rock land |
| K37 | Very deep, well drained, clayey soils on moderately sloping foot hills with moderate erosion: Associated with very deep, well drained, gravelly clay soils on gentle slopes. | Clayey, Mixed, Ustic Palehumults Clayey, Mixed, Ustic Haplohumults | |
| K38 | Very deep, well drained, clayey soils on moderately steeply sloping high hills with thin vegetation, with moderate erosion: Associated with rock outcrops. | Clayey, Mixed, Ustic Palehumults Rock land | Fine, Mixed, Ustic Humitropepts Fine-loamy, Mixed, Ustic Humitropepts |
| Soils of the Lowland | - | | |
| Soils of the Midland | - | | |
| Soils of the Central Sahyadri | - | | |
| Soils of the South Sahyadri | - | | |
| Soils of the Nilgris | - | | |

K01, K02, K03, K05, K07
 K08, K09, K11
 K17
 K31, K32, K33, K37, K38
 K35, K36

Table:8.2

LEGEND FOR THE SOIL MAP OF THRISSUR DISTRICT

| Sl.No. | Map Symbol | Depth | Texture | Slope | Drainage |
|--------|------------|-------|---------|-------|----------|
| 1 | K01 | vd | s | vg | mw |
| 2 | K02 | vd | s | vg | e |
| 3 | K03 | vd | c | vg | vp |
| 4 | K05 | vd | c | vg | l |
| 5 | K07 | vd | gc | g | w |
| 6 | K08 | vd | c | vg | mw |
| 7 | K09 | vd | gc | ms | w |
| 8 | K11 | vd | gc | g | w |
| 9 | K17 | vd | l | vg | mw |
| 10 | K31 | vd | gl | s | w |
| 11 | K32 | d | l | g | w |
| 12 | K33 | d | gc | m | w |
| 13 | K35 | d | gc | m | w |
| 14 | K36 | vd | c | ms | w |
| 15 | K37 | vd | c | m | w |
| 16 | K38 | vd | c | ms | w |

Depth

| | | |
|---|----|-----------|
| 1 | d | deep |
| 2 | vd | very deep |

Slope

| | | |
|---|----|------------------|
| 1 | g | gentle |
| 2 | vg | very gentle |
| 3 | m | moderate |
| 4 | s | steep |
| 5 | ms | moderately steep |

Texture

| | | |
|---|----|---------------|
| 1 | s | sandy |
| 2 | gc | gravelly clay |
| 3 | c | clay |
| 4 | l | loam |
| 5 | gl | gravelly loam |

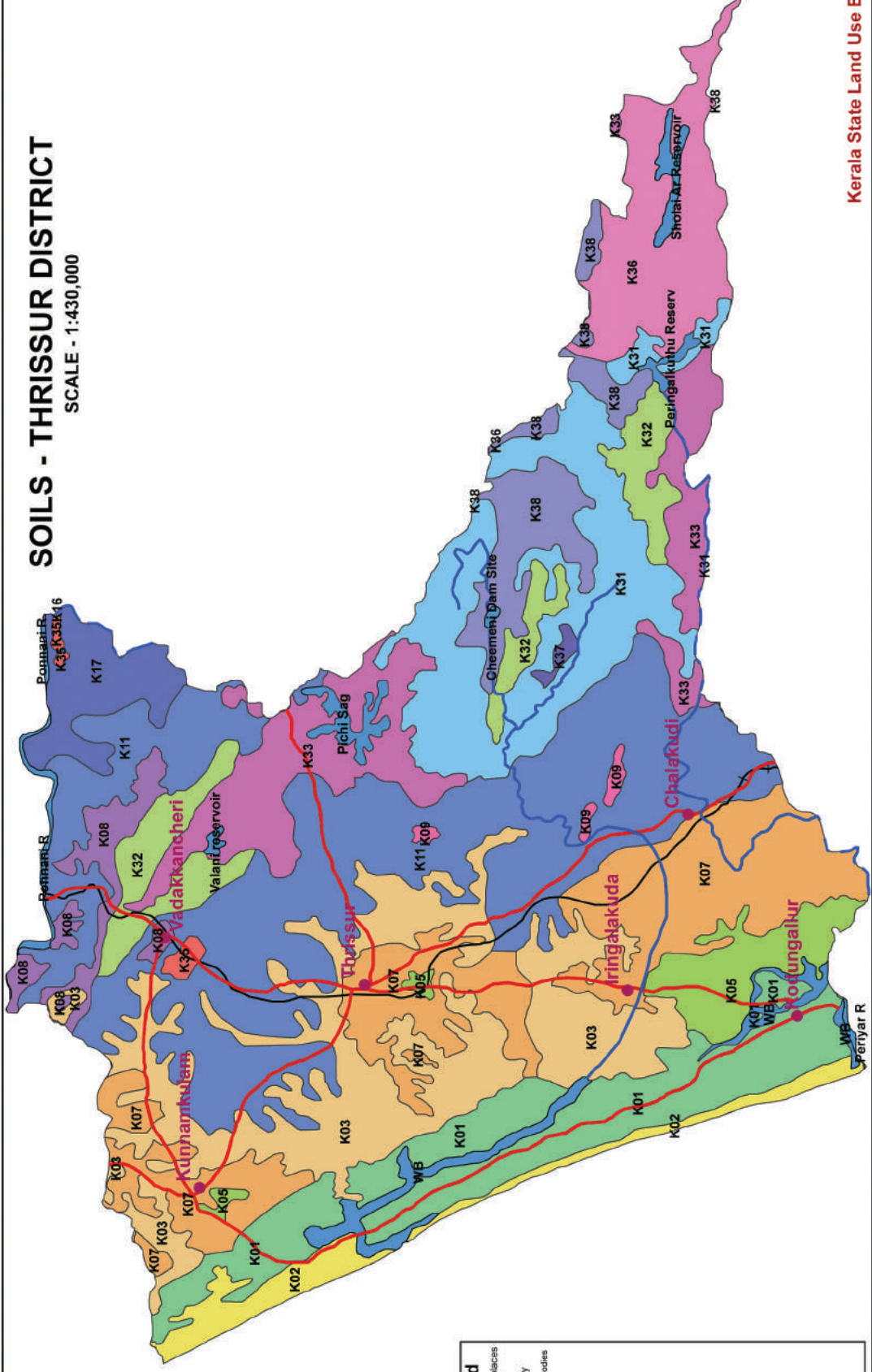
Drainage

| | | |
|---|----|-------------------------|
| 1 | mw | moderately well drained |
| 2 | w | well |
| 3 | e | excessive |
| 4 | i | imperfectly |
| 5 | vp | very poor |



SOILS - THRISSUR DISTRICT

SCALE - 1:430,000



| Legend | |
|--------|--------------|
| • | Major places |
| — | Road |
| — | Railway |
| — | Waterbodies |
| K01 | Soil Type |
| K02 | Soil Type |
| K03 | Soil Type |
| K05 | Soil Type |
| K07 | Soil Type |
| K08 | Soil Type |
| K09 | Soil Type |
| K11 | Soil Type |
| K16 | Soil Type |
| K17 | Soil Type |
| K31 | Soil Type |
| K32 | Soil Type |
| K33 | Soil Type |
| K35 | Soil Type |
| K36 | Soil Type |
| K37 | Soil Type |
| K38 | Soil Type |

Kerala State Land Use Board

WATER RESOURCES

In most developing countries, agriculture is the dominant user of water, accounting for more than 85% of all water use. Use of water in agriculture raises significant issues for water resources management like issues dealing with water scarcity, competing demands from other sectors, irrigation service delivery and system management, water use efficiencies are so forth. The primary objective in coming years will be to balance water supply and demand among users to ensure adequate water for agriculture and sustainable irrigation system management while satisfying other needs. Investments in irrigation are changing globally in response to changes in environment and experience with previous projects. In 1970's and 1980's investment typically involved large irrigation and drainage projects with considerable infrastructure development. In 1990's investment often supported system rehabilitation and management and more recently to small irrigation schemes. Increased water scarcity has shifted the focus from exploitation of water resources and building infrastructure to improvement of water use efficiency.

The basic premise of water resource management is that manages and develops the river basins as an integrated approach. This is always legally and politically complex due to the challenges of allocation between users and uses. In many cases the need of river infrastructure such as weirs, dykes, regulators and other storage structures are primary drivers for adopting institutional solutions. The investment in storage structures is essential to optimize water use as well as to address the growing number of water conflicts. The surface irrigation consists of major chunk of irrigation infrastructure in the state. There are 18 dams in the state intended for irrigation. Out of this, 14 have storages and remaining are barrages.

Live storage capacities of irrigation Reservoirs

The live storage position of the reservoirs during the beginning and end of the monsoon period for 2008 to 2011 are given in the following table.

Table: 9.1

| (Mm ³) | | | | | |
|--------------------|---|---------|------|------|------|
| Sl. No. | Item | 2008 | 2009 | 2010 | 2011 |
| 1 | Storage at the beginning of the Monsoon | 452 | 392 | 531 | 525 |
| 2 | Storage at the end of the Monsoon | 1156 | 1180 | 1213 | 1274 |
| 3 | Increase due to Monsoon | 704 | 788 | 682 | 749 |
| 4 | Average for 10 years (2002 – 2011) | | | | |
| | (i) at the beginning of the monsoon | 430.48 | | | |
| | (ii) at the end of the monsoon | 1133.16 | | | |
| | (iii) increase in monsoon storage | 702.68 | | | |

The awareness among the public about the importance of the ground water has increased during the recent years. The need for ground water being felt by all sectors because of the shortage of surface water sources to mitigate the growing needs of the society. Recently the problems of decline in water table, contamination of ground water, sea water intrusion etc are being reported at many places. The shortage of rainfall in recent years and the increased utilization of ground water caused concern among the public that water may become scarce commodity in future. In order to assess the real situation of ground water conditions, it is very essential to monitor the ground water level and water quality over time and space. Central Ground Water Board monitoring water level and quality through a network of Ground Water Monitoring Wells distributed through out State. The monitoring started from the year 1969 for the nine monitoring wells and the number of monitoring wells was increased during the subsequent years and became 224 by the year 1979 and the number became 460 by the year 1988. Presently the total number of Ground Water Monitoring Wells (GMMWs) through out the Kerala State is 941. Water level is being monitored four times a year during January, April, August and November months and water quality is being monitored from the water samples collected from GMMWs during April.

The total number of GMMWs as on 31.3.2010 is 941. Out of these, 662 are dug wells tapping phreatic aquifers and 279 are bore wells/tube wells tapping deeper

aquifers of confined/semi-confined nature. These GMMWs are spread over all the physiographic divisions of the State. About 62% of the GMMWs fall in the midland region, 18% in coastal plains, 15% in highlands and 5% in plateau region. Among the GMMWs tapping phreatic acquire, 65% are tapping laterite, 17% tapping weathers and fractured crystalline, 15% tapping coastal alluvium and 3% tapping reverie alluvium. The data of these GMMWs were analyzed to understand the depth to water level scenario in the State, annual fluctuation in the water levels due to the monsoon recharge, long term trend in water levels and the nature of the quality of ground water and the salient features are brought out in this report.

RIVERS

There are 41 west flowing rivers and 3 east flowing rivers, most of them having their source in the Western Ghats and draining into the Arabian Sea. Some of these rivers have a portion of their catchments in the adjoining States of Karnataka and Tamil Nadu. In addition, there are three rivers which also originate from the Western Ghats, but they flow eastwards into the States of Karnataka and Tamil Nadu. The important rivers in the district are the Bharathapuzha, Keecheri, Puzhakkal, Karuvannur and Chalakkudy.

Bharathapuzha River

Bharathapuzha River, the second longest river of the State takes its origin at an elevation of +1964m above M.S.L from Anamalai hills and flows through the districts of Coimbatore, Palakkat, Malappuram, Thrissur and joins the Arabian Sea near the Ponnani town. Its main tributaries are the Gayathripuzha, Kannadi river or Chitturpuzha or Amaravathi, Kalpathipuzha and Thuthapuzha. The Gayathripuzha has four main sub tributaries viz Mangalam river in which Mangalam dam is located, Ayalurpuzha in which Pothundy dam is located, Vandazhipuzha, Meenkada river, in which Meenkada dam is located and Chulliyar, in which Chulliyar dam is located. Cheerakuzhi weir is located across the Gayathri River near Pazhayannur. The length of the river is 209km with a catchment area of 6186 sq.km. About two-third of the drainage area of the basin ie, 4400 sq.km lies in Kerala State and the balance 1786 sq.km. in Tamilnadu.

Keecheri River

It is also known as Wadakkanchery River on Alurpuzha is one of the smallest rivers in the State and is practically dry during summer. The river originates from Machad Malai at about +365m elevation in the upper reaches of Talappilly taluk forming part of the Western Ghats. The only important tributary of Keecheri River is Choondal thodu. The total length of the river is 51km. It has a total drainage area of 401sq.km.

Puzhakkal River

Draining into the Kole lands of Thrissur district, Puzhakkal River, is formed by the confluence of parathodu, Poomalathodu, Naduthodu and Kattachira thodu. Parathodu and Poomalathodu have their origin in the hills of Killannoor village at an elevation of +150m. Naduthodu rises from Manalithara hills on the South side of Machadmalai at an altitude of +525m while Kattachirathodu rises from below +75m near Mudikotty. It has a length of 29 km and drains an area of 234 sq.km.

Karuvannur River

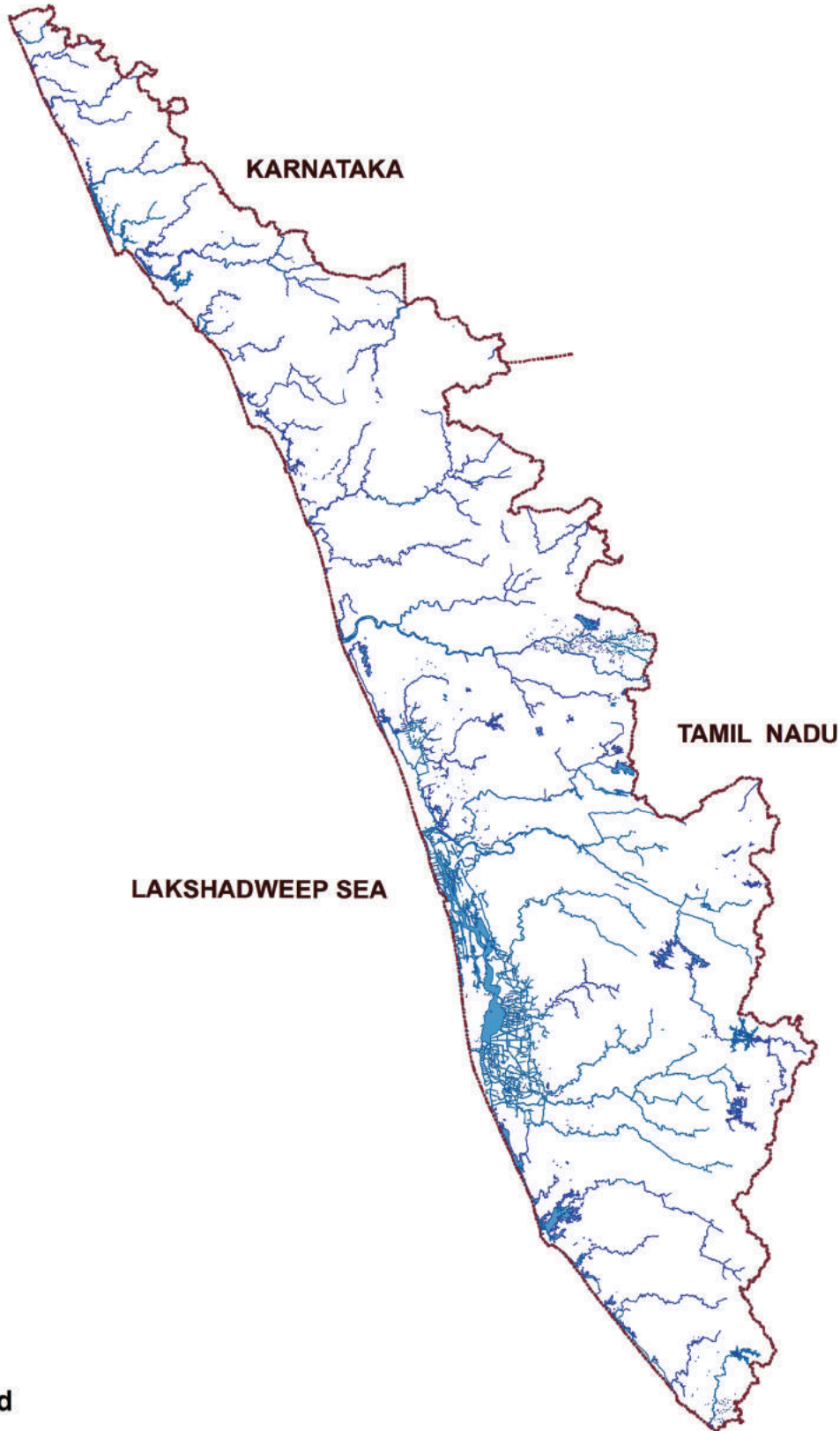
This river originates from the Western Ghats and is fed by its two main tributaries namely Manali and Kurumali. The Manali originates from Vaniampara hills at an elevation of +365m. Chimony and Muply are two sub tributaries of the Kurumali originate from Pumalai at an elevation of +1100m. Karuvannur River has a length of 48km and drains an area of 1054 sq.km.

Chalakkudy River

It is formed by the confluence of five streams Parambikulam, Kuriarkutty, Sholayar, Karappara and Anakkayam all of them originating from the Anamalai hills of the Western Ghats. The length of the river is 130km and the total drainage area is 1704sq.km. Out of this 1404sq.km lies in Kerala State and the rest 300sq.km, in Tamilnadu.

Source: - ER, CGWD, PWD.

RIVERS OF KERALA



Legend

- STATE BOUNDARY
- RIVER/ WATERBODY

Table: 9.2

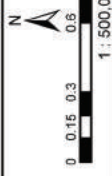
GROUND WATER STATISTICS THRISSUR 2008-09

| Sl. No. | Assessment Unit/District | Command/Non-Command/Total | Recharge from rainfall during monsoon season | Recharge from other sources during monsoon season | Recharge from rainfall during non-monsoon season | Recharge from other sources during non-monsoon season | Total Annual Ground Water Recharge (4+5+6+7) | Provision for Natural Discharges |
|---------|--------------------------|---------------------------|--|---|--|---|--|----------------------------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 1 | Anthikkad | Non-Command | 1775.20 | 45.80 | 0.00 | 1580.00 | 3401.00 | 170.05 |
| 2 | Chalakkudy | Non-Command | 4956.59 | 104.47 | 0.00 | 1580.00 | 6641.16 | 664.12 |
| 3 | Chavakkad | Non-Command | 3398.94 | 78.54 | 0.00 | 372.16 | 3849.65 | 192.48 |
| 4 | Cherpu | Non-Command | 1870.02 | 63.06 | 0.00 | 1930.00 | 3863.08 | 193.15 |
| 5 | Chowannoor | Non-Command | 2625.69 | 53.53 | 0.00 | 880.00 | 3559.22 | 355.92 |
| 6 | Iringalakkuda | Non-Command | 2050.28 | 48.92 | 0.00 | 1400.00 | 3449.20 | 349.92 |
| 7 | Kodakara | Non-Command | 5384.22 | 118.80 | 0.00 | 880.00 | 6383.02 | 638.30 |
| 8 | Kodungallur | Non-Command | 1204.81 | 23.04 | 0.00 | 99.95 | 1327.80 | 132.78 |
| 9 | Mala | Non-Command | 2577.28 | 90.53 | 0.00 | 2090.00 | 4757.81 | 475.78 |
| 10 | Mathiakom | Non-Command | 2095.55 | 32.35 | 0.00 | 144.76 | 2272.65 | 113.63 |
| 11 | Mullassery | Non-Command | 2092.67 | 36.11 | 0.00 | 960.00 | 3088.78 | 308.88 |
| 12 | Ollukkara | Non-Command | 5375.86 | 75.28 | 0.00 | 420.45 | 5871.59 | 587.16 |
| 13 | Pazhayannoor | Non-Command | 4069.85 | 63.05 | 0.00 | 425.27 | 4558.17 | 455.82 |
| 14 | Puzhakkal | Non-Command | 3311.47 | 70.22 | 0.00 | 3000.00 | 6381.69 | 319.08 |
| 15 | Thalikkulam | Non-Command | 2149.05 | 42.44 | 0.00 | 179.63 | 2371.13 | 118.56 |
| 16 | Vellangallur | Non-Command | 1876.10 | 42.12 | 0.00 | 610.00 | 2528.22 | 252.82 |
| 17 | Wadakkanchery | Non-Command | 4966.36 | 82.17 | 0.00 | 544.71 | 5593.23 | 559.32 |
| | Total (Ha.m) | Non-Command | 51779.94 | 1070.43 | 0.00 | 17096.93 | 69947.40 | 5887.77 |
| | Total (MCM) | Non-Command | 517.79 | 10.70 | 0.00 | 170.96 | 699.47 | 58.87 |

Table: 9.2 Continued.....

| Sl. No. | Assessment Unit/District | Net Annual Ground Water Availability | Existing Gross Ground Water Draft for irrigation for irrigation | Existing Gross Water Draft for domestic and industrial water supply | Existing Gross Ground Water Draft for all issues (11+12) | Provision for domestic, and industrial requirement supply upto next 25 years | Net Ground Water Availability for future irrigation development (10-11-14) | Stage of Ground water Development (13/10)*100 |
|---------|--------------------------|--------------------------------------|---|---|--|--|--|---|
| 1 | 2 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| 1 | Anthikkad | 3230.95 | 949.41 | 511.61 | 1461.02 | 578.19 | 1703.35 | 45.22 |
| 2 | Chalakkudy | 5977.04 | 2136.91 | 924.66 | 3061.56 | 1032.79 | 2807.35 | 51.22 |
| 3 | Chavakkad | 3657.17 | 1615.73 | 809.92 | 2425.65 | 915.33 | 1126.11 | 66.33 |
| 4 | Cherpu | 3669.93 | 1289.95 | 450.98 | 1740.93 | 509.67 | 1870.30 | 47.44 |
| 5 | Chowannoor | 3203.30 | 1111.51 | 793.87 | 1905.39 | 896.24 | 1195.55 | 59.48 |
| 6 | Iringalakkuda | 3149.28 | 1016.90 | 720.41 | 1737.31 | 813.33 | 1319.05 | 55.17 |
| 7 | Kodakara | 5744.72 | 2442.55 | 872.45 | 3315.00 | 981.69 | 2320.47 | 57.71 |
| 8 | Kodungallur | 1195.02 | 490.47 | 628.05 | 1118.52 | 704.54 | 0.00 | 93.60 |
| 9 | Mala | 4282.03 | 1855.99 | 719.40 | 2575.39 | 813.02 | 1613.01 | 60.14 |
| 10 | Mathilakom | 2159.02 | 690.61 | 683.80 | 1374.41 | 772.79 | 695.62 | 63.66 |
| 11 | Mullassery | 2779.90 | 748.65 | 430.10 | 1178.74 | 486.07 | 1545.19 | 42.40 |
| 12 | Ollukkara | 5284.43 | 1584.05 | 2278.69 | 3862.74 | 2571.17 | 1129.21 | 73.10 |
| 13 | Pazhayannoor | 4102.35 | 1311.93 | 804.09 | 2116.01 | 908.74 | 1881.69 | 51.58 |
| 14 | Puzhakkal | 6062.61 | 1447.01 | 657.49 | 2104.01 | 730.85 | 3884.76 | 34.71 |
| 15 | Thalikkulam | 2252.57 | 887.67 | 615.51 | 1503.18 | 695.62 | 669.29 | 66.73 |
| 16 | Vellangalloor | 2275.40 | 908.93 | 534.78 | 1443.71 | 604.38 | 762.09 | 63.45 |
| 17 | Wadakkanchery | 5033.91 | 1679.22 | 1069.99 | 2749.22 | 1202.00 | 2152.69 | 54.61 |
| | Total (Ha.m) | 64059.63 | 22167.49 | 13505.80 | 35673.27 | 15216.40 | 26675.73 | 55.69 |
| | Total (MCM) | 640.59 | 221.67 | 135.06 | 356.73 | 152.16 | 266.76 | 55.69 |

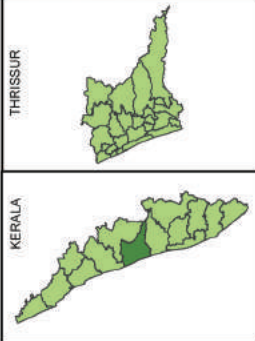
Source: Central Ground Water Department



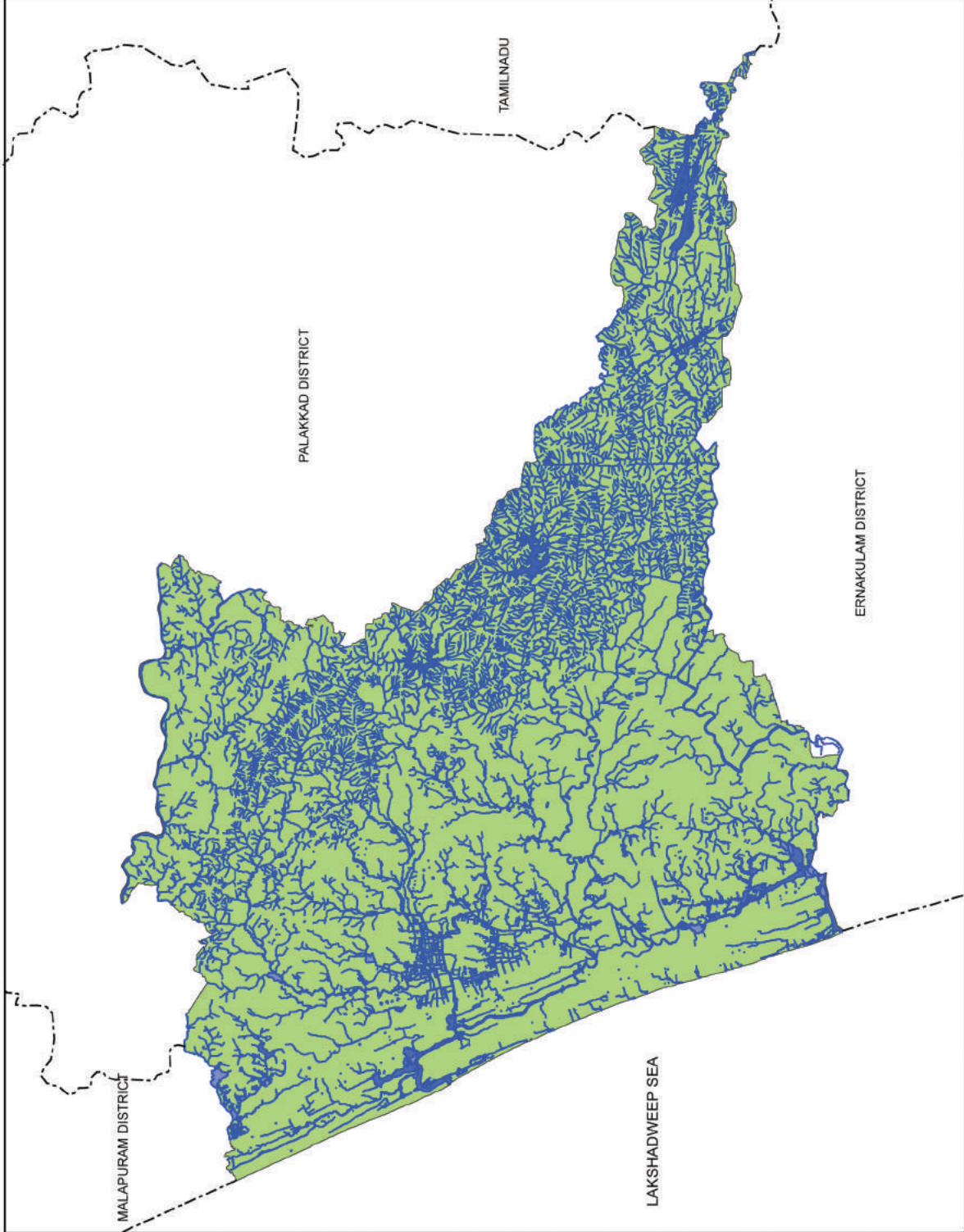
**WATER RESOURCE
THRISSUR DISTRICT**

Legend

- Drains
- Open area
- Miscellaneous
- Reservoir
- Waterbody



Kerala State Land Use Board
Vikas Bhavan, Thiruvananthapuram-33



MINERALS

The availability of minerals determines the pace of economic development of a State to a great extent. Minerals are basically natural resources. Kerala State is endowed with a number of occurrences/deposits of minerals such as Heavy Mineral Sands (Ilmenite, Rutile, Zircon, Monazite, Sillimanite), Gold, Iron Ore, Bauxite, Graphite, China Clay, Fire Clay, Tile and Brick Clay, Silica Sand, Lignite, Limestone, Limeshell, Dimension Stone (Granite), Gemstones, Magnesite and Steatite etc. However mining activities on large scale are confined mainly to a few minerals - Heavy Mineral Sands, China Clay and to a lesser extent Limestone/Limeshell, Silica Sand and Granite. In fact, Heavy Mineral Sand and China Clay contribute more than 90% of the total value of mineral production in the State.

It is stated that the deposits of river sands are seen at the important rivers in the district. The Quaternary clay along the coastal tract near Irumbanallur contains shell deposit. China clay is known to occur near Thrissur and Koratty. The flood plain/paddy field near Thrissur, Chalakkudy and Wadakkanchery has good tile clay deposit. The district has rich resource of construction materials like laterite and granite (hard rock). The Quaternary deposits of the coastal plain near Chavakkad are reported to have concentration of ilmenite. The laterite capping in the area NW of Thrissur is rich in Alumina and in places is bauxitic. Iron ore, allanite and gold are also reported from the district.

Table: 10.1

INVENTORY OF THE MINERAL RESOURCES OF KERALA STATE

| Sl. No. | Name of Minerals | Occurrence | Reserves (Million Tonnes) | Uses |
|---------|------------------|--|---------------------------|---|
| 1 | Gold | Wayanad, Maruda, Nilambur, Malappuram | 0.55 | Manufacture of ornaments |
| 2 | Iron | Kozhikode (Eleyettimala, Naduvallur Nanminda, Cheruppa, Alampara) Malappuram (Korattimala) | 83.04 | Iron is useful in building (Bridge, highway, rail road, etc.), transportation (car, train, boats, plane, etc.) tools (knife, machines, etc.) |
| 3 | China clay | Thiruvananthapuram, Kollam, Kannur, Kasaragod | 172 | Ceramics, pottery, paper, textiles, rubber and paints |
| 4 | Ball clay | Thiruvananthapuram (Nadayara) Kollam (Kumbalam, Kanjirottussery, Mulavana) Kannur (Pattuvam, Karivalloor, Earipuram, Pazhayangadi) | 1.67 | Manufacture of Refractory products, Ceramic Granite tiles, Glazed tiles, table ware & High tension electric insulators etc. |
| 5 | Fire clay | Kollam (Kundamon, Pallikkal), Alappuzha (Thamarakulam), Ernakulam (Amballoor, Kanjiramattom, Keezhumadu), Thrissur (Poomangalam) Kannur (Pattuvam) | 11.55 | Manufacture of firebrick and of various accessory utensils, such as crucibles, saggars, retorts and glass pots, used in the metal working industries. |
| 6 | Silica | Coastal area of Alappuzha | 28.40 | Used in ceramics and to make glass with. It can also be used to strength iron and steel. |
| 7 | Bauxite | Thiruvananthapuram (Mangalapuram, Chilambil, Sasthavattom), Kollam (Poruvazhy, Aadichanalloor) Kannur, Kasaragod | 12.5 | Manufacture of aluminium. It is used in cement, chemicals, face makeup, soda cans, dishwashers, siding for houses. |

| Sl. No. | Name of Minerals | Occurrence | Reserves (Million Tonnes) | Uses |
|---------|------------------|--|---------------------------|--|
| 8 | Lime shell | Alappuzha, Ernakulam (Vembanad lake), Kottayam, Thrissur (Vadanapally), Kannur (Payyannur, Thrikkaripur) | 4.05 | Manufacture of a variety of products including white cements. |
| 9 | Limestone | Palakkad (Walayar) | 24 | Manufacture of cement, calcium carbide, Iron & Steel Industry etc. |
| 10 | Graphite | Thiruvananthapuram (Veli, Kuttichal), Ernakulam (Vadakode), Kottayam (Chirakadavu) | 2.81 | Crucible Foundry, Refractory, Paints & Lubricant Industries |
| 11 | Lignite | Kannur (Madai), Kasaragod (Nileswaram, Palayi) | 9.65 | Used as fuel for steam electric power generation in some countries |
| 12 | Magnesite | Palakkad (Attapadi) | 0.037 | Refractory bricks for furnaces |

Table: 10.2

NUMBER OF QUARRYING PERMITS ISSUED DURING 2009-10 (Mineral wise)

| Sl. No. | Districts | Name of Mineral | | | | | | Total |
|---------|--------------------|------------------------|-------------|------------|---------------|-----------|------------|-------------|
| | | Granite building stone | Late rite | Brick clay | Ordinary sand | Sea shell | Lime shell | |
| 1 | Thiruvananthapuram | 158 | 4 | 5 | 4 | | | 171 |
| 2 | Kollam | 112 | 11 | 7 | 25 | | | 155 |
| 3 | Pathanamthitta | 162 | 9 | 8 | | | | 179 |
| 4 | Alappuzha | | 51 | 4 | | | | 55 |
| 5 | Kottayam | 274 | | 14 | 239 | | | 527 |
| 6 | Idukki | 172 | | | 118 | | | 290 |
| 7 | Ernakulam | 294 | 11 | 14 | 2 | | 1 | 322 |
| 8 | Thrissur | 299 | 60 | 82 | | | | 441 |
| 9 | Palakkad | 142 | 7 | | 283 | | | 432 |
| 10 | Malappuram | 326 | 489 | 17 | | | | 832 |
| 11 | Kozhikode | 336 | 85 | 30 | 20 | | | 471 |
| 12 | Wayanad | 151 | 3 | 12 | 4 | | | 170 |
| 13 | Kannur | 218 | 226 | | 37 | 1 | | 482 |
| 14 | Kasaragod | 172 | 336 | | 148 | | | 656 |
| | Total | 2816 | 1292 | 193 | 880 | 1 | 1 | 5183 |

Table: 10.3

**NUMBER OF MINING LEASES IN THE STATE OF KERALA AS ON 31-03-2010
(Mineral wise)**

| Sl. No. | Districts | Name of Mineral | | | | | | | | | |
|----------|--------------------|-----------------|------------|----------|----------|----------|------------|--------------|------------|-------------|-----------|
| | | Graphite | China clay | Laterite | Iron ore | Quartz | Lime shell | Mineral sand | Lime stone | Silica sand | Quartzite |
| 1 | Thiruvananthapuram | | 30 | | | | | | | | |
| 2 | Kollam | | 1 | | | | | 3 | | | |
| 3 | Pathanamthitta | | | | | | | | | | |
| 4 | Alappuzha | | | 1 | | | 4 | | | 22 | |
| 5 | Kottayam | | | | | | 2 | | | | 1 |
| 6 | Idukki | | | | | | | | | | |
| 7 | Ernakulam | 1 | | | | | | | | | |
| 8 | Thrissur | | | | | | | | | | |
| 9 | Palakkad | | | | | | | | 1 | | |
| 10 | Malappuram | | | | | | | | | | |
| 11 | Kozhikode | | | | 1 | | | | | | |
| 12 | Wayanad | | | | | | | | | | |
| 13 | Kannur | | 2 | 5 | | | | | | | |
| 14 | Kasaragod | | 1 | 1 | | | | | | | |
| | Total | 1 | 34 | 7 | 1 | 1 | 6 | 3 | 1 | 22 | 1 |

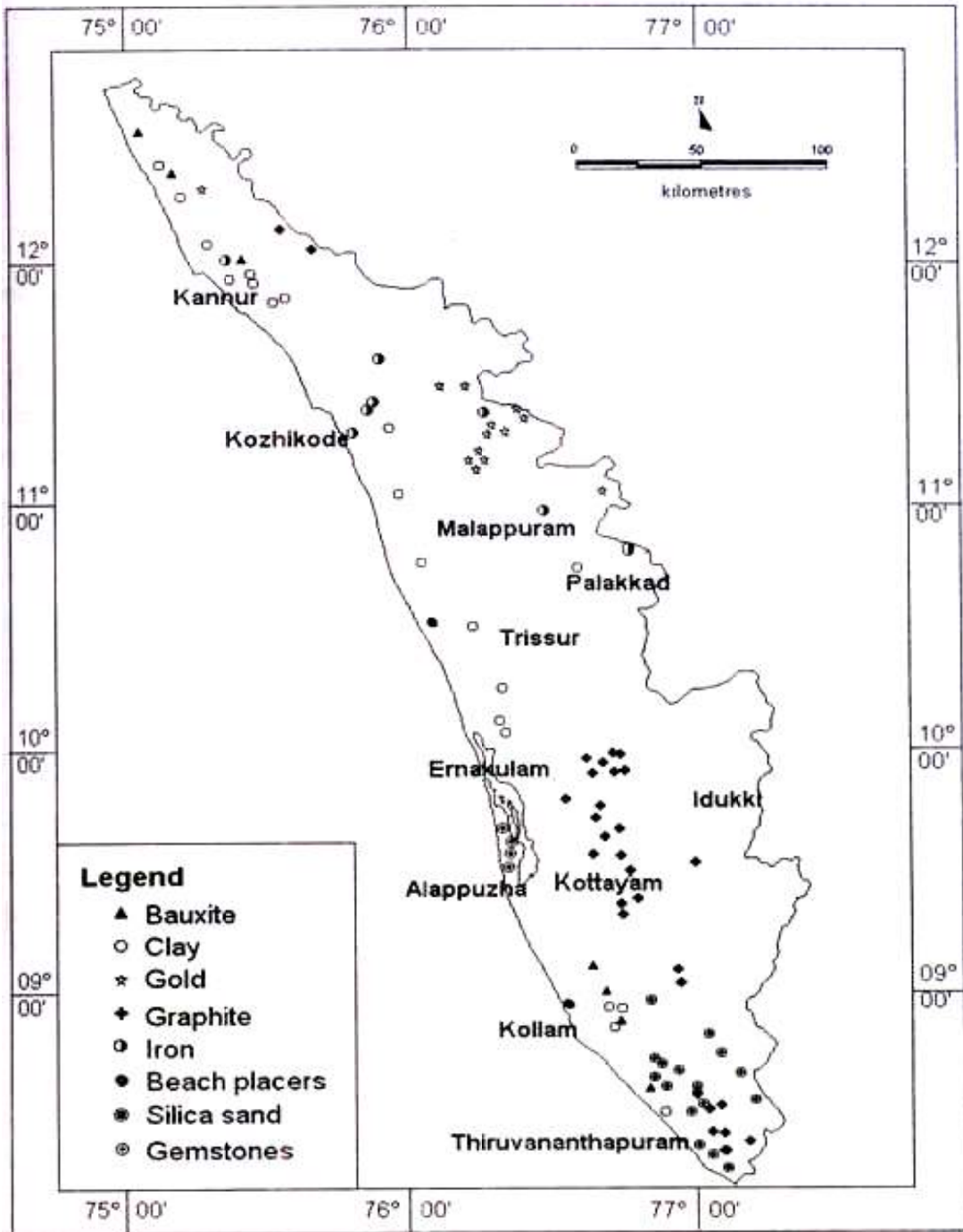
Table: 10.4

DISTRICT WISE REVENUE COLLECTION FOR 2011-12

| Sl.No. | Districts | Major minerals | Minor minerals | Total |
|---------------|--------------------|-----------------------|-----------------------|------------------|
| 1 | Thiruvananthapuram | 11661103 | 24533618 | 36294721 |
| 2 | Kollam | 47548382 | 14615433 | 62163815 |
| 3 | Pathanamthitta | 0 | 20203550 | 20203550 |
| 4 | Alappuzha | 8138592 | 2364614 | 10503206 |
| 5 | Kottayam | 1875258 | 20363947 | 22239205 |
| 6 | Idukki | 0 | 13817639 | 13817639 |
| 7 | Ernakulam | 18720 | 48886751 | 48905471 |
| 8 | Thrissur | 0 | 39086404 | 39086404 |
| 9 | Palakkad | 34417152 | 34307255 | 68724407 |
| 10 | Malappuram | 158850 | 33863331 | 34022181 |
| 11 | Kozhikode | 0 | 17572244 | 17572244 |
| 12 | Wayanad | 0 | 11442866 | 11442866 |
| 13 | Kannur | 1582350 | 27790851 | 29373201 |
| 14 | Kasaragod | 4040597 | 12668970 | 16709567 |
| 15 | KMS(NR) | 52700 | 1926000 | 1978700 |
| 16 | KMS(SR) | 0 | 915000 | 915000 |
| 17 | KMS(CR) | 0 | 4882000 | 4882000 |
| 18 | DRT | 2183979 | 1970672 | 4154651 |
| | Total | 111677683 | 331311145 | 442988828 |

Source: Infrastructure Statistics of Kerala

Mineral reserves (2000-01)



Mineral map of Kerala (After Dept. of Mining and Geology, 2005)

Source: www.Kerenvis.nic.in

LAND USE

The spatial information on land use/land cover and their pattern of change is essential for planning, utilization and management of the country's land resources. Land use/land cover inventories are assuming increasing importance in various resource sectors like agriculture planning, settlement and cadastral surveys, environmental studies and operational planning based on agro-climatic zones. Information on land use/land cover permits a better understanding of the land utilization aspects on cropping pattern, fallow land, forest and grazing land, wasteland, surface water bodies etc., which is very vital for developmental planning. Further the draft outline of the National Land Use Policy having strongly re-iterated the main thrust and strategy on "Optimum Land Use Planning" for sustained efforts and economic returns, up to date information on the nature, distribution and extent of land use/land cover will be of great relevance. Space remote sensing with its wider scope, rapid and repetitive coverage capabilities, can provide highly reliable and accurate estimate on the various resources.

Realising its importance, land use mapping on 1:250,000 scales was envisaged for the entire country using satellite data by Department of Space in 1986 as a part of Remote Sensing Application Mission Project. The study enabled to arrive at a Nationwide Land use/Land cover classification system.

Subsequently, the Government of Kerala felt the need for having up to date information for the whole State on agriculture and other land use categories and their estimate for agro-climate zone planning in 1:50,000 scale. The work undertaken by the Board, involves preparation of land use maps on 1:50,000 scale for 14 districts through digital techniques.

The Kerala State Land Use Board was entrusted with the task of preparing the Land use/land cover maps of State, by interpretation of satellite imagery. Standard False Color Composite (FCC) generated on 1:12,500 scale of IRS (LISS-IV) was interpreted for identification of different Land use/Land cover classes, based on the image characteristics like tone, size, shape, pattern, texture, location, association etc. by developing a detailed interpretation key for each district.

Multi-date imagery was essentially interpreted to identify and map the details of crop land in Viruppu and Mundakan seasons the area under double crop, fallow lands and for better boundary delineation of boundaries of the other land use/land cover classes. Ancillary data like topographical maps and other thematic maps of the district was also used for the interpretation.

METHODOLOGY

The methodology is essentially digital interpretation of IRS-1C (LISS - IV) geo-coded image (FCC) for identification of different categories of land use/land cover using standard visual image interpretation techniques which is based on interpretation elements such as tone, texture, shape, size, etc. supplemented by the local knowledge of the interpreter. Other ancillary data like topographical maps and any other available information will be used for identification and mapping of land use/ land cover. The interpreted details are to be verified on the ground in order to rectify the doubtful areas, and based on the ground verification, the wasteland boundaries (interpreted details) are to be finalized.

The geographical area under different land use/land cover categories was then computed and expressed as simple percentage to the total geographical area of each district.

Land Use/Land Cover Categories and their Spatial Distribution -Thrissur

Land use refers to man's activities and the various use which are carried on land. Land cover refers to, "natural vegetation, water bodies, rock/soil, artificial cover and others resulting due to land transformations".

A brief description of the major land use/land cover categories observed in the Thrissur district and their spatial distribution is given below:

i) Built up land

It is defined as an area of human habitation developed due to non-agricultural use and that which has a cover of buildings, transport, and communication, utilities in association with water, vegetation and vacant lands. An area 5763 ha accounting for 1.90 per cent of the TGA is estimated under this category.

ii) Agricultural land

It is defined as the land primarily used for farming and for production of food, fibre and other commercial and horticultural crops. It includes land under crops (irrigated and unirrigated), fallow land and plantation area under agricultural tree crops planted adopting certain agricultural management techniques. This is the major category occupying an area of 190518 ha accounting for 62.80 per cent of the TGA. Of these, the paddy area covers an area of 33339 ha. Nearly 7526 ha of paddy area has been converted to other landuses. The coconut dominant mixed crop which covers an area of 75148 ha is the major landuse identified under this category.

iii) Forest

It is the area bearing an association predominantly of trees and other vegetation types capable of producing timber and other forest produce. It includes notified forests, private forests and vested forests, of which only the notified forests possess territorial boundaries. The other categories do not have any demarcation in the ground as well as in the concerned toposheets. This category includes Evergreen/Semi-evergreen and Deciduous forests, degraded forests where the vegetative (crown) density is less than 20% of the canopy cover, forest blanks described as openings amidst forests without any tree cover and forest plantations of trees of forestry importance and raised on forest lands. This category accounts for 89573 ha, which is 29.53 per cent of the total geographical area.

iv) Wastelands

It is described as degraded land which can be brought under vegetative cover with reasonable efforts and which is currently under utilized and land which is deteriorating due to lack of appropriate water and soil management or on account of natural causes. The three major classes in the category are; a) Land with or without scrub which occupy higher topography like uplands or high grounds with or without scrub, generally prone to degradation or erosion b) underutilized / degraded notified forest – scrub dominated and c) barren rocky/ stony waste/ sheet rock area which are rock exposures of varying lithology and devoid of soil cover and vegetation. They occur amidst hill forests as opening or scattered as isolated exposures or loose fragments of

boulders or as sheet rocks on plateau and plains. The waste lands occupy an area of 5565 ha accounting for 1.83 percent of the total geographical area.

v) Water bodies

It is an area of impounded water, area in extent and often with a regulated flow of water. It includes manmade reservoirs/lakes/tanks/canals, besides natural lakes, rivers/streams and creeks. The water bodies mapped occupy an area of 8740 Ha accounting for 2.88 percent of the total area.

vi) Others

It includes all those which can be treated as miscellaneous because of their nature of occurrence, physical appearance and other characteristics. Marshy area mainly constitutes this category occupying an area of 8740 Ha accounting for 2.88 percent.

The land use/land cover categories identified and mapped in the district is furnished in the table below:

Table: 11.1

LAND USE/LAND COVER CATEGORIES- THRISSUR

(Area in Sq.Km)

| Sl.No. | Category | Area | Percentage |
|--------|-------------------------------------|--------|------------|
| 1 | Built up land (urban) - commercial | 19.67 | 0.65 |
| 2 | Built up land (urban) - beaches | 6.7 | 0.22 |
| 3 | Built up land (rural) - residential | 31.26 | 1.03 |
| 4 | Paddy - viruppu + mundakan | 333.39 | 10.99 |
| 5 | Paddy reclaimed arecanut | 0.02 | 0 |
| 6 | Paddy reclaimed coconut | 65.76 | 2.17 |
| 7 | Paddy reclaimed mixed crop | 7.68 | 0.25 |
| 8 | Paddy reclaimed banana | 1.53 | 0.05 |
| 9 | Paddy reclaimed residential | 0.27 | 0.01 |
| 10 | Paddy - fallow | 29.61 | 0.98 |

| Sl.No. | Category | Area | Percentage |
|---------------|--|-------------|-------------------|
| 11 | Coffee | 0.2 | 0.01 |
| 12 | Rubber | 190.37 | 6.28 |
| 13 | Coconut | 0.16 | 0.01 |
| 14 | Cashew | 9.82 | 0.32 |
| 15 | Eucalyptus | 24.5 | 0.81 |
| 16 | Teak | 9.27 | 0.31 |
| 17 | Mixed crop | 479.5 | 15.81 |
| 18 | Coconut dominant mixed crop | 751.48 | 24.77 |
| 19 | Mixed trees | 1.09 | 0.04 |
| 20 | Banana | 0.44 | 0.01 |
| 21 | Banana + tapioca | 0.09 | 0 |
| 22 | Semi evergreen/Evergreen - Dense mixed forest | 10.67 | 0.35 |
| 23 | Semi evergreen/Evergreen - Dense mixed forest (Reserve Forest) | 63.93 | 2.11 |
| 24 | Semi evergreen/Evergreen - Dense mixed forest mainly bamboo | 157.87 | 5.2 |
| 25 | Semi evergreen/Evergreen - Dense mixed forest mainly bamboo (Reserve Forest) | 172.92 | 5.7 |
| 26 | Deciduous - Dense mixed forest mainly teak (Reserve Forest) | 235.5 | 7.76 |
| 27 | Deciduous - Dense mixed forest mainly bamboo + teak (Reserve Forest) | 12.18 | 0.4 |
| 28 | Deciduous - Open mixed forest | 0.09 | 0 |
| 29 | Deciduous - Open mixed forest (Reserve Forest) | 10.92 | 0.36 |
| 30 | Deciduous - Open mixed forest mainly teak (Reserve Forest) | 1.82 | 0.06 |
| 31 | Deciduous - Scrub forest | 101.73 | 3.35 |
| 32 | Forest plantation - Teak (Reserve Forest) | 51.65 | 1.7 |
| 33 | Forest plantation - Eucalyptus (Reserve Forest) | 2.5 | 0.08 |
| 34 | Forest plantation - Rubber | 0.48 | 0.02 |

| Sl.No. | Category | Area | Percentage |
|---------------|--|----------------|-------------------|
| 35 | Forest plantation - Rubber (Reserve Forest) | 48.24 | 1.59 |
| 36 | Forest plantation - Eucalyptus + Softwood (Reserve Forest) | 20 | 0.66 |
| 37 | Grassland - degraded | 5.23 | 0.17 |
| 38 | Land with scrub | 17.56 | 0.58 |
| 39 | Land without scrub | 9.23 | 0.3 |
| 40 | Mining/Industrial wastelands | 1.37 | 0.05 |
| 41 | Barren rocky/sheet rock area | 6.68 | 0.22 |
| 42 | Degraded land under plantation crop (Teak) | 0.05 | 0 |
| 43 | Degraded land under plantation crop (Rubber) | 17.7 | 0.58 |
| 44 | Degraded land under plantation crop (Eucalyptus) | 2.91 | 0.1 |
| 45 | Sands - riverine | 0.15 | 0 |
| 46 | Marshy area | 32.19 | 1.06 |
| 47 | Water bodies | 87.4 | 2.88 |
| | Total | 3033.78 | 100 |

Table:11.2

ANTHIKKAD BLOCK

| Sl.No. | Land Use | Anthikkad | Arimpoor | Chazhoor | Manaloor | Thanniyam |
|--------|------------------------------|----------------|----------------|----------------|----------------|----------------|
| 1 | Banana | | | | | |
| 2 | Banana + Tapioca | | | | | |
| 3 | Barren rocky | | | | | |
| 4 | Built-up land | 37.88 | 10.69 | 49.53 | 102.59 | 117.45 |
| 5 | Coconut | | | | | |
| 6 | Coffee | | | | | |
| 7 | Current fallow | 231.21 | 86.81 | 910.85 | 89.3 | 44.13 |
| 8 | Degraded grass land | | | | | |
| 9 | Dense mixed forest | | | | | |
| 10 | Dense mixed forest (RF) | | | | | |
| 11 | Eucalyptus | | | | | |
| 12 | Eucalyptus + Softwood (RF) | | | | | |
| 13 | Land with scrub | | | 22.27 | | |
| 14 | Land without scrub | | | | | |
| 15 | Marshy land | 0.05 | 324.73 | 0.79 | | |
| 16 | Mining/Industrial wastelands | | | | | |
| 17 | Mixed crop | 183.21 | 841.8 | 465.45 | 885.08 | 825.97 |
| 18 | Mixed trees | | | | | |
| 19 | Open mixed forest (RF) | | | | | |
| 20 | Paddy converted to arecanut | | | | | |
| 21 | Paddy converted to banana | | 1.68 | 7.94 | | |
| 22 | Paddy converted to coconut | 705.93 | 10.57 | 858.89 | 270.36 | 425.44 |
| 23 | Plantation cashew | | | | | |
| 24 | Plantation rubber | | 0.58 | | | |
| 25 | Plantation rubber (RF) | | | | | |
| 26 | Plantation teak | | | | | |
| 27 | Plantation teak (RF) | | | | | |
| 28 | Reserve forest | | | | | |
| 29 | River/Waterbody | 37.27 | 66.35 | 62.7 | 110.58 | 44.63 |
| 30 | Rubber | | | | | |
| 31 | Scrub forest | | | | | |
| 32 | Virippu + Mundakan | 74.28 | 843.77 | 297 | 371.41 | 128.21 |
| 33 | Waterbody | | | | | |
| | Panchayath Total | 1269.83 | 2186.98 | 2675.42 | 1829.32 | 1585.83 |
| | Block Total | | 9547.38 | | | |

Table:11.3

CHALAKKUDY BLOCK

| SI.No. | Land Use | Athirappilly | Kadukutty | Kodassery | Koratty | Meloor | Pariyaram |
|--------|------------------------------|-----------------|----------------|-----------------|----------------|----------------|----------------|
| 1 | Banana | | | | | | |
| 2 | Banana + Tapioca | | | | | | |
| 3 | Barren rocky | 10.15 | | 6.64 | | | |
| 4 | Built-up land | 14.69 | 12.97 | | 2.63 | 0.28 | 9.21 |
| 5 | Coconut | | | | | | |
| 6 | Coffee | 20.42 | | | | | |
| 7 | Current fallow | | | | | | |
| 8 | Degraded grass land | 522.68 | | | | | |
| 9 | Dense mixed forest | 16810.12 | | | | | |
| 10 | Dense mixed forest (RF) | 9634.28 | | 8970.56 | | | 226.34 |
| 11 | Eucalyptus | 1028.57 | | | | | |
| 12 | Eucalyptus + Softwood (RF) | 2000.14 | | | | | |
| 13 | Land with scrub | 17.60 | | 52.32 | | 4.18 | 19.28 |
| 14 | Land without scrub | 18.12 | | 66.78 | | | 12.30 |
| 15 | Marshy land | | | | | | |
| 16 | Mining/Industrial wastelands | | | | | | |
| 17 | Mixed crop | 143.34 | 1335.77 | 2166.19 | 1790.96 | 2030.31 | 1951.31 |
| 18 | Mixed trees | | | | | | |
| 19 | Open mixed forest (RF) | | | | | | |
| 20 | Paddy converted to arecanut | | | | | | |
| 21 | Paddy converted to banana | | | | | | |
| 22 | Paddy converted to coconut | | 1.58 | | | | |
| 23 | Plantation cashew | | | | | | |
| 24 | Plantation rubber | 607.67 | 14.70 | 948.01 | 289.61 | 246.74 | 351.52 |
| 25 | Plantation rubber (RF) | 148.80 | | 164.83 | | | 19.64 |
| 26 | Plantation teak | 554.02 | | 17.16 | | | |
| 27 | Plantation teak (RF) | 1937.25 | | 934.35 | | | |
| 28 | Reserve forest | 1217.70 | | | | | |
| 29 | River/Waterbody | 1569.91 | 75.62 | 27.87 | 3.29 | 56.13 | 81.61 |
| 30 | Rubber | | | | | | |
| 31 | Scrub forest | 1323.87 | | 158.07 | | | 58.52 |
| 32 | Virippu + Mundakan | 1.75 | 285.69 | 127.47 | 248.76 | 26.08 | 31.27 |
| 33 | Waterbody | 10.44 | 4.30 | | | | |
| | Panchayath Total | 37591.52 | 1730.63 | 13640.25 | 2335.25 | 2363.72 | 2761.00 |
| | Block Total | | | 60422.37 | | | |

Table:11.4

CHAVAKKAD BLOCK

| Sl.No. | Land Use | Kadappuram | Orumanayoor | Punnayoor | Punnayoorkulam | Vadakkakkad |
|--------|------------------------------|---------------|---------------|----------------|----------------|----------------|
| 1 | Banana | 56.25 | | | 1.48 | |
| 2 | Banana + Tapioca | | | | | |
| 3 | Barren rocky | | | | | |
| 4 | Built-up land | | 164.43 | 55.73 | 36.53 | 36.31 |
| 5 | Coconut | | | 1.13 | | 0.93 |
| 6 | Coffee | | | | | |
| 7 | Current fallow | | | 7.07 | 5.12 | |
| 8 | Degraded grass land | | | | | |
| 9 | Dense mixed forest | | | | | |
| 10 | Dense mixed forest (RF) | | | | | |
| 11 | Eucalyptus | | | | | |
| 12 | Eucalyptus + Softwood (RF) | | | | | |
| 13 | Land with scrub | | | | | |
| 14 | Land without scrub | | | | | |
| 15 | Marshy land | | | | 263.77 | 23.91 |
| 16 | Mining/Industrial wastelands | | | | | |
| 17 | Mixed crop | 557.91 | 517.38 | 1150.66 | 1363.30 | 1099.11 |
| 18 | Mixed trees | | | | | |
| 19 | Open mixed forest (RF) | | | | | |
| 20 | Paddy converted to arecanut | | | | | |
| 21 | Paddy converted to banana | | | | 8.30 | |
| 22 | Paddy converted to coconut | | 2.39 | 194.63 | 45.33 | 0.21 |
| 23 | Plantation cashew | | | | | |
| 24 | Plantation rubber | | | | 0.59 | 1.07 |
| 25 | Plantation rubber (RF) | | | | | |
| 26 | Plantation teak | | | | | |
| 27 | Plantation teak (RF) | | | | | |
| 28 | Reserve forest | | | | | |
| 29 | River/Waterbody | 150.56 | 59.17 | 22.77 | 52.07 | 7.02 |
| 30 | Rubber | | | | | |
| 31 | Scrub forest | | | | | |
| 32 | Virippu + Mundakan | | 5.85 | 211.24 | 186.25 | 201.19 |
| 33 | Waterbody | | | | | |
| | Panchayath Total | 782.58 | 749.22 | 1643.23 | 1962.74 | 1369.75 |
| | Block Total | | | 6507.52 | | |

Table:11.5

CHOWANNOOR BLOCK

| Sl. No. | Land Use | Choondal | Chowannoor | Kadangode | Kadavallloor | Kandanassery | Kattakampal | Porkulam | Velloor | (Area in Ha) | |
|---------|------------------------------|----------------|----------------|----------------|-----------------|----------------|----------------|----------------|----------------|--------------|------|
| | | | | | | | | | | | |
| 1 | Banana | | | 1.53 | | | | | | | |
| 2 | Banana + Tapioca | | | | | | | | | | |
| 3 | Barren rocky | | | | | | | | | | |
| 4 | Built-up land | 43.56 | 39.52 | 65.43 | 28.24 | 22.69 | 13.47 | 13.96 | 41.59 | | |
| 5 | Coconut | | 1.94 | | | | | | | | |
| 6 | Coffee | | | | | | | | | | |
| 7 | Current fallow | | | | | | 22.18 | | | | |
| 8 | Degraded grass land | | | | | | | | | | |
| 9 | Dense mixed forest | | | | | | | | | | |
| 10 | Dense mixed forest (RF) | | | | | | | | | | |
| 11 | Eucalyptus | | | 165.96 | | | | | 200.39 | | |
| 12 | Eucalyptus + Softwood (RF) | | | | | | | | | | |
| 13 | Land with scrub | 9.77 | 9.75 | 83.37 | 43.82 | | | 9.60 | 58.36 | | |
| 14 | Land without scrub | 6.11 | 0.88 | 5.09 | 0.99 | 8.23 | | 5.96 | 13.19 | | |
| 15 | Marshy land | | | | | | 384.08 | 215.69 | | | |
| 16 | Mining/Industrial wastelands | | | 14.96 | 2.16 | | | | | | 8.06 |
| 17 | Mixed crop | 891.28 | 1156.07 | 1666.68 | 1615.72 | 1015.14 | 891.53 | 782.94 | 2068.66 | | |
| 18 | Mixed trees | | | | | | | | | | |
| 19 | Open mixed forest (RF) | | | 32.27 | | | | | | | |
| 20 | Paddy converted to arecanut | | | | | | | | | | |
| 21 | Paddy converted to banana | | | | | | | 20.76 | 1.85 | | |
| 22 | Paddy converted to coconut | 437.51 | 11.85 | 27.26 | 13.32 | 122.64 | 36.12 | 16.79 | 144.06 | | |
| 23 | Plantation cashew | | | 102.74 | | | | | | | |
| 24 | Plantation rubber | 30.25 | 11.13 | 233.82 | 177.81 | 1.72 | 9.12 | 4.28 | 188.64 | | |
| 25 | Plantation rubber (RF) | | | 125.23 | 0.61 | | | | | | |
| 26 | Plantation teak | | | | | | | | | | |
| 27 | Plantation teak (RF) | | | | | | | | | | |
| 28 | Reserve forest | | | | | | | | | | |
| 29 | River/Waterbody | 18.21 | 7.14 | 13.05 | 1.59 | 13.84 | 53.41 | 40.80 | 31.90 | | |
| 30 | Rubber | | | | | | | | | | |
| 31 | Scrub forest | | | 13.68 | | | | | | | |
| 32 | Virippu + Mundakan | 612.61 | 671.33 | 728.25 | 545.34 | 317.57 | 268.43 | 238.40 | 741.07 | | |
| 33 | Waterbody | | | | | | | | | | |
| | Panchayath Total | 2049.30 | 1909.61 | 3279.32 | 2429.60 | 1501.83 | 1699.10 | 1330.27 | 3495.92 | | |
| | Block Total | | | | 17694.95 | | | | | | |

Table:11.6

CHERPPU BLOCK

| Sl.No. | Land Use | (Area in Ha) | | | | |
|--------|------------------------------|---------------|----------------|----------------|---------------|--|
| | | Avinissery | Cherppu | Paralam | Vallachira | |
| 1 | Banana | | | | | |
| 2 | Banana + Tapioca | | | | | |
| 3 | Barren rocky | | | | | |
| 4 | Built-up land | 15.55 | 40.06 | 129.16 | 36.6 | |
| 5 | Coconut | | | | | |
| 6 | Coffee | | | | | |
| 7 | Current fallow | 35.94 | 318.54 | 352.3 | 0.85 | |
| 8 | Degraded grass land | | | | | |
| 9 | Dense mixed forest | | | | | |
| 10 | Dense mixed forest (RF) | | | | | |
| 11 | Eucalyptus | | | | | |
| 12 | Eucalyptus + Softwood (RF) | | | | | |
| 13 | Land with scrub | | 1.94 | | | |
| 14 | Land without scrub | | | 15.65 | | |
| 15 | Marshy land | 14.69 | 1.17 | 49.83 | 14.61 | |
| 16 | Mining/Industrial wastelands | | 1.42 | | 3.44 | |
| 17 | Mixed crop | 124.58 | 37.88 | 724.4 | 783.99 | |
| 18 | Mixed trees | | | | | |
| 19 | Open mixed forest (RF) | | | | | |
| 20 | Paddy converted to arecanut | | | | | |
| 21 | Paddy converted to banana | | 3.77 | 3.08 | 6.98 | |
| 22 | Paddy converted to coconut | 0.95 | 61.06 | 2.38 | 8.37 | |
| 23 | Plantation cashew | | | | | |
| 24 | Plantation rubber | | 0.06 | 2.41 | 23.45 | |
| 25 | Plantation rubber (RF) | | | | | |
| 26 | Plantation teak | | | | | |
| 27 | Plantation teak (RF) | | | | | |
| 28 | Reserve forest | | | | | |
| 29 | River/Waterbody | 1.43 | 36.45 | 37.34 | 17.65 | |
| 30 | Rubber | | | | | |
| 31 | Scrub forest | | | | | |
| 32 | Virippu + Mundakan | 27.11 | 521.62 | 391.24 | 76.69 | |
| 33 | Waterbody | | | | | |
| | Panchayath Total | 220.25 | 1023.97 | 1707.79 | 972.63 | |
| | Block Total | | 3924.64 | | | |

Table:11.7

IRINGALAKKUDA BLOCK

| Sl.No. | Land Use | Karalam | Kattoor | Muriyad | Parappukkara |
|--------|------------------------------|----------------|----------------|----------------|----------------|
| 1 | Banana | | | | |
| 2 | Banana + Tapioca | | | | |
| 3 | Barren rocky | | | | |
| 4 | Built-up land | 67.90 | 59.16 | 13.43 | 19.47 |
| 5 | Coconut | | | | |
| 6 | Coffee | | | | |
| 7 | Current fallow | | | 54.95 | |
| 8 | Degraded grass land | | | | |
| 9 | Dense mixed forest | | | | |
| 10 | Dense mixed forest (RF) | | | | |
| 11 | Eucalyptus | | | | |
| 12 | Eucalyptus + Softwood (RF) | | | | |
| 13 | Land with scrub | | | | |
| 14 | Land without scrub | | | 0.48 | 11.02 |
| 15 | Marshy land | 32.11 | 40.05 | 79.42 | |
| 16 | Mining/Industrial wastelands | 4.50 | | | |
| 17 | Mixed crop | 1073.90 | | 1565.23 | 1209.85 |
| 18 | Mixed trees | | 714.78 | | |
| 19 | Open mixed forest (RF) | | | | |
| 20 | Paddy converted to arecanut | | | | |
| 21 | Paddy converted to banana | 8.84 | 1.89 | 8.25 | |
| 22 | Paddy converted to coconut | 68.82 | 130.27 | 6.17 | 116.78 |
| 23 | Plantation cashew | | | | |
| 24 | Plantation rubber | 8.24 | | 218.59 | 7.63 |
| 25 | Plantation rubber (RF) | | | | |
| 26 | Plantation teak | | | | |
| 27 | Plantation teak (RF) | | | | |
| 28 | Reserve forest | | | | |
| 29 | River/Waterbody | 78.01 | 17.83 | 30.20 | 34.31 |
| 30 | Rubber | | | | |
| 31 | Scrub forest | | | | |
| 32 | Virippu + Mundakan | 581.12 | 140.43 | 382.13 | 668.84 |
| 33 | Waterbody | | | | |
| | Panchayath Total | 1923.44 | 1104.41 | 2358.85 | 2067.90 |
| | Block Total | | 7454.60 | | |

Table:11.8

KODAKARA BLOCK

| SI.No. | Land Use | Alagappa Nagar | Kodakara | Mattathoor | Nenmanikkara | Pudukkad | Thrikkoor | Varantharappilly |
|--------|------------------------------|----------------|----------------|-----------------|-----------------|----------------|----------------|------------------|
| 1 | Banana | | | | | | | |
| 2 | Banana + Tapioca | | | | | | | |
| 3 | Barren rocky | | | | | | | |
| 4 | Built-up land | 4.40 | 1.52 | | 18.46 | 13.60 | 9.46 | 5.43 |
| 5 | Coconut | | | | | | | |
| 6 | Coffee | | | | | | | |
| 7 | Current fallow | | | | 14.46 | | | |
| 8 | Degraded grass land | | | | | | | |
| 9 | Dense mixed forest | | | | | | | |
| 10 | Dense mixed forest (RF) | | 10.11 | 7979.07 | | | 24.09 | 5110.25 |
| 11 | Eucalyptus | | | | | | | |
| 12 | Eucalyptus + Softwood (RF) | | | | | | | |
| 13 | Land with scrub | 0.11 | 6.22 | 75.47 | 2.92 | 15.86 | 23.29 | 98.89 |
| 14 | Land without scrub | 32.22 | 7.13 | 258.83 | | 16.29 | 20.98 | 114.57 |
| 15 | Marshy land | | | | 10.52 | | | |
| 16 | Mining/Industrial wastelands | | | | | | 2.42 | |
| 17 | Mixed crop | 917.88 | 1970.49 | 1904.77 | 964.65 | 1061.80 | 37.88 | 1852.54 |
| 18 | Mixed trees | | | | | | | |
| 19 | Open mixed forest (RF) | | | | | | | |
| 20 | Paddy converted to arecanut | | | | | | | |
| 21 | Paddy converted to banana | | | | 3.41 | 0.04 | | |
| 22 | Paddy converted to coconut | 21.49 | | | 114.60 | 33.91 | 104.00 | 7.80 |
| 23 | Plantation cashew | | | | | | | |
| 24 | Plantation rubber | 52.21 | 28.21 | 2195.04 | 4.64 | 78.53 | 171.17 | 1458.56 |
| 25 | Plantation rubber (RF) | 170.64 | 1.61 | 594.78 | | 14.40 | 532.54 | 825.50 |
| 26 | Plantation teak | | | 14.49 | | | 123.12 | 19.95 |
| 27 | Plantation teak (RF) | | | 253.88 | | | 54.58 | 12.43 |
| 28 | Reserve forest | | | | | | | |
| 29 | River/Waterbody | 9.19 | | 521.67 | 31.64 | 36.38 | 12.27 | 415.53 |
| 30 | Rubber | | | | | | | |
| 31 | Scrub forest | | | | | | 3.43 | 1313.79 |
| 32 | Virippu + Mundakan | 600.58 | 188.62 | 348.93 | 122.07 | 274.09 | 295.47 | 277.99 |
| 33 | Waterbody | | | | | | | |
| | Panchayath Total | 1808.72 | 2213.91 | 14833.95 | 1287.37 | 1544.90 | 1414.70 | 11513.23 |
| | Block Total | | | | 34616.78 | | | |

Table:11.9

MALA BLOCK

| SI.No. | Land Use | Aloor | Annamanada | Kuzhoor | Mala | Poyya |
|--------|------------------------------|----------------|----------------|-----------------|----------------|----------------|
| 1 | Banana | | | 1.42 | | |
| 2 | Banana + Tapioca | | | | | |
| 3 | Barren rocky | | | | | |
| 4 | Built-up land | 2.11 | 12.56 | 57.39 | 53.94 | 57.92 |
| 5 | Coconut | | 0.72 | | | |
| 6 | Coffee | | | | | |
| 7 | Current fallow | 16.31 | | | | |
| 8 | Degraded grass land | | | | | |
| 9 | Dense mixed forest | | | | | |
| 10 | Dense mixed forest (RF) | | | | | |
| 11 | Eucalyptus | | | | | |
| 12 | Eucalyptus +Softwood (RF) | | | | | |
| 13 | Land with scrub | | | | | |
| 14 | Land without scrub | 13.93 | | | | |
| 15 | Marshy land | | | | | |
| 16 | Mining/Industrial wastelands | 0.78 | | | | |
| 17 | Mixed crop | 3324.56 | 2045.58 | 1013.24 | 2355.98 | 840.76 |
| 18 | Mixed trees | | | | | |
| 19 | Open mixed forest (RF) | | | | | |
| 20 | Paddy converted to arecanut | | | | | |
| 21 | Paddy converted to banana | | | 0.83 | | |
| 22 | Paddy converted to coconut | 1.81 | 1.47 | 28.64 | | 2.28 |
| 23 | Plantation cashew | | | | | |
| 24 | Plantation rubber | 69.41 | 34.57 | 14.58 | 18.73 | 39.22 |
| 25 | Plantation rubber (RF) | | | | | |
| 26 | Plantation teak | | | | | |
| 27 | Plantation teak (RF) | | | | | |
| 28 | Reserve forest | | | | | |
| 29 | River/Waterbody | 1.07 | 52.28 | 35.84 | 16.85 | 146.35 |
| 30 | Rubber | | | | | |
| 31 | Scrub forest | | | | | |
| 32 | Virippu + Mundakan | 166.47 | 315.62 | 809.19 | 352.49 | 866.23 |
| 33 | Waterbody | | | | | |
| | Panchayath Total | 3596.45 | 2462.80 | 1961.13 | 2797.99 | 1952.76 |
| | Block Total | | | 12771.13 | | |

Table:11.10

MATHILAKOM BLOCK

| Sl.No. | Land Use | Edathiruthy | Edavilangu | Eriyad | Kaipaman galam | Mathilakom | Perinjanam | Sreenarayana puram |
|--------|------------------------------|----------------|---------------|----------------|----------------|----------------|---------------|--------------------|
| 1 | Banana | | | | | | | |
| 2 | Banana + Tapioca | | | | | | | |
| 3 | Barren rocky | | | | | | | |
| 4 | Built-up land | 139.57 | 56.95 | 181.02 | 192.96 | 118.87 | 44.84 | 160.82 |
| 5 | Coconut | | | | | | | |
| 6 | Coffee | | | | | | | |
| 7 | Current fallow | | | | | | | |
| 8 | Degraded grass land | | | | | | | |
| 9 | Dense mixed forest | | | | | | | |
| 10 | Dense mixed forest (RF) | | | | | | | |
| 11 | Eucalyptus | | | | | | | |
| 12 | Eucalyptus + Softwood (RF) | | | | | | | |
| 13 | Land with scrub | | | | | | | |
| 14 | Land without scrub | | | | | | | |
| 15 | Marshy land | | | | | | | |
| 16 | Mining/Industrial wastelands | | | | | | | |
| 17 | Mixed crop | 1174.17 | 569.6 | 1222.56 | 1241.5 | 1035.91 | 792.85 | 1484.28 |
| 18 | Mixed trees | | | | | | | |
| 19 | Open mixed forest (RF) | | | | | | | |
| 20 | Paddy converted to arecanut | | | | | | | |
| 21 | Paddy converted to banana | | | | 1.92 | | | |
| 22 | Paddy converted to coconut | 249.38 | 84.67 | 52.74 | 12.69 | 154.65 | 34.00 | 172.30 |
| 23 | Plantation cashew | | | | | | | |
| 24 | Plantation rubber | | | | | | | |
| 25 | Plantation rubber (RF) | | | | | | | |
| 26 | Plantation teak | | | | | | | |
| 27 | Plantation teak (RF) | | | | | | | |
| 28 | Reserve forest | | | | | | | |
| 29 | River/Waterbody | 34.09 | 0.82 | 90.70 | 5.84 | 14.37 | 11.97 | 100.94 |
| 30 | Rubber | | | | | | | |
| 31 | Scrub forest | | | | | | | |
| 32 | Virippu + Mundakan | 81.59 | | | 2.65 | 1.52 | 0.05 | 14.90 |
| 33 | Waterbody | | | | | | | |
| | Panchayath Total | 1678.80 | 712.04 | 1547.02 | 1457.56 | 1325.32 | 883.71 | 1933.24 |
| | Block Total | | | | 9537.69 | | | |

Table:11.11

MULLASSERY BLOCK

| Sl.No. | Land Use | Elavally | Mullassery | Pavaratty | Venkidangu |
|--------|------------------------------|----------------|----------------|---------------|----------------|
| 1 | Banana | | | | |
| 2 | Banana + Tapioca | | | | |
| 3 | Barren rocky | | | | |
| 4 | Built-up land | 27.80 | 37.13 | 64.06 | 79.1 |
| 5 | Coconut | | | 0.67 | |
| 6 | Coffee | | | | |
| 7 | Current fallow | | 10.87 | | 430.73 |
| 8 | Degraded grass land | | | | |
| 9 | Dense mixed forest | | | | |
| 10 | Dense mixed forest (RF) | | | | |
| 11 | Eucalyptus | | | | |
| 12 | Eucalyptus + Softwood (RF) | | | | |
| 13 | Land with scrub | | | | |
| 14 | Land without scrub | 27.09 | | | |
| 15 | Marshy land | 20.01 | 83.76 | | |
| 16 | Mining/Industrial wastelands | | 6.55 | | |
| 17 | Mixed crop | 1110.25 | 783.96 | 685.41 | 979.28 |
| 18 | Mixed trees | | | | |
| 19 | Open mixed forest (RF) | | | | |
| 20 | Paddy converted to arecanut | | | | |
| 21 | Paddy converted to banana | | 2.81 | | 0.36 |
| 22 | Paddy converted to coconut | 168.90 | 119.12 | 4.13 | 31.34 |
| 23 | Plantation cashew | | | | |
| 24 | Plantation rubber | | 4.03 | | |
| 25 | Plantation rubber (RF) | | | | |
| 26 | Plantation teak | | | | |
| 27 | Plantation teak (RF) | | | | |
| 28 | Reserve forest | | | | |
| 29 | River/Waterbody | 30.62 | 76.88 | 182.06 | 266.45 |
| 30 | Rubber | | | | |
| 31 | Scrub forest | | | | |
| 32 | Virippu + Mundakan | 352.65 | 642.92 | 11.17 | 318.89 |
| 33 | Waterbody | | | | |
| | Panchayath Total | 1737.32 | 1768.03 | 947.50 | 2106.15 |
| | Block Total | | 6559.00 | | |

Table:11.12

OLLOOKKARA BLOCK

| Sl.No. | Land Use | Madakkathara | Nadathara | Pananachery | Puthoor |
|--------|------------------------------|----------------|-----------------|-----------------|-----------------|
| 1 | Banana | | | | |
| 2 | Banana + Tapioca | | | | |
| 3 | Barren rocky | | | | |
| 4 | Built-up land | 1.86 | 1.65 | 31.08 | 13.77 |
| 5 | Coconut | | | | |
| 6 | Coffee | | | | |
| 7 | Current fallow | | | | 1.82 |
| 8 | Degraded grass land | | | | |
| 9 | Dense mixed forest | | | | |
| 10 | Dense mixed forest (RF) | 498.92 | | 4997.89 | 2763.35 |
| 11 | Eucalyptus | | | | |
| 12 | Eucalyptus +Softwood (RF) | | | | |
| 13 | Land with scrub | 31.76 | 37.37 | 196.56 | 112.63 |
| 14 | Land without scrub | 1.12 | | 33.59 | 105.77 |
| 15 | Marshy land | | 3.06 | | |
| 16 | Mining/Industrial wastelands | 19.21 | | | 2.27 |
| 17 | Mixed crop | 1057.38 | 1171.39 | 2804.66 | 37.88 |
| 18 | Mixed trees | | | | |
| 19 | Open mixed forest (RF) | 20.49 | | 65.84 | 91.84 |
| 20 | Paddy converted to arecanut | | | | |
| 21 | Paddy converted to banana | 1.89 | 0.71 | | 1.46 |
| 22 | Paddy converted to coconut | 42.15 | 56.56 | 6.36 | 163.51 |
| 23 | Plantation cashew | 4.93 | | 1.12 | |
| 24 | Plantation rubber | 914.82 | 301.60 | 1028.41 | 804.67 |
| 25 | Plantation rubber (RF) | | 166.63 | 410.21 | 553.68 |
| 26 | Plantation teak | | | | 1.69 |
| 27 | Plantation teak (RF) | 0.36 | | | 147.23 |
| 28 | Reserve forest | | | | |
| 29 | River/Waterbody | 21.66 | 22.62 | 130.28 | 785.45 |
| 30 | Rubber | | | | |
| 31 | Scrub forest | 81.83 | 3.53 | 189.56 | 5179.77 |
| 32 | Virippu + Mundakan | 250.81 | 319.49 | 220.39 | 494.83 |
| 33 | Waterbody | | | | |
| | Panchayath Total | 2949.19 | 2084.61 | 10115.95 | 11261.62 |
| | Block Total | | 26411.37 | | |

Table:11.13

PAZHAYANNOOR BLOCK

| Sl.No. | Land Use | Chelakkara | Kondazhy | Panjai | Pazhayannoor | Thiruvilwamala | Vallathol Nagar |
|--------|------------------------------|----------------|----------------|----------------|-----------------|----------------|-----------------|
| 1 | Banana | | | 0.11 | | | |
| 2 | Banana + Tapioca | | | | | | |
| 3 | Barren rocky | | | | | 651.11 | |
| 4 | Built-up land | 1.26 | 2.02 | 9.87 | 30.79 | 23.68 | 6.03 |
| 5 | Coconut | | | | | | |
| 6 | Coffee | | | | | | |
| 7 | Current fallow | | | | | | |
| 8 | Degraded grass land | | | | | | |
| 9 | Dense mixed forest | | | | 41.27 | | |
| 10 | Dense mixed forest (RF) | 1043.35 | 158.77 | 6.85 | 4009.20 | | |
| 11 | Eucalyptus | | | | | | 26.26 |
| 12 | Eucalyptus + Softwood (RF) | | | | | | |
| 13 | Land with scrub | 56.59 | 0.04 | 22.83 | 9.30 | 92.11 | 43.19 |
| 14 | Land without scrub | | | 4.11 | 6.61 | 65.49 | |
| 15 | Marshy land | | | | | | |
| 16 | Mining/Industrial wastelands | | | 9.86 | 3.46 | 4.78 | 3.74 |
| 17 | Mixed crop | 1203.93 | 1026.64 | 1073.24 | 37.88 | 37.88 | 641.52 |
| 18 | Mixed trees | | | | | | |
| 19 | Open mixed forest | | | 8.82 | | | |
| 20 | Open mixed forest (RF) | 59.57 | 204.52 | 74.58 | 64.9 | | 170.86 |
| 21 | Paddy converted to arecanut | | | | | | |
| 22 | Paddy converted to banana | 2.77 | | 2.09 | | | 0.43 |
| 23 | Paddy converted to coconut | 6.37 | | 7.58 | 0.54 | | 0.88 |
| 24 | Plantation cashew | 135.84 | | | | | 70.05 |
| 25 | Plantation rubber | 1855.62 | 728.04 | 684.86 | 2369.49 | 682.54 | 194.96 |
| 26 | Plantation rubber (RF) | 157.18 | 69.89 | 1.3 | 203.13 | 127.99 | 12.62 |
| 27 | Plantation teak | | 0.02 | | 173.01 | 28.02 | |
| 28 | Plantation teak (RF) | 238.42 | | 325.82 | 175.79 | | |
| 29 | Reserve forest | | | | | | |
| 30 | River/Waterbody | 14.84 | 136.24 | 111.24 | 61.97 | 153.73 | 71.62 |
| 31 | Rubber | | | | | | |
| 32 | Scrub forest | 230.81 | 205.36 | 15.8 | 51.67 | 33.91 | 7.47 |
| 33 | Virippu + Mundakan | 1044.62 | 495.25 | 471.01 | 1090.16 | 735.9 | 651.35 |
| 34 | Waterbody | | | | | | |
| | Panchayath Total | 6051.17 | 3026.79 | 2829.97 | 8329.17 | 2637.14 | 1900.98 |
| | Block Total | | | | 24775.22 | | |

Table:11.14

PUZHAKKAL BLOCK

(Area in Ha)

| Sl.No. | Land Use | Adat | Avannoor | Kaiparamb | Kolazhy | Mulamkunnathu kavu | Tholloor |
|--------|------------------------------|----------------|----------------|----------------|-----------------|--------------------|----------------|
| 1 | Banana | | | | | | |
| 2 | Banana + Tapioca | | | | | | |
| 3 | Barren rocky | | | | | | |
| 4 | Built-up land | 11.80 | 141.21 | 37.43 | 18.47 | 132.03 | 51.33 |
| 5 | Coconut | | | | | | |
| 6 | Coffee | | | | | | |
| 7 | Current fallow | 223.04 | | | | | 1.41 |
| 8 | Degraded grass land | | | | | | |
| 9 | Dense mixed forest | | | | | | |
| 10 | Dense mixed forest (RF) | | | | | | |
| 11 | Eucalyptus | | | | | | |
| 12 | Eucalyptus +Softwood (RF) | | | | | | |
| 13 | Land with scrub | 8.17 | 75.67 | 1.71 | 2.46 | 98.13 | 3.41 |
| 14 | Land without scrub | 4.92 | 3.39 | | | | |
| 15 | Marshy land | 587.07 | | 14.61 | 57.77 | | 197.48 |
| 16 | Mining/Industrial wastelands | | 1.00 | | 1.23 | 15.49 | |
| 17 | Mixed crop | 1046.51 | 1066.00 | 1315.44 | 908 | 833.88 | 729.93 |
| 18 | Mixed trees | | | | 10.47 | 92.93 | |
| 19 | Open mixed forest (RF) | | | | | 195.14 | |
| 20 | Paddy converted to arecanut | 0.51 | | | | | |
| 21 | Paddy converted to banana | | | | | | |
| 22 | Paddy converted to coconut | 10.62 | 0.41 | 60.67 | 133.51 | 15.08 | 50.46 |
| 23 | Plantation cashew | | 21.41 | | | | |
| 24 | Plantation rubber | 7.55 | 11.88 | 48.17 | 31.86 | 443.02 | 3.01 |
| 25 | Plantation rubber (RF) | | | | | | |
| 26 | Plantation teak | | | | | | |
| 27 | Plantation teak (RF) | | | | | | |
| 28 | Reserve forest | | | | | | |
| 29 | River/Waterbody | 87.68 | 10.58 | 13.82 | 10.91 | 25.76 | 48.66 |
| 30 | Rubber | | | | | | |
| 31 | Scrub forest | | | | | 36.22 | |
| 32 | Virippu + Mundakan | 378.02 | 398.99 | 571.06 | 508.18 | 226.43 | 470.18 |
| 33 | Waterbody | | | | | | |
| | Panchayath Total | 2365.89 | 1730.54 | 2062.91 | 1682.86 | 2114.11 | 1555.87 |
| | Block Total | | | | 11512.18 | | |

Table:11.15

THALIKKULAM BLOCK

| Sl.No. | Land Use | Engandiyoor | Nattika | Thalikulam | Vadanappally | Valappad |
|--------|------------------------------|----------------|----------------|----------------|---------------|----------------|
| 1 | Banana | | 1.47 | | | |
| 2 | Banana + Tapioca | | | | | |
| 3 | Bairren rocky | | | | | |
| 4 | Built-up land | 213.04 | 107.98 | 97.80 | 111.29 | 113.35 |
| 5 | Coconut | 0.45 | | | | |
| 6 | Coffee | | | | | |
| 7 | Current fallow | | | | | |
| 8 | Degraded grass land | | | | | |
| 9 | Dense mixed forest | | | | | |
| 10 | Dense mixed forest (RF) | | | | | |
| 11 | Eucalyptus | | | | | |
| 12 | Eucalyptus +Softwood (RF) | | | | | |
| 13 | Land with scrub | | | | | |
| 14 | Land without scrub | | | | | |
| 15 | Marshy land | | | | | |
| 16 | Mining/Industrial wastelands | | | | | |
| 17 | Mixed crop | 1219.79 | 797.72 | 897.1 | 37.88 | 1460.99 |
| 18 | Mixed trees | | | | | |
| 19 | Open mixed forest (RF) | | | | | |
| 20 | Paddy converted to arecanut | | | | | |
| 21 | Paddy converted to banana | | | | | |
| 22 | Paddy converted to coconut | | | | 17.76 | 22.49 |
| 23 | Plantation cashew | | | | | |
| 24 | Plantation rubber | | | | | |
| 25 | Plantation rubber (RF) | | | | | |
| 26 | Plantation teak | | | | | |
| 27 | Plantation teak (RF) | | | | | |
| 28 | Reserve forest | | | | | |
| 29 | River/Waterbody | 182.12 | 33.84 | 13.48 | 32.01 | 2.83 |
| 30 | Rubber | | | | | |
| 31 | Scrub forest | | | | | |
| 32 | Virippu + Mundakan | 5.19 | 1.34 | 6.11 | 4.86 | 20.2 |
| 33 | Waterbody | | | | | |
| | Panchayath Total | 1620.59 | 942.35 | 1014.49 | 203.80 | 1619.86 |
| | Block Total | | 5401.09 | | | |

Table:11.16

WADAKKANCHERY BLOCK

| SI.No. | Land Use | Desamangalam | Erumapetty | Mulloorkara | Mundathikode | Thekkumkara | Wadakkan chery | Varavoor |
|--------|------------------------------|----------------|----------------|----------------|-----------------|----------------|----------------|----------------|
| 1 | Banana | | | 1.17 | | | | 0.61 |
| 2 | Banana + Tapioca | | 1.18 | | | | | |
| 3 | Barren rocky | | | | | | | |
| 4 | Built-up land | 2.42 | 3.62 | 2.82 | 163.01 | 12.71 | 1.63 | 9.50 |
| 5 | Coconut | | | | | | | |
| 6 | Coffee | | | | | | | |
| 7 | Current fallow | | | | | | | |
| 8 | Degraded grass land | | | | | | | |
| 9 | Dense mixed forest | | | | | 4.29 | | |
| 10 | Dense mixed forest (RF) | | | 1553.81 | | 224.3 | 21.92 | |
| 11 | Eucalyptus | 143.13 | 186.36 | 99.90 | 139.99 | | 181.53 | 568.94 |
| 12 | Eucalyptus (RF) | | 229.44 | 14.03 | | | | 6.16 |
| 13 | Land with scrub | 93.18 | 42.01 | 2.11 | 33.53 | 28.84 | 50.77 | 81.72 |
| 14 | Land without scrub | | 23.87 | 1.51 | 3.11 | | | 0.7 |
| 15 | Marshy land | | | 8.92 | | | | |
| 16 | Mining/Industrial wastelands | 0.66 | 0.72 | 1.01 | | 7.18 | | 4.43 |
| 17 | Mixed crop | 961.6 | 912.21 | 1131.82 | 1373.71 | 1354.78 | 1088.87 | 1028.12 |
| 18 | Mixed trees | | | | | | | |
| 19 | Open mixed forest (RF) | | | 48.00 | | 186.67 | 58.67 | |
| 20 | Paddy converted to arecanut | | | | | | | |
| 21 | Paddy converted to banana | | 2.60 | | | | | 1.24 |
| 22 | Paddy converted to coconut | 3.73 | 46.45 | | 22.52 | 78.87 | 51.64 | 8.42 |
| 23 | Plantation cashew | | 285.71 | 2.36 | 1.40 | 69.82 | | 271.67 |
| 24 | Plantation rubber | 373.22 | 263 | 431.80 | 141.76 | 974.55 | 257.29 | 326.23 |
| 25 | Plantation rubber (RF) | | 46.55 | 328.69 | | 8.63 | 5.94 | 133.01 |
| 26 | Plantation teak | | | | | | | |
| 27 | Plantation teak (RF) | | 276.47 | 231.89 | 12.84 | 253.06 | 243.11 | 69.79 |
| 28 | Reserve forest | | | | | | | |
| 29 | River/Waterbody | 165.71 | 19.14 | 20.81 | 30.66 | 153.02 | 237.10 | 12.98 |
| 30 | Rubber | | | | | | | |
| 31 | Scrub forest | 1.49 | | 310.79 | | 218.90 | 0.49 | 46.53 |
| 32 | Virippu + Mundakan | 523.23 | 567.71 | 410.52 | 472.85 | 463.13 | 395 | 407.24 |
| 33 | Waterbody | | | | | | | |
| | Panchayath Total | 2268.37 | 2907.04 | 4601.96 | 2395.38 | 4038.75 | 2593.96 | 2977.29 |
| | Block Total | | | | 21782.75 | | | |

Table:11.17

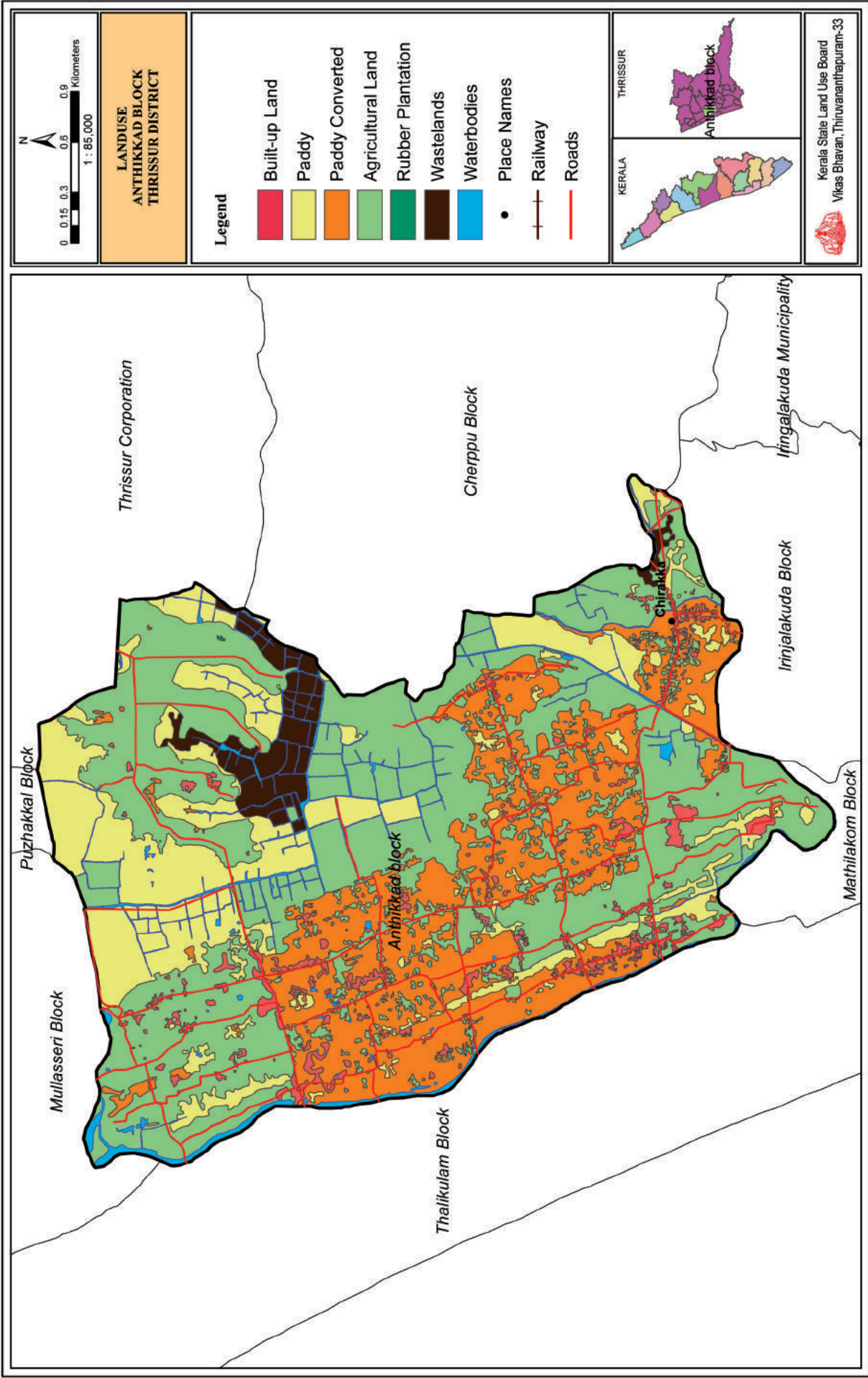
VELLANGALLOOR BLOCK

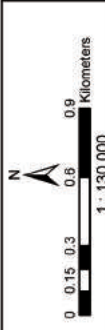
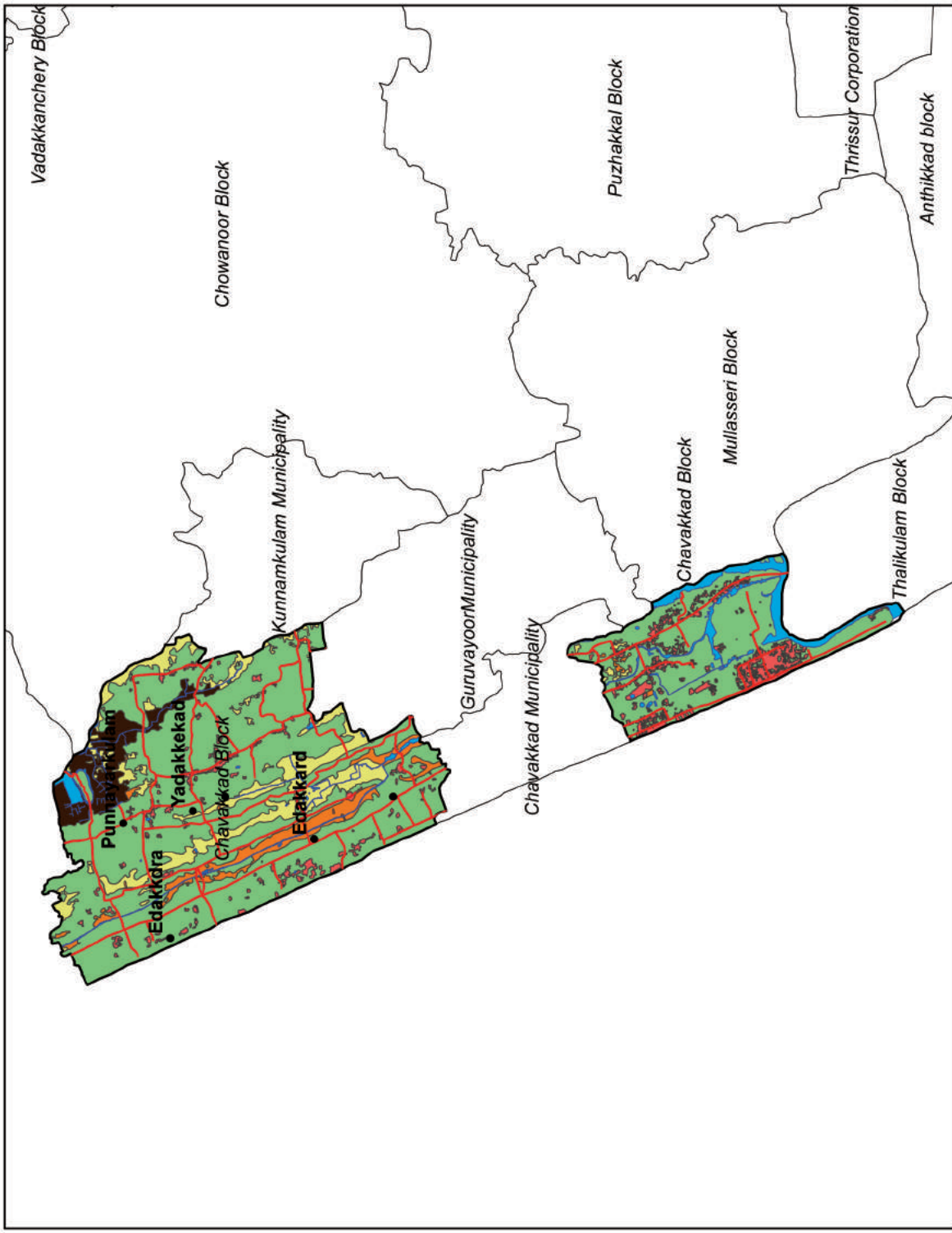
| Sl.No. | Land Use | Padiyoor | Poomangalam | Puthenchira | Vellangalloor | Velookkara |
|--------|------------------------------|----------------|----------------|-----------------|----------------|----------------|
| 1 | Banana | | | | | 0.58 |
| 2 | Banana + Tapioca | | | | | 2.06 |
| 3 | Barren rocky | | | | | |
| 4 | Built-up land | 18.83 | 2.99 | 87.71 | 67.45 | 66.76 |
| 5 | Coconut | | | | | |
| 6 | Coffee | | | | | |
| 7 | Current fallow | 3.72 | | 0.01 | 2.32 | |
| 8 | Degraded grass land | | | | | |
| 9 | Dense mixed forest | | | | | |
| 10 | Dense mixed forest (RF) | | | | | |
| 11 | Eucalyptus | | | | | |
| 12 | Eucalyptus + Softwood (RF) | | | | | |
| 13 | Land with scrub | | | | | |
| 14 | Land without scrub | | | | | 0.89 |
| 15 | Marshy land | 29.84 | 47.24 | | | |
| 16 | Mining/Industrial wastelands | | | | | |
| 17 | Mixed crop | 1301.73 | 784.82 | 1756.24 | 1639.14 | 2246.66 |
| 18 | Mixed trees | | | | | |
| 19 | Open mixed forest (RF) | | | | | |
| 20 | Paddy converted to arecanut | | | | | 0.59 |
| 21 | Paddy converted to banana | | | | | |
| 22 | Paddy converted to coconut | 15.56 | 11.38 | 8.47 | 104.49 | 51.16 |
| 23 | Plantation cashew | | | | | |
| 24 | Plantation rubber | | | 1.79 | 0.63 | 51.34 |
| 25 | Plantation rubber (RF) | | | | | |
| 26 | Plantation teak | | | | | |
| 27 | Plantation teak (RF) | | | | | |
| 28 | Reserve forest | | | | | |
| 29 | River/Waterbody | 91.6 | 38.80 | 144.82 | 117.89 | 14.06 |
| 30 | Rubber | | | | | |
| 31 | Scrub forest | | | | | |
| 32 | Virippu + Mundakan | 328.33 | 307.73 | 388.53 | 406.57 | 351.55 |
| 33 | Waterbody | | | | | |
| | Panchayath Total | 1789.61 | 1192.96 | 2387.57 | 2338.49 | 2785.65 |
| | Block Total | | | 10494.28 | | |

Table:11.18

MUNICIPALITY/CORPORATION

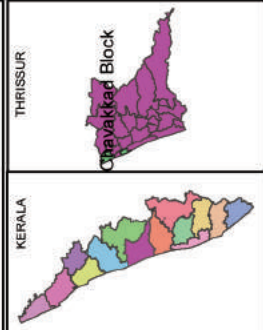
| Sl.No. | Land Use | Chalakkudy (M) | Chavakkad (M) | Guruvayoor Township (M) | Iringalakuda (M) | Kodungalloor (M) | Kunnamkulam (M) | Thrissur (C) | (Area in Ha) |
|--------|------------------------------|----------------|----------------|-------------------------|------------------|------------------|-----------------|-----------------|--------------|
| 1 | Banana | | 0.24 | | 1.10 | 1.03 | 6.38 | 26.85 | |
| 2 | Banana + Tapioca | | | | | | 5.5 | | |
| 3 | Bairren rocky | | | | | | | | |
| 4 | Built-up land | 9.58 | 98.09 | 128.03 | 57.90 | 404.49 | 33.32 | 110.99 | |
| 5 | Coconut | | 0.27 | | | | 9.68 | | |
| 6 | Coffee | | | | | | | | |
| 7 | Current fallow | | | | 0.42 | 9.51 | | 86.41 | |
| 8 | Degraded grass land | | | | | | | | |
| 9 | Dense mixed forest | | | | | | | | |
| 10 | Dense mixed forest (RF) | | | | | | | | |
| 11 | Eucalyptus | | | | | | | | |
| 12 | Eucalyptus + Softwood (RF) | | | | | | | | |
| 13 | Land with scrub | | | | | | | 77.52 | |
| 14 | Land without scrub | 8.94 | | | | | | 3.26 | |
| 15 | Marshy land | | | | 41.51 | | 138.58 | 575.98 | |
| 16 | Mining/Industrial wastelands | | | | 0.99 | | | 16.26 | |
| 17 | Mixed crop | 2349.55 | 1017.69 | 2524.28 | 1926.94 | 1763.04 | 1416.92 | 6460.09 | |
| 18 | Mixed trees | | | | | | | 5.56 | |
| 19 | Open mixed forest (RF) | | | | | 0.73 | | | |
| 20 | Paddy converted to arecanut | | | | | | | | |
| 21 | Paddy converted to banana | | | | 5.46 | | 4.32 | 46.95 | |
| 22 | Paddy converted to coconut | | 80.68 | 82.85 | 164.21 | 34.31 | 6.43 | 80.1 | |
| 23 | Plantation cashew | | | | | | | 15.08 | |
| 24 | Plantation rubber | 16.18 | 0.59 | 0.49 | 52.63 | 1.8 | | 298.13 | |
| 25 | Plantation rubber (RF) | | | | | | | | |
| 26 | Plantation teak | | | | | | | | |
| 27 | Plantation teak (RF) | | | | | | | | |
| 28 | Reserve forest | | | | | | | | |
| 29 | River/Waterbody | 45.35 | 21.67 | 87.92 | 67.52 | 399.58 | 63.03 | 206.29 | |
| 30 | Rubber | | | | | | | | |
| 31 | Scrub forest | | | | | | | | |
| 32 | Virippu + Mundakan | 103.82 | 21.75 | 115.84 | 678.52 | 288.83 | 286.86 | 2466.41 | |
| 33 | Waterbody | | | | | | | | |
| | Total | 2533.42 | 1240.98 | 2939.41 | 2997.20 | 2903.32 | 1971.02 | 10475.88 | |





**LANDUSE
CHAVAKKAD BLOCK
THRISSUR DISTRICT**

- Legend**
- Built-up Land
 - Paddy
 - Paddy Converted
 - Agricultural Land
 - Wastelands
 - Waterbodies
 - Place Names
 - Railway
 - Roads



Kerala State Land Use Board
Vikas Bhavan, Thiruvananthapuram-33

0 0.15 0.3 0.6 0.9 Kilometers
1 : 100,000

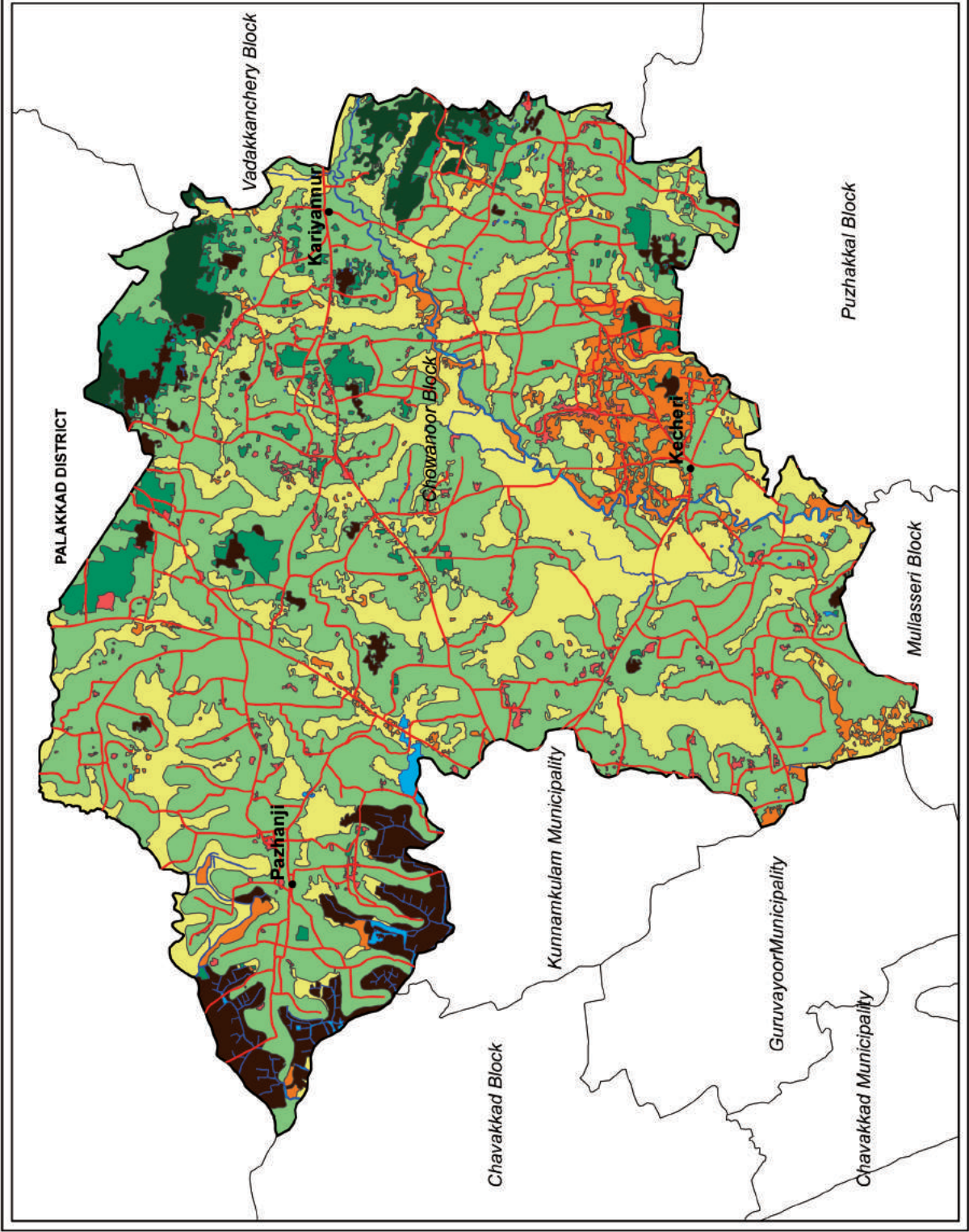
LAND USE
CHOWANNUR BLOCK
THRISSUR DISTRICT

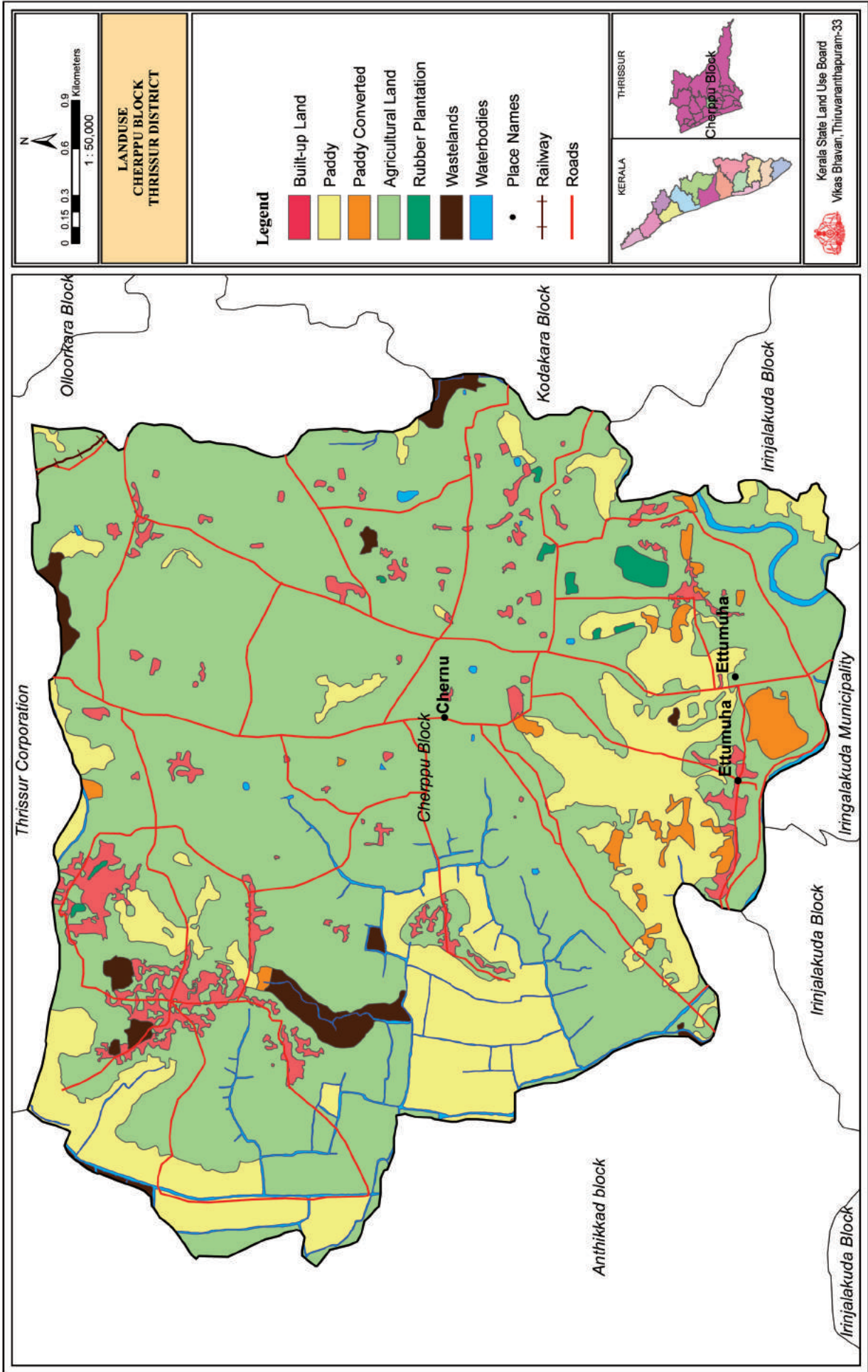
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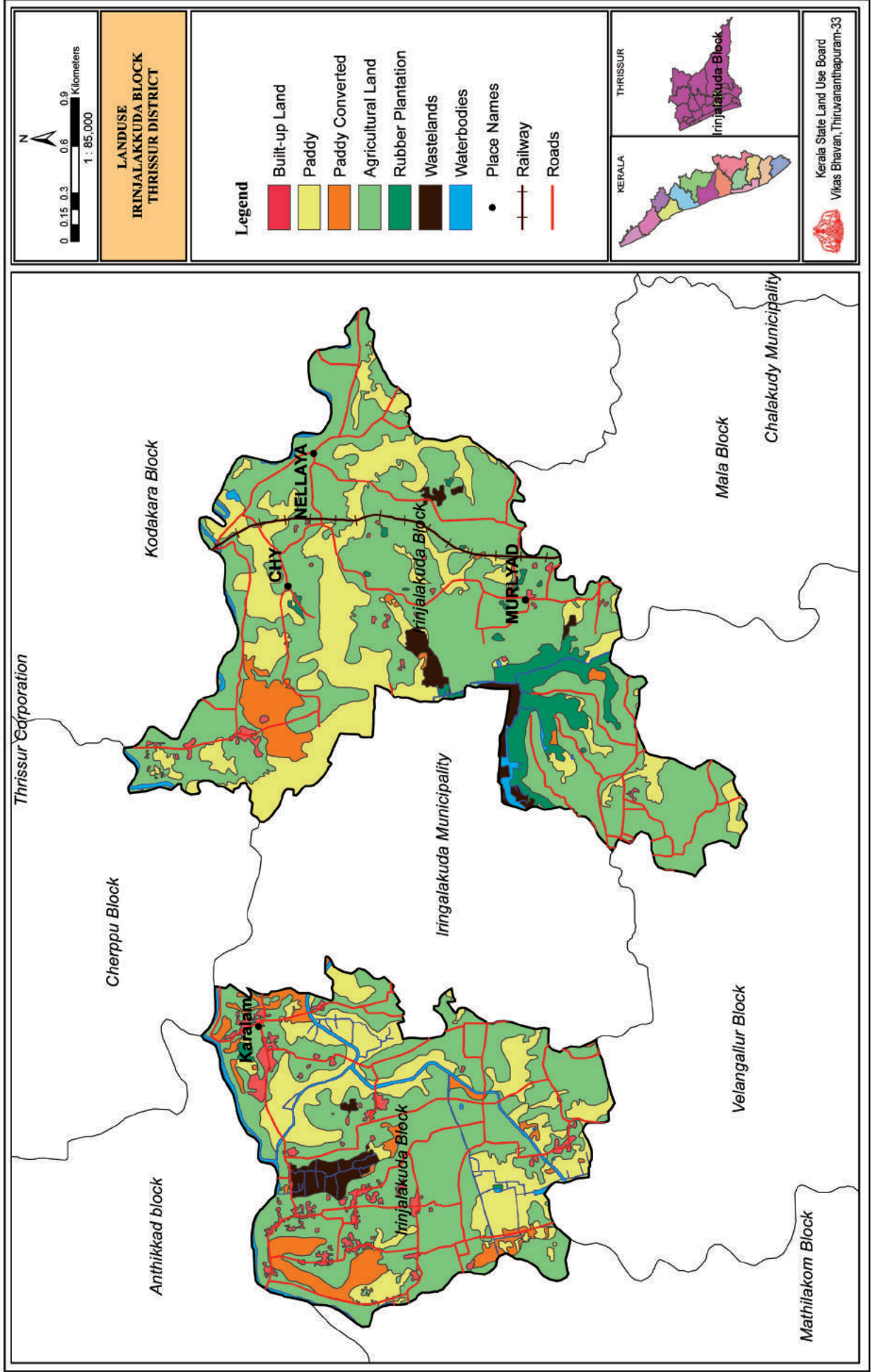
- Built-up Land
- Paddy
- Paddy Converted
- Agricultural Land
- Rubber Plantation
- Forest
- Wastelands
- Waterbodies
- Place Names
- Railway
- Roads

KERALA
THRISSUR
Chowannoor Block

Kerala State Land Use Board
Vikas Bhavan, Thiruvananthapuram-33

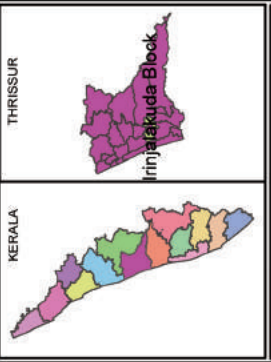






N
 0 0.15 0.3 0.6 0.9 Kilometers
 1 : 85,000
LAND USE
IRINJALAKKUDA BLOCK
THRISSUR DISTRICT

- Legend**
- Built-up Land
 - Paddy
 - Paddy Converted
 - Agricultural Land
 - Rubber Plantation
 - Wastelands
 - Waterbodies
 - Place Names
 - Railway
 - Roads



Kerala State Land Use Board
 Vikas Bhavan, Thiruvananthapuram-33

**LANDUSE
KODAKARA BLOCK
THRISSUR DISTRICT**

Legend

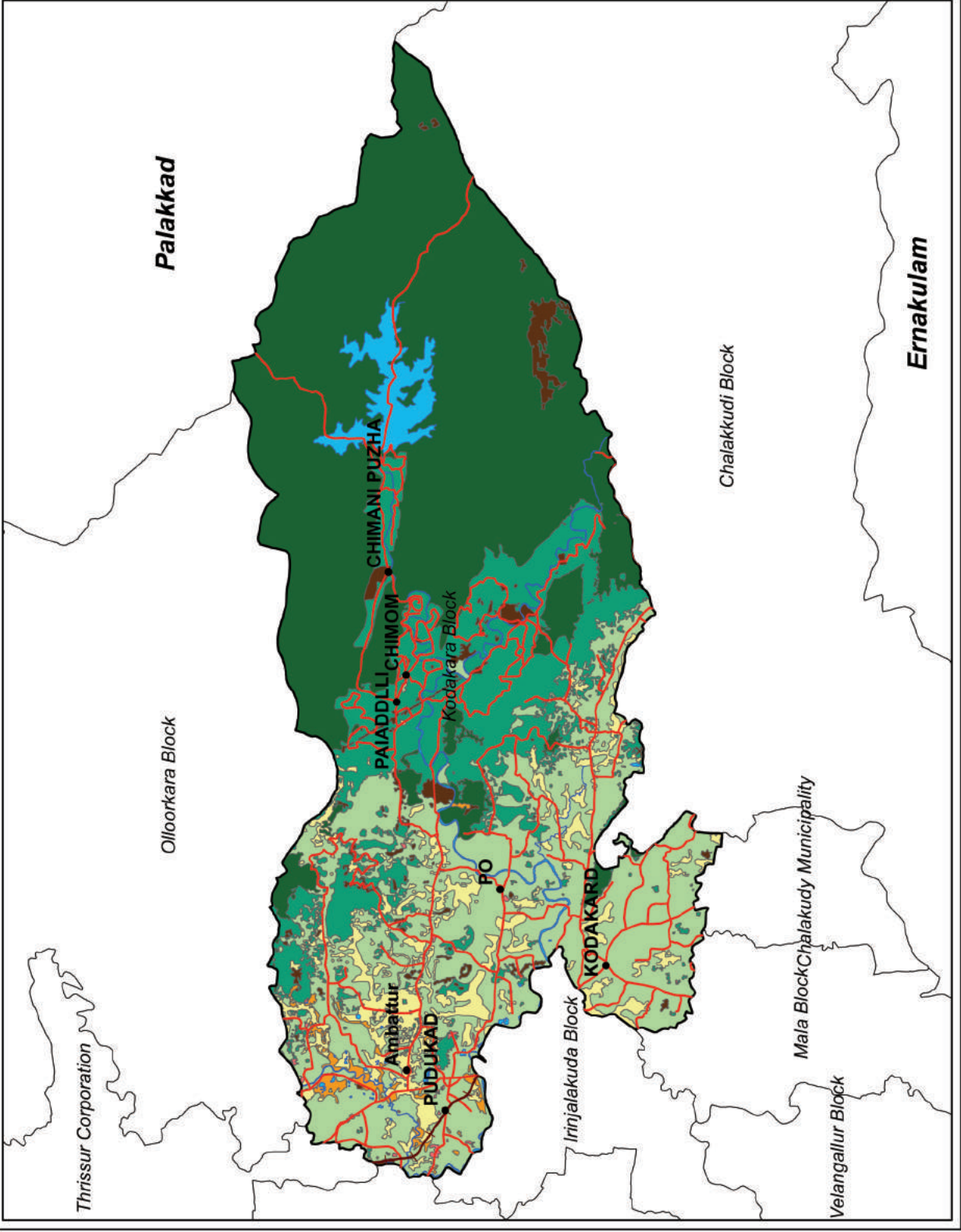
- Built-up Land
- Paddy
- Paddy Converted
- Agricultural Land
- Rubber Plantation
- Forest
- Wastelands
- Waterbodies
- Place Names
- Railway
- Roads

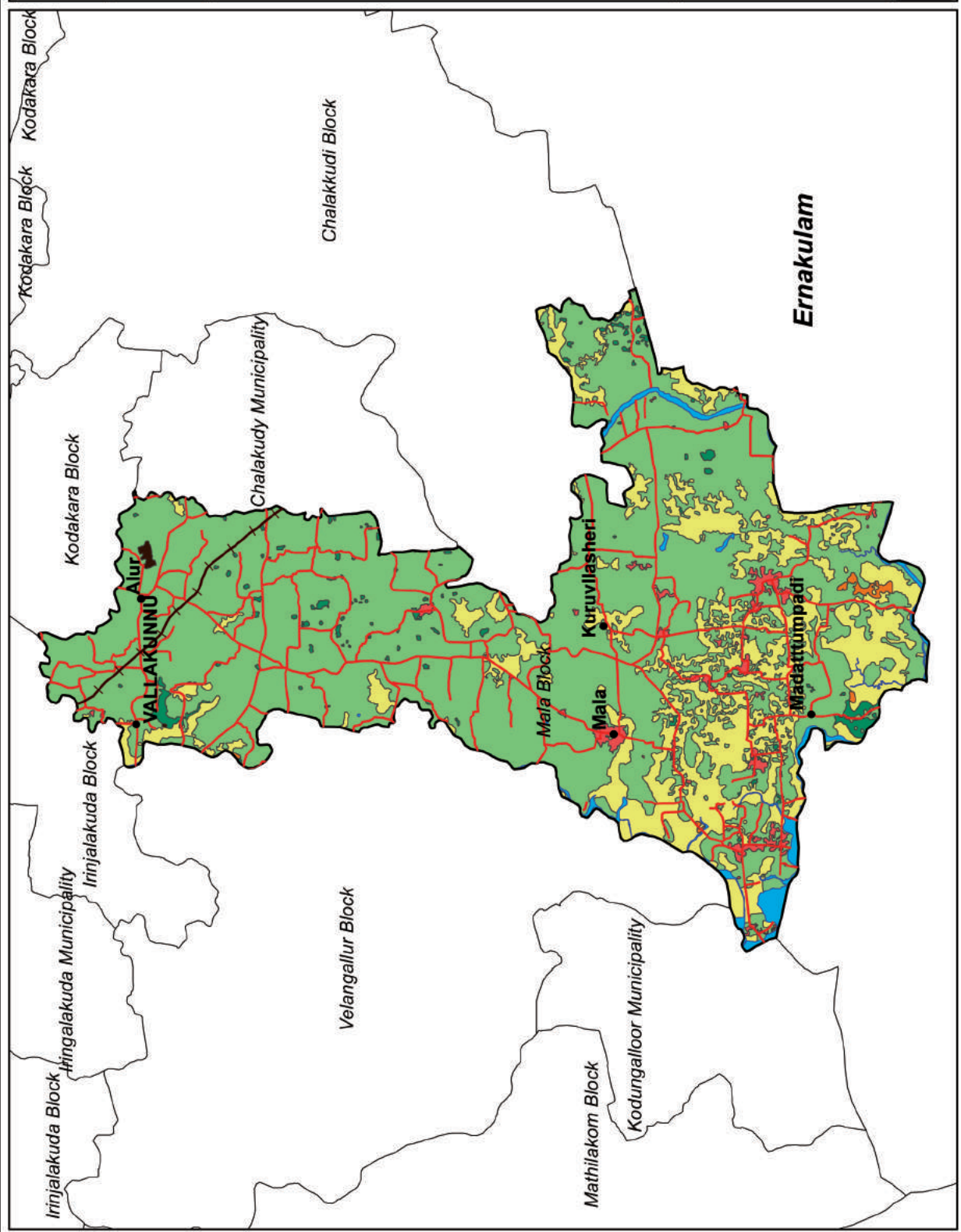
KERALA

THRISSUR

Kodakara Block

Kerala State Land Use Board
Vikas Bhavan, Thiruvananthapuram-33





**LANDUSE
MALA BLOCK
THRISSUR DISTRICT**

Legend

- Built-up Land
- Paddy
- Paddy Converted
- Agricultural Land
- Rubber Plantation
- Wastelands
- Waterbodies
- Place Names
- Railway
- Roads

THRASSUR

THRASSUR

Mala Block

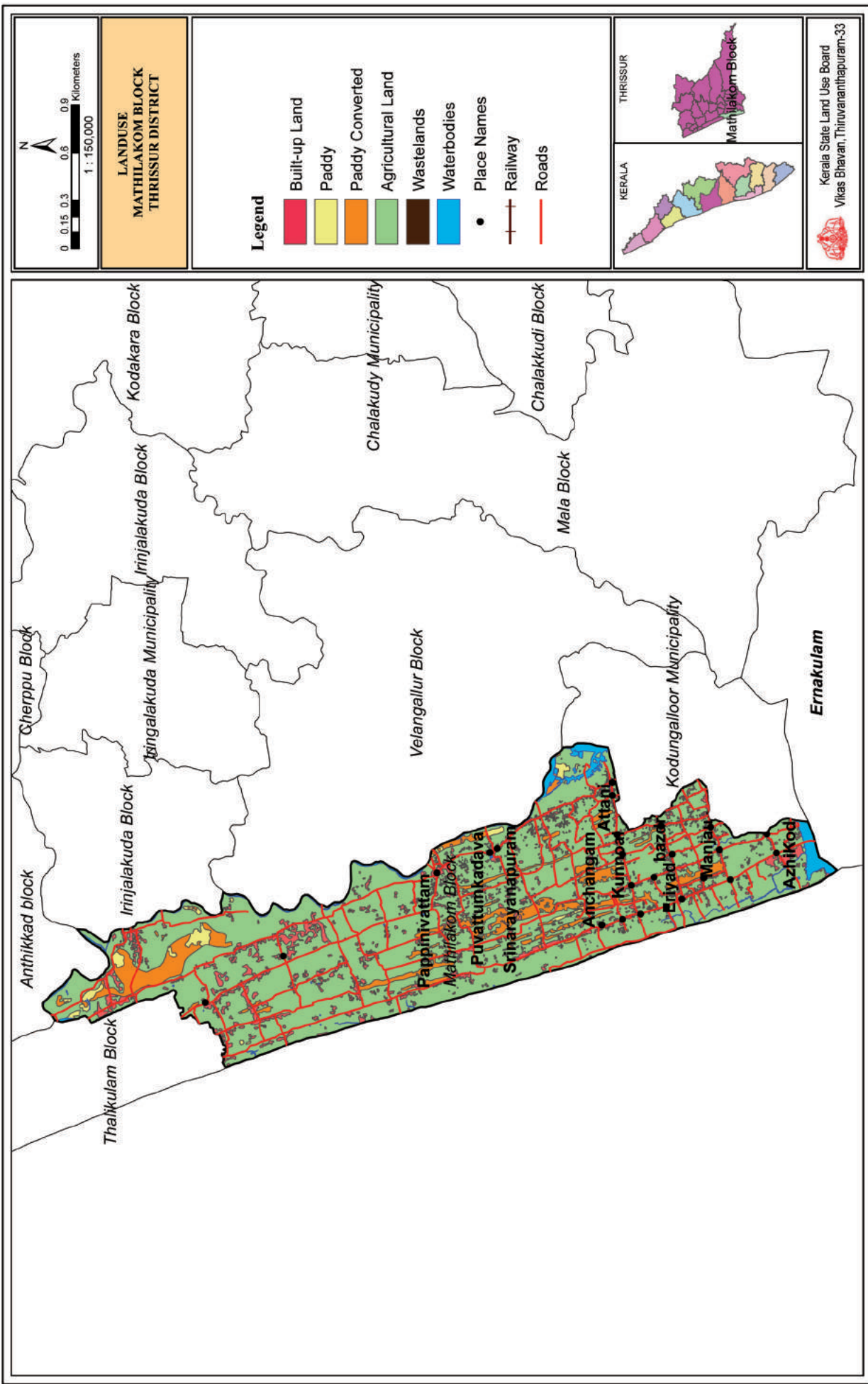
KERALA

KERALA

0 0.15 0.3 0.6 0.9 Kilometers

1 : 125,000

Kerala State Land Use Board
Vikas Bhavan, Thiruvananthapuram-33

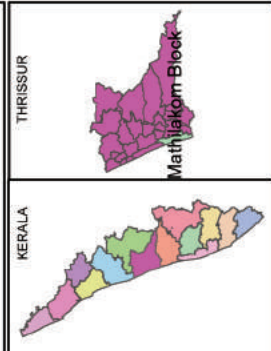


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 1 : 150,000

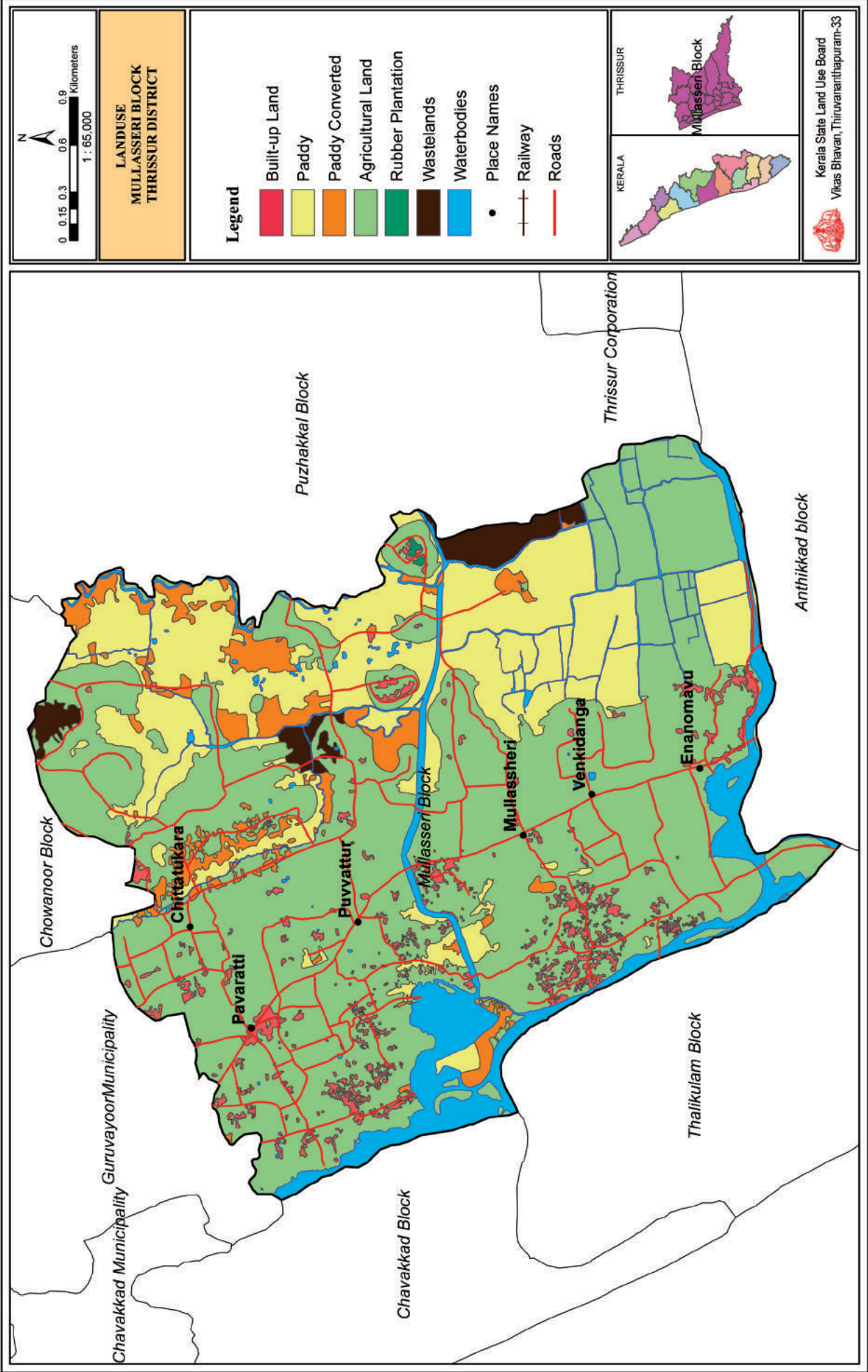
LAND USE
MATHILAKOM BLOCK
THRISSUR DISTRICT

Legend

- Built-up Land
- Paddy
- Paddy Converted
- Agricultural Land
- Wastelands
- Waterbodies
- Place Names
- Railway
- Roads



Kerala State Land Use Board
 Vikas Bhavan, Thiruvananthapuram-33



0 0.15 0.3 0.6 0.9 Kilometers
1 : 125,000

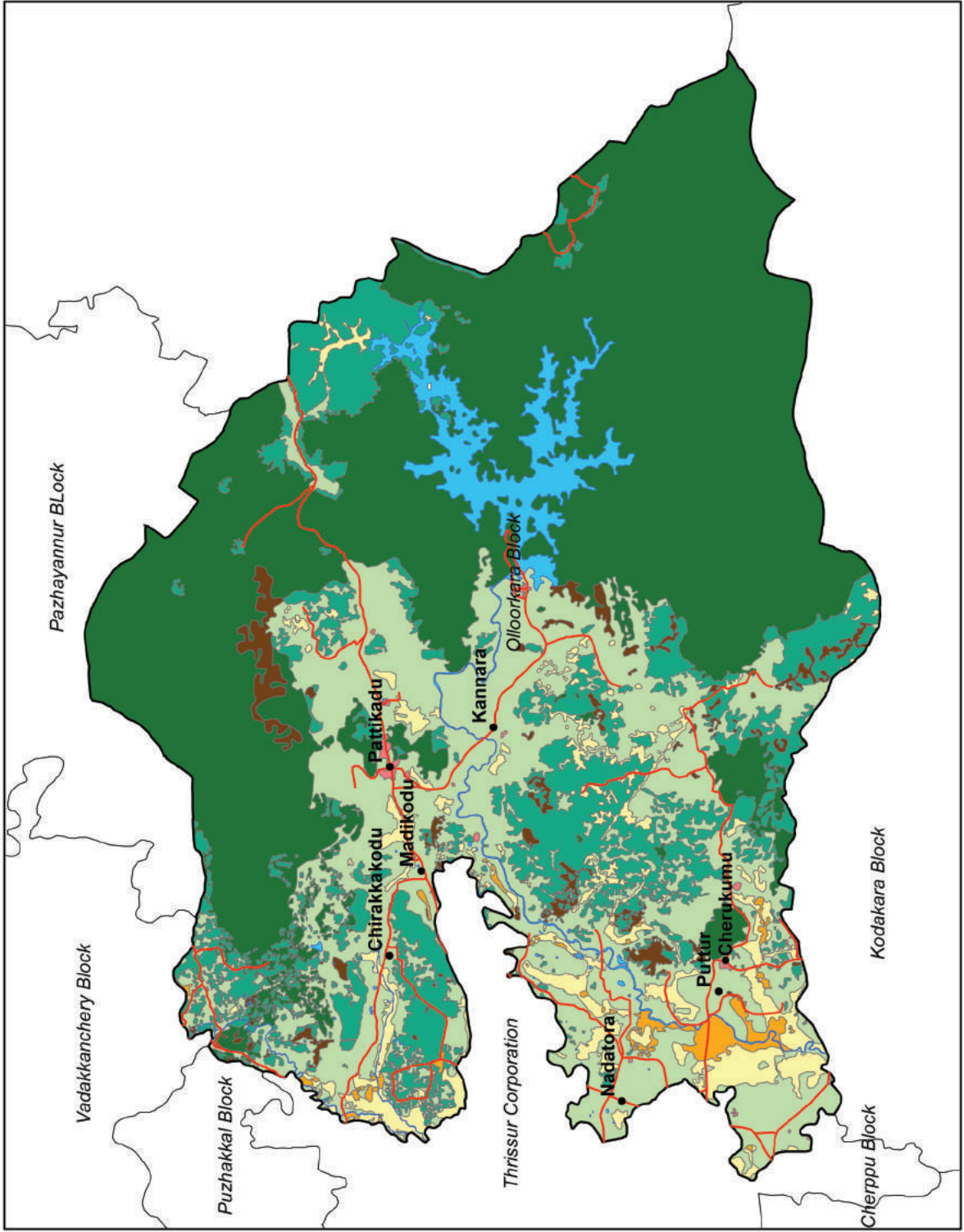
**LAND USE
OLLOORKKARA BLOCK
THRISSUR DISTRICT**

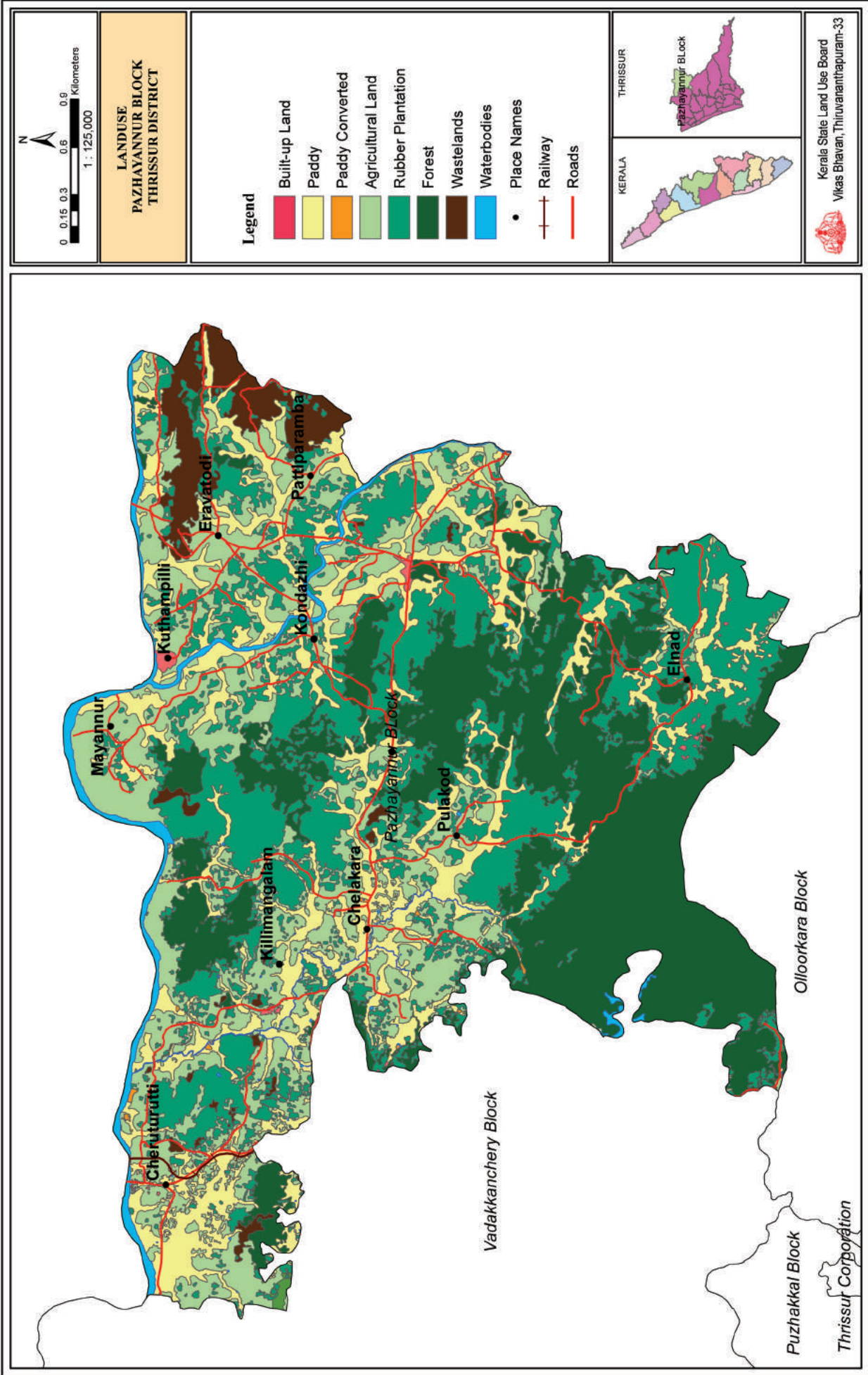
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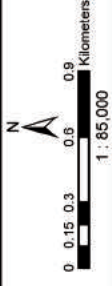
- Built-up Land
- Paddy
- Paddy Converted
- Agricultural Land
- Rubber Plantation
- Forest
- Wastelands
- Waterbodies
- Place Names
- Railway
- Roads

KERALA
THRISSUR
Ollorkkara Block

Kerala State Land Use Board
Vikas Bhavan, Thiruvananthapuram-33



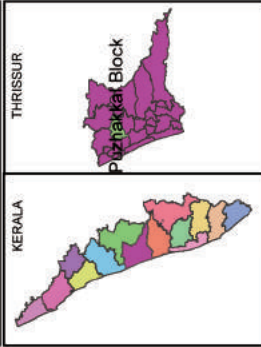




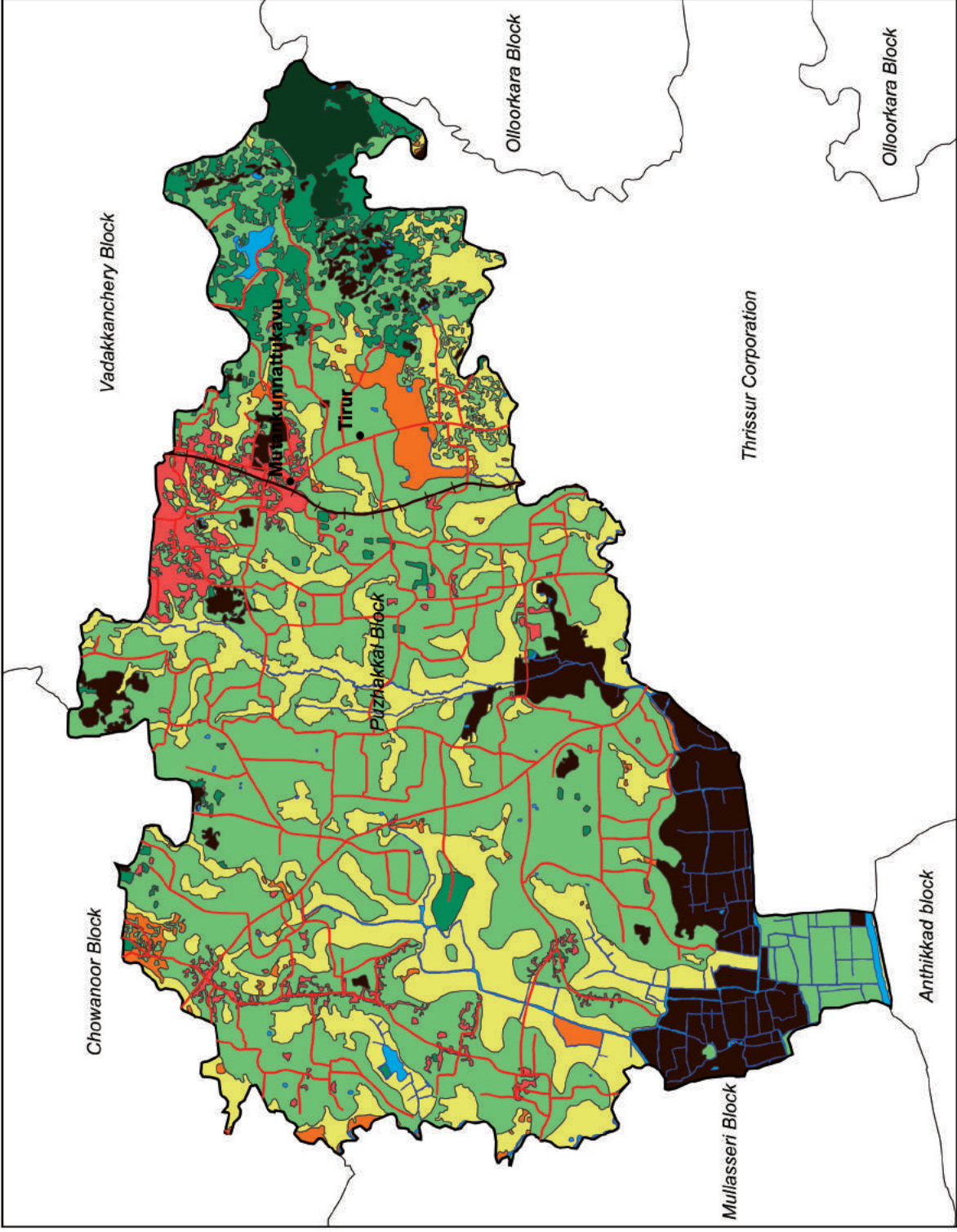
**LAND USE
PUZHAKKAL BLOCK
THRISSUR DISTRICT**

Legend

| | |
|--|-------------------|
| | Built-up Land |
| | Paddy |
| | Paddy Converted |
| | Agricultural Land |
| | Rubber Plantation |
| | Forest |
| | Wastelands |
| | Waterbodies |
| | Place Names |
| | Railway |
| | Roads |



Kerala State Land Use Board
Vikas Bhavan, Thiruvananthapuram-33



0 0.15 0.3 0.6 0.9 Kilometers
1 : 85,000

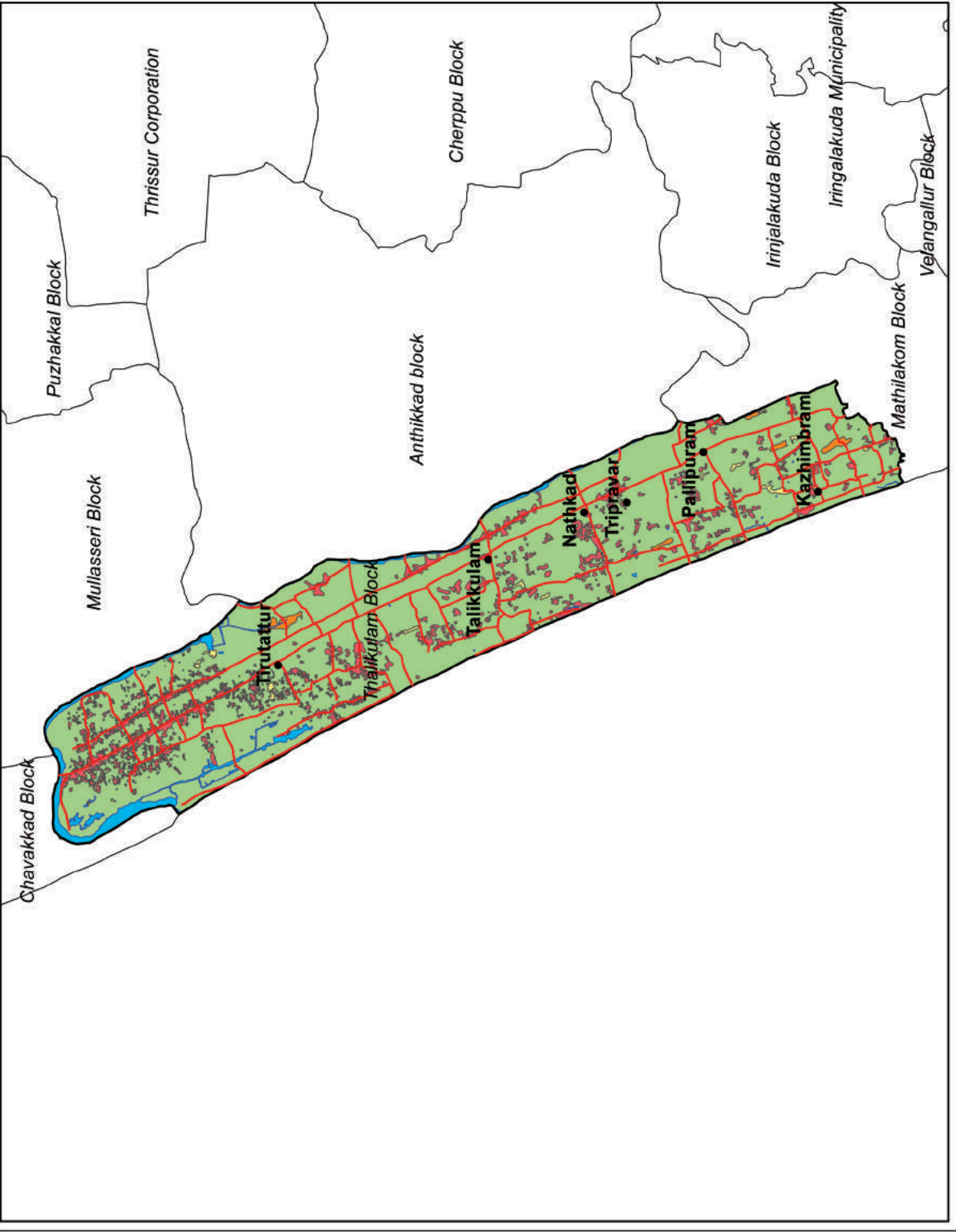
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THALIKKULAM BLOCK
THRISSUR DISTRICT**

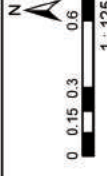
Legend

- Built-up Land
- Paddy
- Paddy Converted
- Agricultural Land
- Rubber Plantation
- Forest
- Wastelands
- Waterbodies
- Place Names
- Railway
- Roads

KERALA
THRISSUR

Kerala State Land Use Board
Vikas Bhavan, Thiruvananthapuram-33





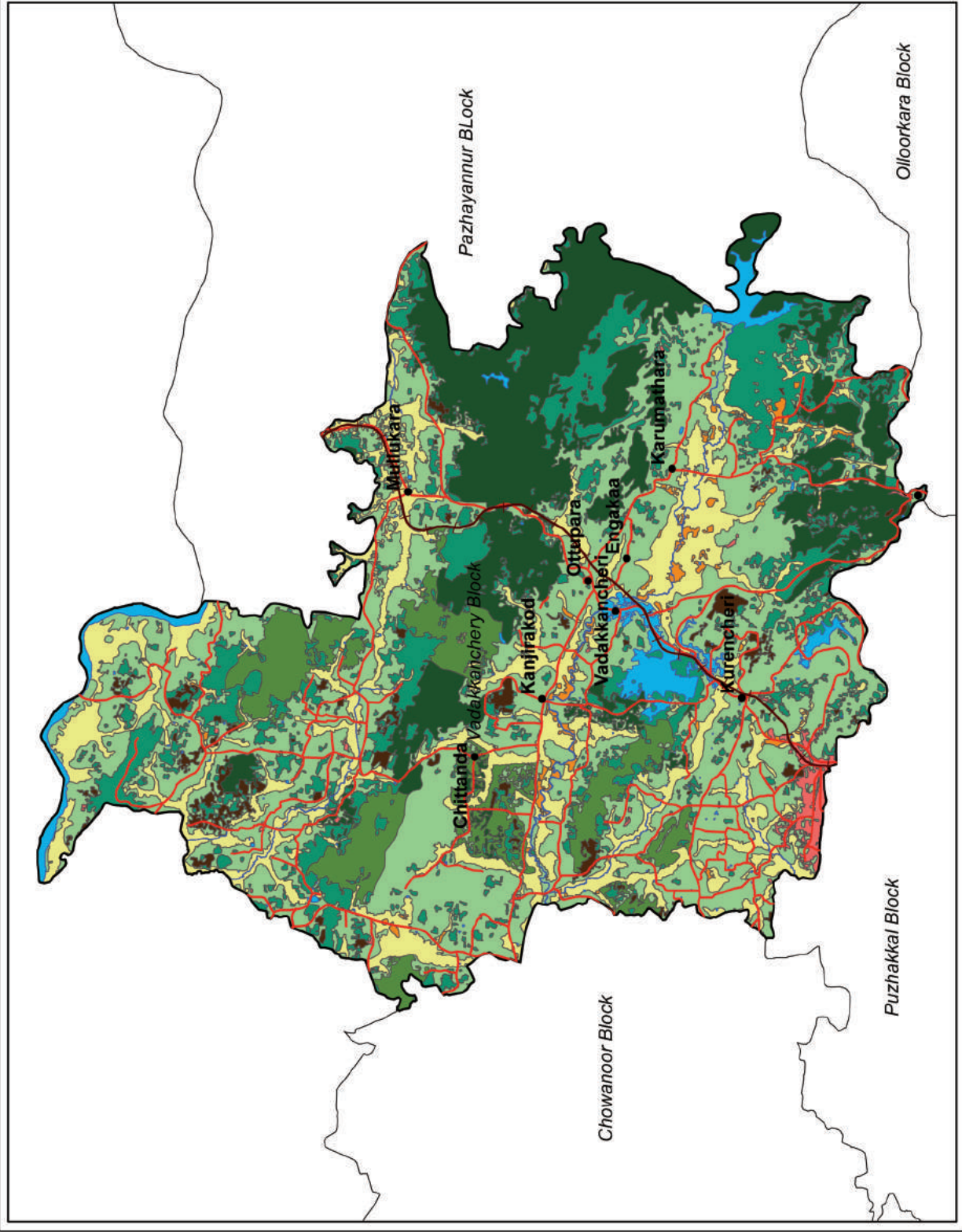
**LANDUSE
VADAKKANCHERI BLOCK
THRISSUR DISTRICT**

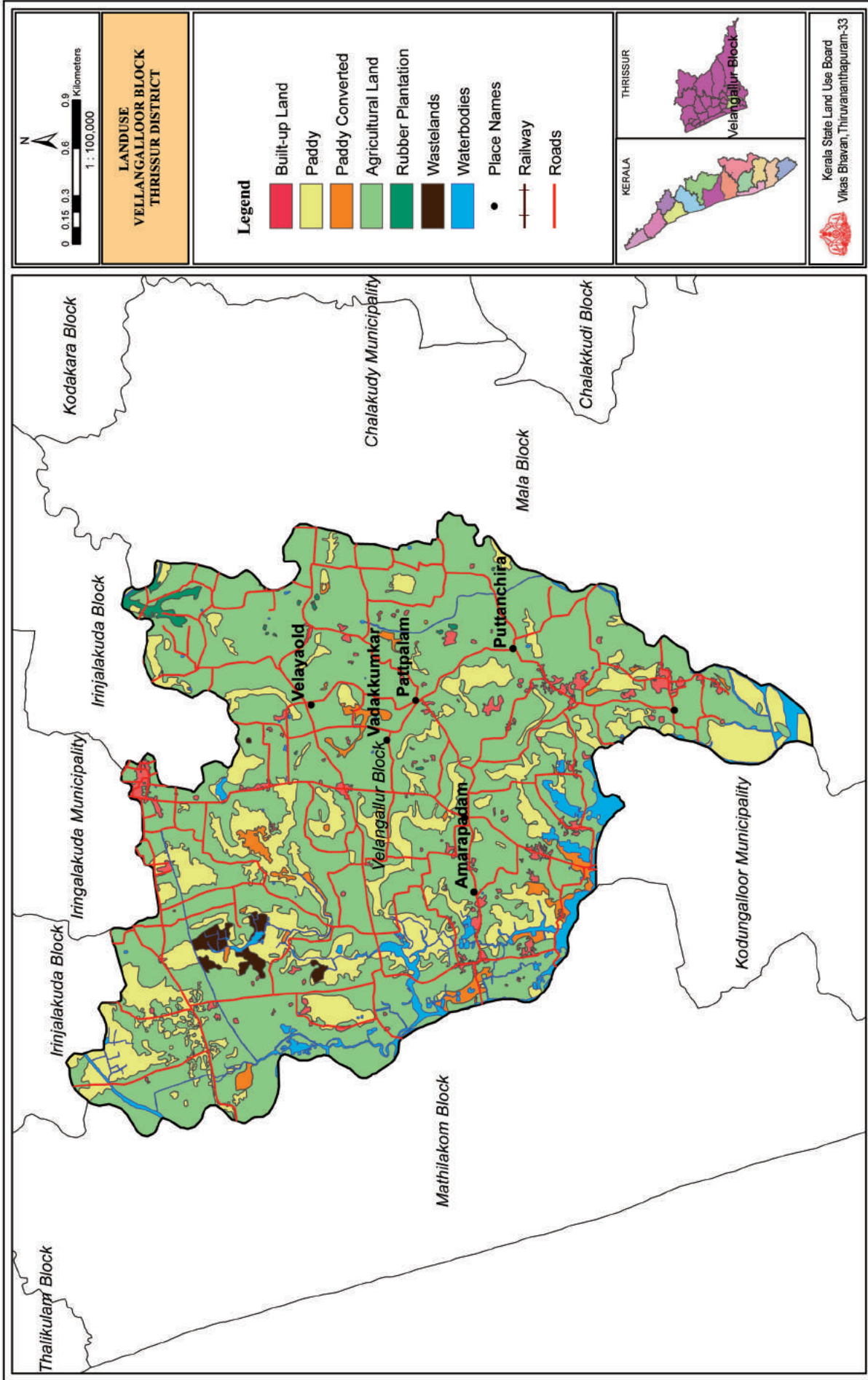
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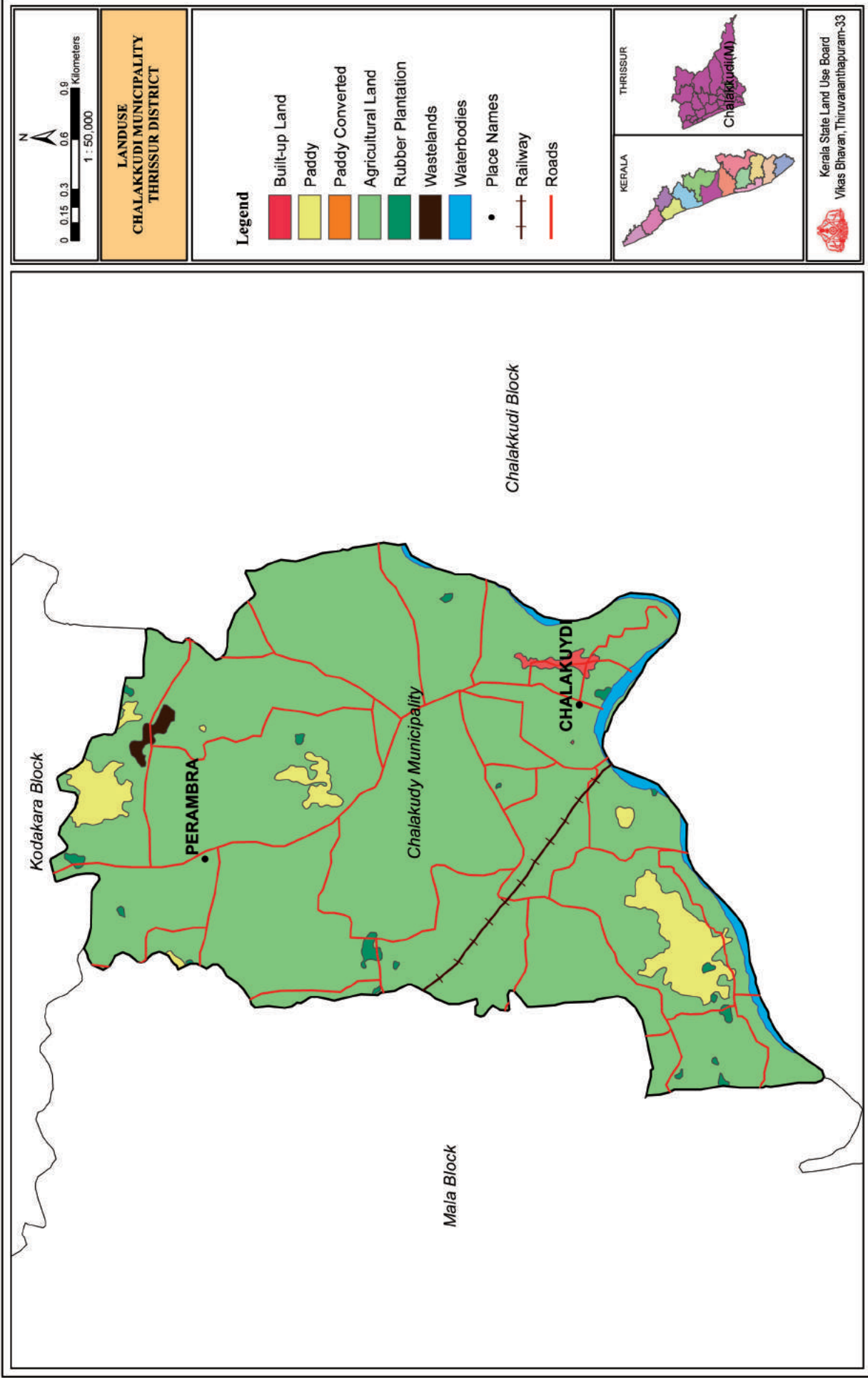
- Built-up Land
- Paddy
- Paddy Converted
- Agricultural Land
- Rubber Plantation
- Forest
- Wastelands
- Waterbodies
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Kerala State Land Use Board
Vikas Bhavan, Thiruvananthapuram-33









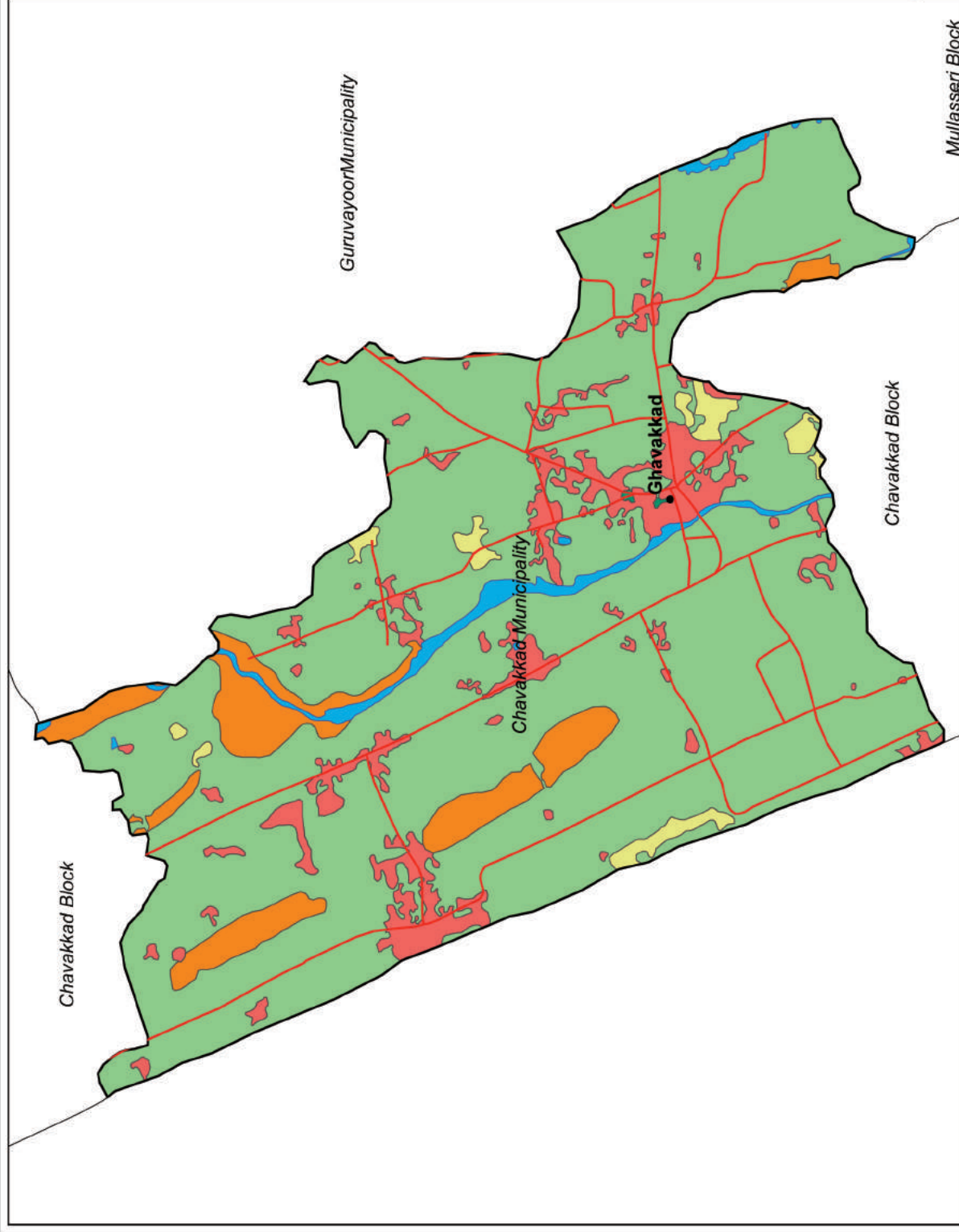
LANDUSE
CHAVAKKAD MUNICIPALITY
THRISSUR DISTRICT

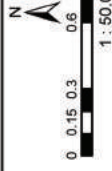
Legend

- Built-up Land
- Paddy
- Paddy Converted
- Agricultural Land
- Rubber Plantation
- Wastelands
- Waterbodies
- Place Names
- Railway
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Kerala State Land Use Board
 Vikas Bhavan, Thiruvananthapuram-33





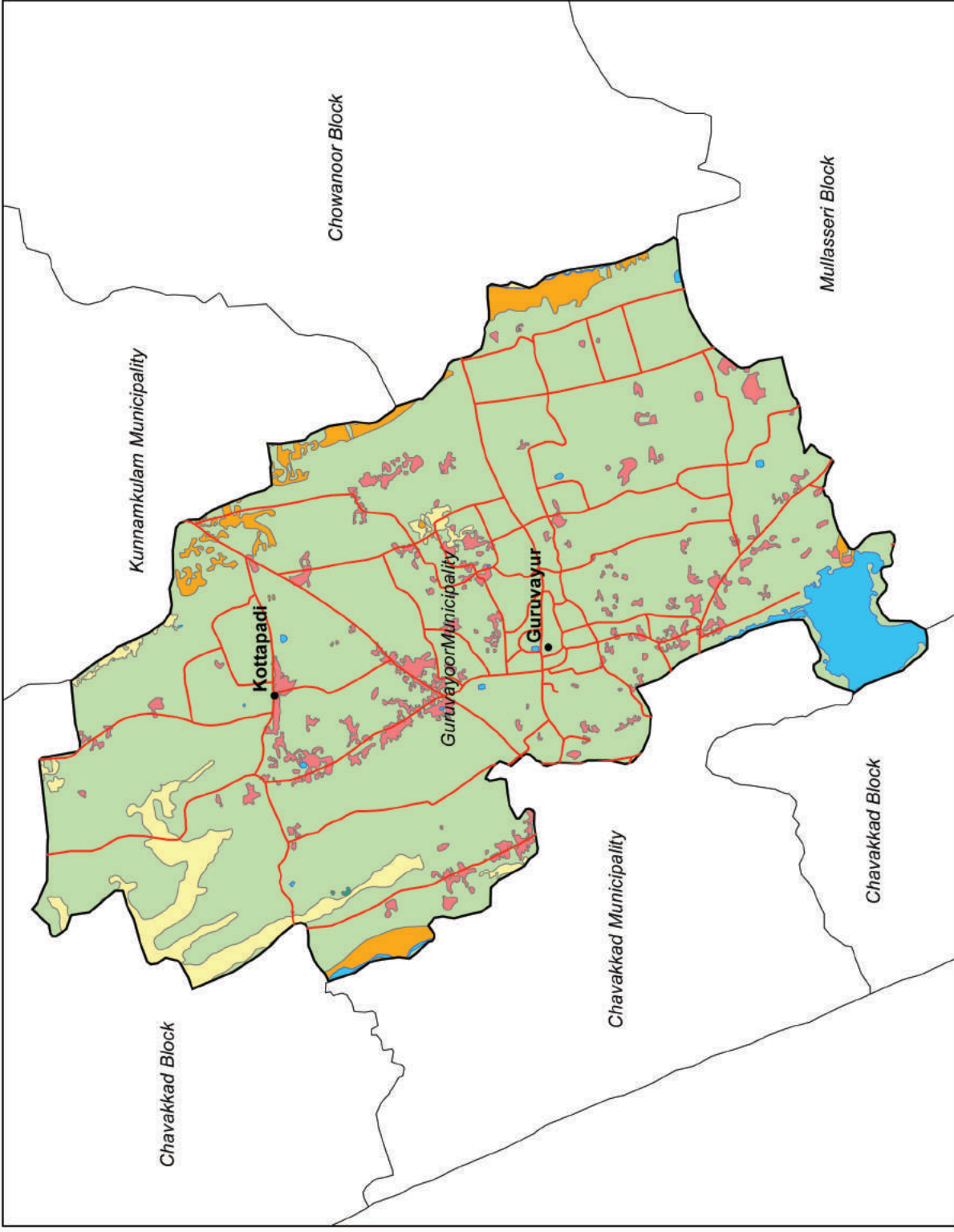
**LANDUSE
GURUVAYOOR MUNICIPALITY
THRISSUR DISTRICT**

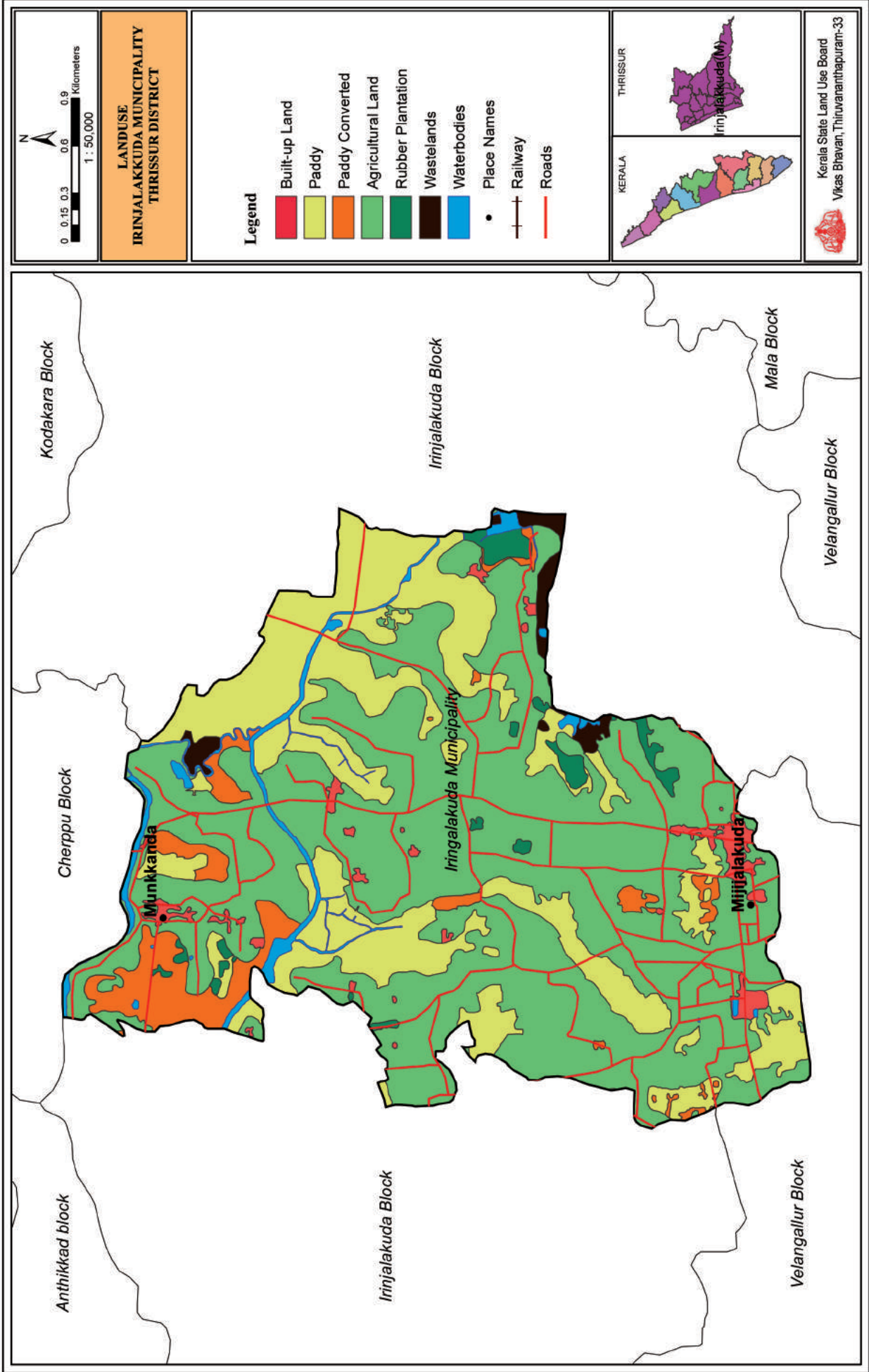
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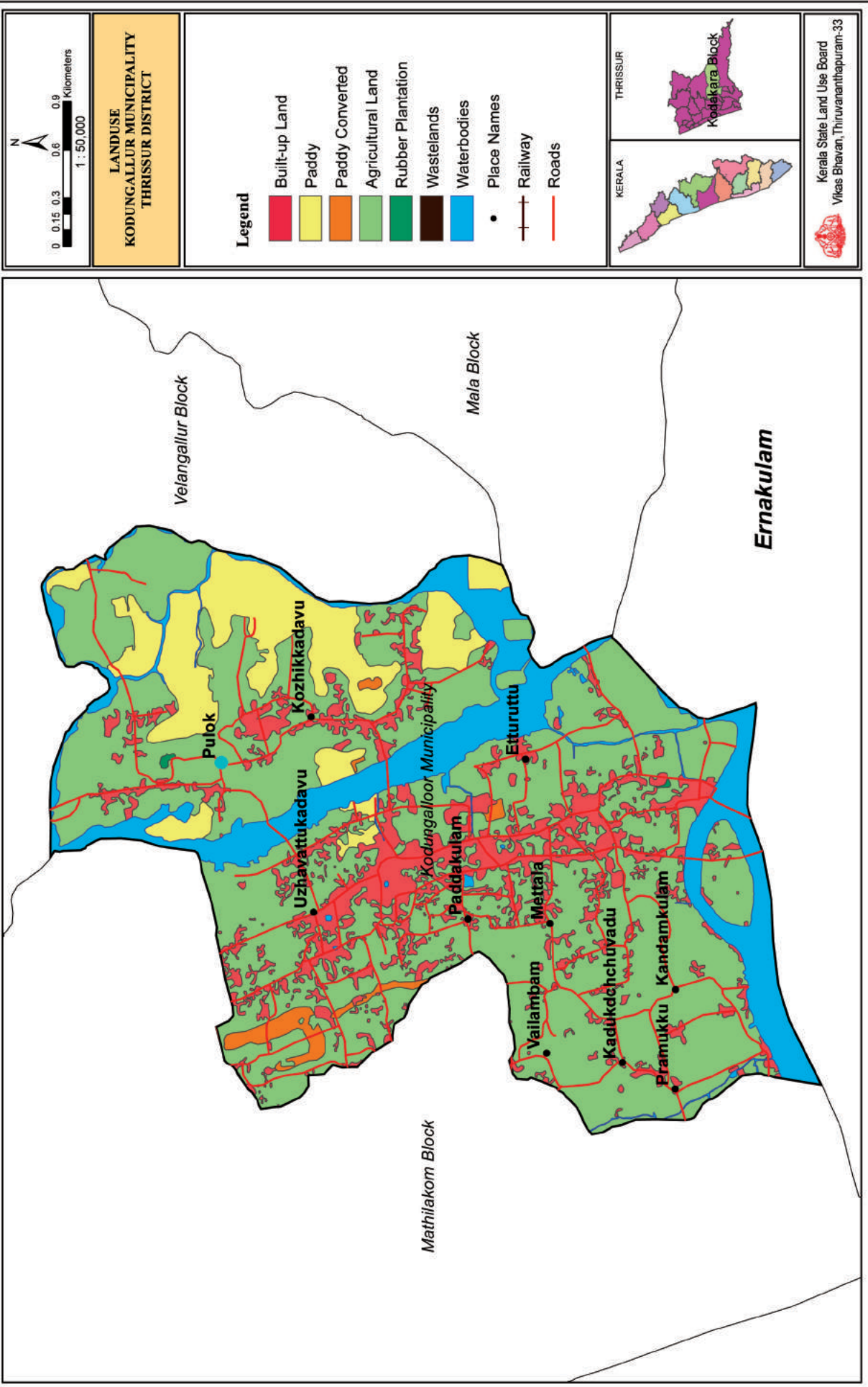
- Built-up Land
- Paddy
- Paddy Converted
- Agricultural Land
- Rubber Plantation
- Wastelands
- Waterbodies
- Place Names
- Railway
- Roads

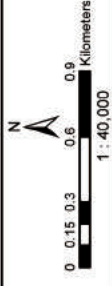


Kerala State Land Use Board
Vikas Bhavan, Thiruvananthapuram-33



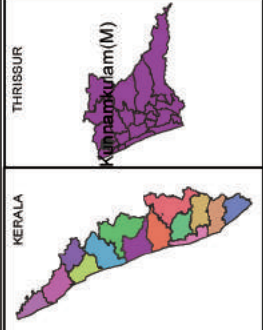




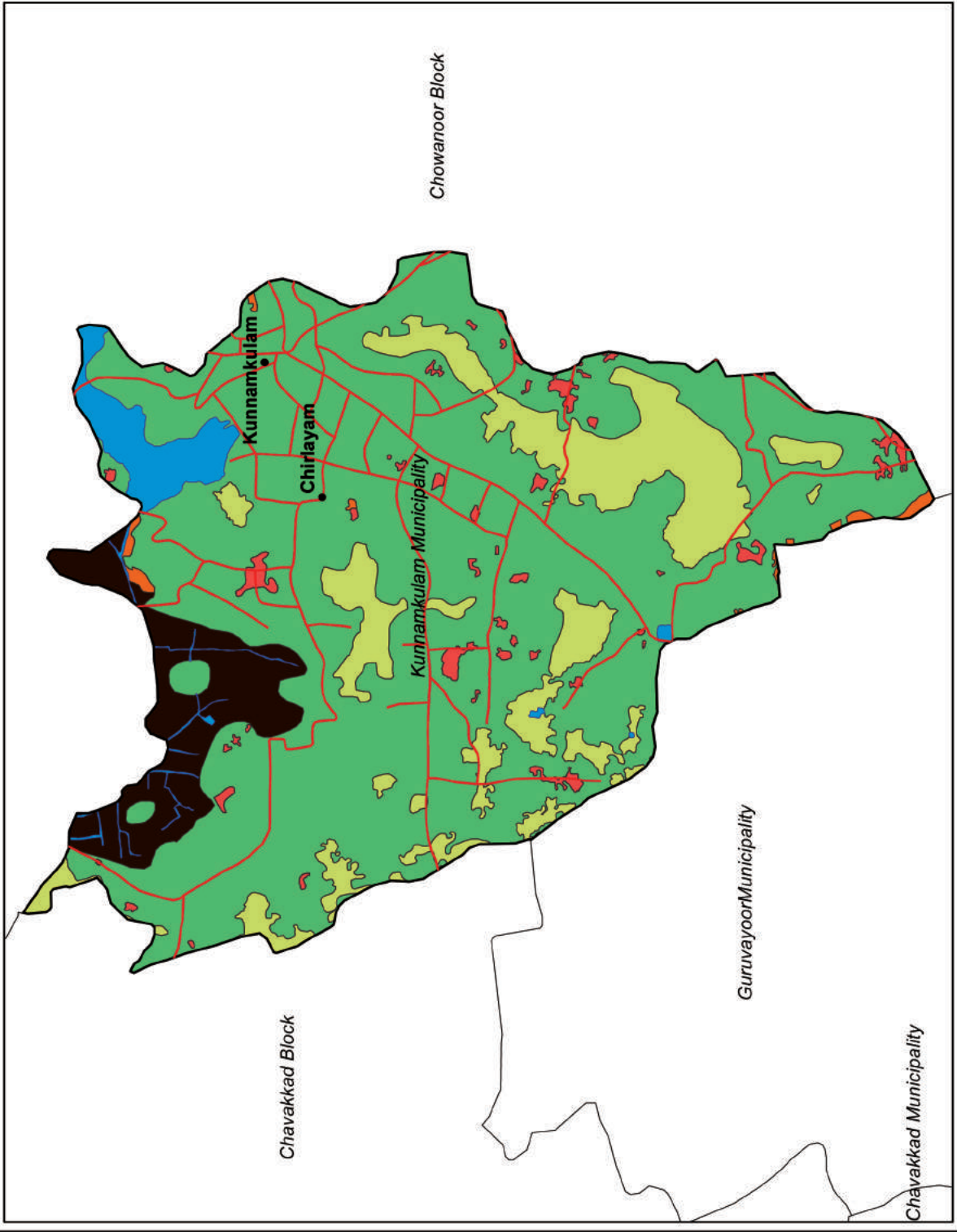


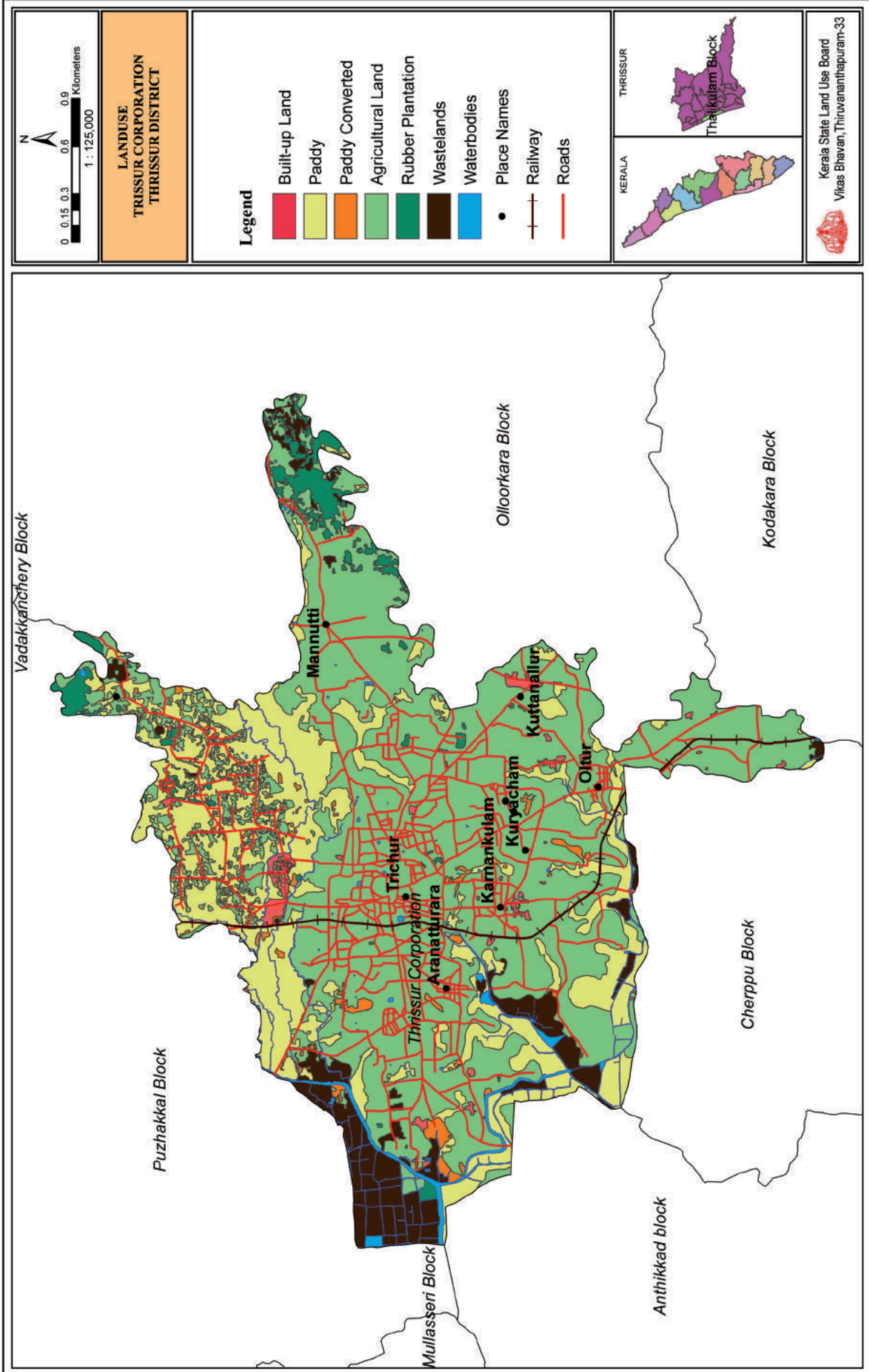
**LANDUSE
KUNNAMKULAM MUNICIPALITY
THRISSUR DISTRICT**

- Legend**
- Built-up Land
 - Paddy
 - Paddy Converted
 - Agricultural Land
 - Wastelands
 - Waterbodies
 - Place Names
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Kerala State Land Use Board
Vikas Bhavan, Thiruvananthapuram-33





BIODIVERSITY

Biodiversity refers to the variety and variability of life on earth. It is the variety of all living organisms including all species. Biodiversity is expressed at three levels on earth viz., genetic diversity, species diversity and ecosystem diversity. Its direct and indirect services are crucial for the subsistence of life on earth. Biodiversity ensures food, fuel, shelter, medicines and other resources vital for our survival. Most of the crop pests are controlled by a variety of other organisms including insects, birds and fungi. Genetic diversity is the variety of genetic information contained in all individual plants, animals and micro organisms. Species diversity is the variety species on earth. Species diversity is usually a measure of the number of species and their relative abundances for a given area at a given point in time. Ecosystem diversity is the variety of habitats, biotic communities and ecological processes.

Western Ghats, one of the Biodiversity hot spots is running along the length of Kerala. Almost a fourth of India's 10,000 plant species are found in the State. Among the 4,000 flowering plant species (1,272 of which are endemic to Kerala and 159 threatened) almost 900 species are of medicinal plants. Its 9,400 km² of forests include tropical wet evergreen and semi-evergreen forests (lower and middle elevations-3,470 km²), tropical moist and dry deciduous forests (mid-elevations-4,100 km² and 100 km², respectively), montane subtropical and temperate (shola) forests (highest elevations-100 km²). Altogether, 29% of Kerala is forested. Two of the world's Ramsar convention listed wetland lake-Sasthamcotta and the Vembanad-Kol wetlands-are in Kerala, as well as 1455.4 km² of the vast Nilgiri Biosphere Reserve.

Thrissur district with vast stretches of evergreen forest provides the natural habitat for a variety of plants and animals. Valuable medicinal plants, costly trees, diverse group of mammals, birds and reptiles have the necessary ecological back ground to grow.

Table: 12.1

PLANT DIVERSITY

| Sl.No. | Items | Nos. |
|---------------|-----------------------|-------------|
| 1 | Flowering Plants | 4000 |
| 2 | Grass species | 350 |
| 3 | Bamboo species | 15 |
| 4 | Reeds species | 9 |
| 5 | Orchid species | 214 |
| 6 | Gymnosperms | 4 |
| 7 | Ferns and Fern allies | 200 |
| 8 | Liverworts | 200 |
| 9 | Algae | 231 |
| 10 | Fungi | 1044 |
| 11 | Lichens | 800 |

Table: 12.2

ANIMAL DIVERSITY

| Sl.No. | Items | Nos. |
|---------------|------------------------------------|-------------|
| 1 | Large and medium sized mammals | 48 |
| 2 | Birds species | 475 |
| 3 | Water Birds | 101 |
| 4 | Reptiles Genera | 60 |
| 5 | Lizard (endemic) species | 30 |
| 6 | Snake (endemic) species | 57 |
| 7 | Amphibian (endemic) species | 87 |
| 8 | Fresh water fish (endemic) species | 84 |
| 9 | Butterflies | 313 |

Source: Economic Review.

Table: 12.3

**WESTERN GHAT TALUKS, BLOCKS, GRAMA PANCHAYATS OF
THRISSUR DISTRICT**

| Taluk | Block | Panchayat |
|--------------|---------------|----------------|
| Mukundapuram | Kodakara | Alagappa Nagar |
| | | Kodakara |
| | | Mattathur |
| | | Nenmenikkara |
| | | Puthukkad |
| | | Thrikkur |
| | | Varandarapilly |
| | Irinjalakkuda | Karalam |
| | | Kattoor |
| | | Muriyad |
| | | Parappukkara |
| | | Porathissery |
| | Vellangallur | Padiyoor |
| Puthenchira | | |
| Vellangallur | | |
| Velookara | | |
| Mukundapuram | Mala | Aloor |
| | | Annamanada |
| | | Kuzhur |
| | | Mala |
| Kodungalloor | | Poyya |
| Mukundapuram | Chalakkudy | Athirapally |
| | | Kadukutty |
| | | Kodassery |
| | | Koratty |
| | | Melur |
| | | Pariyaram |

Source: Western Ghat Development Programme

FOREST

Kerala has a total recorded forest cover of 11309.47 Sq.Km which is 29.09% of the total geographical area of the State (38863 Sq.Km). 11309.47sq.km of forest cover includes reserve forest (9107.20 sq.km), proposed reserve (364.47 sq.km), vested forest (1837.79 sq.km) and EFL (Ecological Fragile Land). Tropical climate favours forests with rich biodiversity and endemism. Western Ghats cover major portion of forest in Kerala. Forest may be classified into different regions and Thrissur district is in the region of moist deciduous and semi evergreen forests. Thrissur district have 103619 ha. (approx) of forest which is 34% of total geographical area (302919 ha). The tropical evergreen forests or shola with its luxuriant vegetation with lofty trees are found in sholayar valley. The semi evergreen forests which lie between the moist deciduous and evergreen forest occur in the Athirappally reserve of Vazhachal division. The main forest product is timber, rose wood. Other hardwood species which command steady market are Irul, Pullamaruthu, Koramaruthu, Venga, Venteak, Pongu, Akil etc. Minor forest products like Mattipal, Karuvelampatta, Marottii, Poovam, Zamalporia, Kanjiram, Elevangam are abundant in these forests. There are also rubber, tea and coffee plantations in these forest tracts. Kerala Forest Research Institute (KFRI) is an organization in Peechi at Thrissur district.

Table: 13.1

CLASSIFICATION OF FOREST TYPES AS ON 31-03-2011

| Sl.No. | Type | Area (km ²) | % of total |
|--------|---|-------------------------|---------------|
| 1 | Tropical Wet Evergreen and Semi Evergreen | 3877.44 | 34.28 |
| 2 | Tropical Moist Deciduous | 3615.98 | 31.97 |
| 3 | Tropical Dry Deciduous | 391.36 | 3.46 |
| 4 | Montane Sub-tropical Temperate sholas | 386.42 | 3.42 |
| 5 | Plantations | 1492.91 | 13.20 |
| 6 | Grass Lands | 501.08 | 4.43 |
| 7 | Others | 1044.26 | 9.24 |
| | Total | 11309.47 | 100.00 |

Table: 13.2

CLASSIFICATION OF FOREST AREA ACCORDING TO UTILIZATION AS ON 31-03-2011

| Sl.No. | Mode of Utilisation | Area (km ²) | % of total |
|--------|--------------------------------|-------------------------|---------------|
| 1 | Dense Forests/Degraded Forest | 8982.97 | 79.43 |
| 2 | Plantation | 1492.91 | 13.20 |
| 3 | Area under lease | 423.22 | 3.74 |
| 4 | Forest land diverted under FCA | 410.35 | 3.63 |
| | Total | 11309.47 | 100.00 |

Table: 13.3

DISTRICT WISE FOREST AREA (APPROX) BY LEGAL STATUS AS ON 31-03-2011(KM²)

| District | Division | Reserve Forest/Proposed Reserve | Vested Forest + EFL | Total (KM ²) |
|----------|--------------|---------------------------------|---------------------|--------------------------|
| Thrissur | Thrissur | 293.74 | 4.31 | 298.05 |
| | Malayattoor | 2.67 | | 2.67 |
| | Chalakkudy | 279.70 | | 279.70 |
| | Vazhachal | 318.84 | | 318.84 |
| | Peechi | 123.46 | | 123.46 |
| | Total | 1018.43 | 4.31 | 1022.72 |

Table: 13.4

DIVISION WISE AREA OF FORESTS AS ON 31-03-2011(Km²)

| Sl. No. | Division | Reserve Forests | Proposed Reserve | Vested Forest + EFL | Total | Percentage of total |
|---------------------------------|--------------|-----------------|------------------|---------------------|----------------|---------------------|
| Central Circle, Thrissur | | | | | | |
| 1 | Vazhachal | 413.94 | - | - | 413.94 | 3.66 |
| 2 | Chalakkudy | 279.70 | - | - | 279.70 | 2.47 |
| 3 | Malayattoor | 617.24 | 0.52 | - | 617.76 | 5.46 |
| 4 | Thrissur | 293.74 | - | 4.31 | 298.05 | 2.64 |
| | Total | 1604.62 | 0.52 | 4.31 | 1609.45 | 14.23 |

Table: 13.5

DISTRICT WISE FOREST AREA (APPROX) AS ON 31-03-2010

| SI.No. | Districts | Area (Km ²) |
|----------|--------------------|-------------------------|
| 1 | Thiruvananthapuram | 463.83 |
| 2 | Kollam | 840.56 |
| 3 | Pathanamthitta | 1533.79 |
| 4 | Kottayam | 100.84 |
| 5 | Ernakulam | 823.83 |
| 6 | Idukki | 2713.72 |
| 7 | Thrissur | 1022.75 |
| 8 | Palakkad | 1527.35 |
| 9 | Malappuram | 723.91 |
| 10 | Kozhikode | 290.45 |
| 11 | Wayanad | 907.04 |
| 12 | Kannur | 241.45 |
| 13 | Kasaragod | 119.84 |
| | Total | 11309.41 |

Table: 13.6

DISTRICT WISE ECOLOGICALLY FRAGILE LAND (EFL) AREA

| SI.No. | Districts | Area (ha) |
|----------|--------------------|-----------------|
| 1 | Thiruvananthapuram | 881.75 |
| 2 | Kollam | 273.72 |
| 3 | Idukki | 1255.55 |
| 4 | Thrissur | 70.79 |
| 5 | Palakkad | 5177.56 |
| 6 | Malappuram | 1265.12 |
| 7 | Kozhikode | 1531.90 |
| 8 | Wayanad | 2673.03 |
| 9 | Kannur | 777.13 |
| 10 | Kasaragod | 94.88 |
| | Total | 14001.46 |

Source: Forest Statistics, Forest Department



AGRICULTURE

The agricultural sector is the important sub-sector of the primary sector in Kerala. Agriculture has been a way of life and continues to be the single most important livelihood of the masses. Stabilization and augmentation of productivity assume critical importance, given the limited scope for increasing area under cultivation of various crops. Agricultural crops in the State are broadly classified as food crops and non-food crops. Food crops are cereals & condiments, fresh fruits, vegetables etc. The major non-food crops are rubber, betel leaves, lemon grass etc. Another classification of crops is seasonal crops, annual crops and perennial crops which are based on their life time.

The main cultivated crops of the district are paddy, tapioca, coconut, arecanut, nutmeg, rubber, cashew, banana and pepper. Paddy is most widely cultivated crop. During 1990-91, an area of 74038 ha was under paddy and now it had declined to 21172 ha during 2011-12. Coconut is the main crop of the district and is cultivated in an area of 89677 ha. Arecanut another perennial crop grown in almost all taluks is intensively cultivated in Mukundapuram and Talappilly taluks, major centres being Pazhanji, Wadakkanchery, Kunnamkulam, Iringalakuda and Thrissur. Area under cultivation of arecanut during the year 2011-12 is 7055 ha and production is 4700 tonnes. District stands 1st position in nutmeg cultivation and covers an area of 5933 ha. Rubber is planted in Thalappilly, Thrissur and Mukundapuram taluks. There was only 6861 ha of area under this crop during 1990-91 and increased to 15460 ha during 2012-13 period. Cashew is another crop grown in almost all parts of the district especially in dry lands and 2505 ha of land is under cashew cultivation during the same period. Mango, Jack fruit, Banana, Pineapple, etc., are some of the main fruit crops intensively grown in the district. Banana cultivation is done in almost all areas where irrigation facility available and pulses, pepper are almost cultivated in the district. Spices like Ginger, Turmeric are also grown in small areas in some places. Total cropped area of the Thrissur district during 2010-11 is 161216 ha as against 181287 ha during 2011-12.

Table: 14.1

CLASSIFICATION OF AREA ON THE BASIS OF LAND UTILISATION**(Area in Ha)**

| Year | Total Geographical area | Forest | Land put to non agricultural use | Barren & uncultivable land | Permanent pastures & other grazing land |
|-----------|-------------------------|--------|----------------------------------|----------------------------|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| 2011-2012 | 302919 | 103619 | 37998 | 206 | |
| 2010-2011 | 302919 | 103619 | 36707 | 247 | 5 |
| 2009-2010 | 302919 | 103619 | 33862 | 292 | 29 |

| Year | Land under misc. tree crops | Cultivable waste | Fallow other than current fallow | Current fallow | Marshy land |
|-----------|-----------------------------|------------------|----------------------------------|----------------|-------------|
| 1 | 7 | 8 | 9 | 10 | 11 |
| 2011-2012 | 272 | 6428 | 7927 | 11241 | 4 |
| 2010-2011 | 350 | 6766 | 6364 | 13139 | 4 |
| 2009-2010 | 341 | 6855 | 5437 | 12629 | 4 |

| Year | Still water | Water logged area | Social forestry | Net area sown | Area sown more than once | Total cropped area |
|-----------|-------------|-------------------|-----------------|---------------|--------------------------|--------------------|
| 1 | 12 | 13 | 14 | 15 | 16 | 17 |
| 2011-2012 | 5878 | 279 | 172 | 128895 | 52392 | 181287 |
| 2010-2011 | 8082 | 280 | 171 | 127185 | 34031 | 161216 |
| 2009-2010 | 8080 | 278 | 169 | 131324 | 38733 | 170057 |

Table: 14.2

BLOCK WISE AREA OF CROPS 2011-12

| Sl. No. | Name of Block | Paddy | | | | | | Tapioca | | | Drumstick | Amaran thus | Brinjal | Ladies finger |
|---------|-----------------------|----------------|-----------------|----------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|--------------|--------------|---------------|
| | | Autumn | | Winter | | Summer | | Autumn | Winter | Summer | | | | |
| | | 3 | 4 | 5 | 6 | 7 | 8 | | | | | | | |
| 1 | 2 | | | | | | 6 | 7 | 8 | 9 | 10 | 11 | 12 | |
| 1 | Chavakkad | 1.01 | 30.93 | 75.77 | 0.12 | 0.40 | 0.12 | 0.40 | 2.38 | 49.24 | 2.33 | 0.70 | 1.03 | |
| 2 | Mullassery | 95.39 | 223.62 | 1388.19 | 0.07 | 0.20 | 0.07 | 0.20 | 1.01 | 30.69 | 1.12 | 0.24 | 0.25 | |
| 3 | Thalikulam | | | | 0.61 | 0.94 | 0.61 | 0.94 | 1.43 | 74.78 | 2.88 | 0.80 | 1.03 | |
| 4 | Chalakkudy | 91.87 | 136.61 | 70.52 | 136.93 | 217.41 | 136.93 | 217.41 | 358.24 | 31.00 | 3.75 | 4.72 | 7.33 | |
| 5 | Iringalakuda | 46.31 | 325.50 | 290.64 | 7.08 | 6.66 | 7.08 | 6.66 | 3.39 | 91.62 | 1.98 | 2.59 | 2.75 | |
| 6 | Kodakara | 152.08 | 686.50 | 42.58 | 17.32 | 36.04 | 17.32 | 36.04 | 40.49 | 45.44 | 5.97 | 3.74 | 5.29 | |
| 7 | Mala | 117.95 | 378.41 | 108.20 | 48.2 | 48.44 | 48.2 | 48.44 | 75.75 | 34.82 | 7.60 | 5.20 | 15.02 | |
| 8 | Vellangalloor | 54.21 | 269.25 | 110.33 | 11.72 | 17.40 | 11.72 | 17.40 | 18.75 | 32.30 | 4.73 | 3.90 | 3.43 | |
| 9 | Chowannoor | 134.63 | 906.53 | 643.28 | 3.03 | 3.08 | 3.03 | 3.08 | 6.46 | 44.14 | 3.47 | 3.43 | 4.51 | |
| 10 | Pazhayanoor | 1429.34 | 3105.40 | 4.46 | 16.48 | 45.81 | 16.48 | 45.81 | 62.22 | 186.6 | 7.51 | 6.13 | 8.75 | |
| 11 | Wadakkanchery | 289.09 | 2717.35 | 3.60 | 16.51 | 39.97 | 16.51 | 39.97 | 56.66 | 140.04 | 8.70 | 6.47 | 8.18 | |
| 12 | Anthikkad | 35.55 | 234.00 | 1085.98 | 0.11 | 1.67 | 0.11 | 1.67 | 1.41 | 70.51 | 6.46 | 0.97 | 0.92 | |
| 13 | Cherpu | 81.86 | 150.86 | 1387.60 | 0.30 | 1.15 | 0.30 | 1.15 | 4.53 | 540.09 | 5.74 | 2.28 | 2.72 | |
| 14 | Ollukkara | 45.08 | 727.10 | 121.79 | 16.99 | 9.48 | 16.99 | 9.48 | 44.24 | 134.02 | 27.98 | 4.14 | 3.30 | |
| 15 | Puzhahal | 147.83 | 749.87 | 2365.83 | 1.85 | 4.78 | 1.85 | 4.78 | 6.90 | 135.74 | 8.60 | 4.29 | 3.88 | |
| 16 | Mathilakom | 10.34 | 35.76 | 2.83 | 1.18 | 2.40 | 1.18 | 2.40 | 6.48 | 41.12 | 7.57 | 4.21 | 2.52 | |
| | Blocks Total | 2732.54 | 10677.69 | 7701.60 | 278.50 | 435.83 | 278.50 | 435.83 | 690.34 | 1682.15 | 106.39 | 53.81 | 70.91 | |
| | Municipalities | 7.64 | 49.02 | 3.57 | 4.89 | 8.85 | 4.89 | 8.85 | 12.58 | 66.11 | 4.34 | 2.09 | 2.69 | |
| | District Total | 2740.18 | 10726.71 | 7705.17 | 283.39 | 444.68 | 283.39 | 444.68 | 702.92 | 1748.26 | 110.73 | 55.90 | 73.60 | |

Table: 14.2 Continued.....

| Sl. No. | Name of Block | (Area in Ha) | | | | | | | | | | |
|----------|-----------------------|---------------|--------------|---------------|--------------|---------------|--------------|--------------|--------------|---------------|-------------|--|
| | | Bitter gourd | Snake gourd | Little gourd | Ash gourd | Payar | Pumpkin | Cucumber | Bottle gourd | Green chilli | Cabbage | |
| 1 | 2 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | |
| 1 | Chavakkad | 1.30 | 0.40 | 0.97 | 1.54 | 3.02 | 1.86 | 1.04 | | 2.89 | 0.03 | |
| 2 | Mullassery | 1.04 | 0.38 | 0.40 | 0.70 | 2.29 | 1.07 | 0.70 | | 1.86 | | |
| 3 | Thalikulam | 1.53 | 0.91 | 1.12 | 1.29 | 2.93 | 1.84 | 0.38 | 0.02 | 2.86 | 0.06 | |
| 4 | Chalakkudy | 7.01 | 3.90 | 1.12 | 2.48 | 35.27 | 2.55 | 1.96 | 0.17 | 8.65 | | |
| 5 | Iringalakuda | 4.41 | 3.37 | 1.63 | 1.73 | 20.86 | 4.55 | 0.81 | | 12.72 | | |
| 6 | Kodakara | 8.38 | 4.85 | 2.86 | 5.04 | 104.41 | 6.30 | 2.62 | 0.14 | 12.54 | 0.09 | |
| 7 | Mala | 7.21 | 7.81 | 3.91 | 5.79 | 73.11 | 4.92 | 61.96 | 0.32 | 13.10 | 0.06 | |
| 8 | Vellangalloor | 3.73 | 2.92 | 1.74 | 2.53 | 22.42 | 2.60 | 3.26 | 0.06 | 7.45 | | |
| 9 | Chowannoor | 3.15 | 1.95 | 1.76 | 3.39 | 18.66 | 4.45 | 1.95 | 0.03 | 9.84 | 0.03 | |
| 10 | Pazhayanoor | 75.36 | 2.63 | 74.22 | 13.58 | 228.09 | 14.78 | 3.49 | 0.08 | 13.70 | | |
| 11 | Wadakkanchery | 7.79 | 1.47 | 6.44 | 5.84 | 30.70 | 8.28 | 2.51 | 0.17 | 20.43 | | |
| 12 | Anthikkad | 1.02 | 0.73 | 1.11 | 0.64 | 5.38 | 2.50 | 0.38 | | 7.25 | | |
| 13 | Cherpu | 2.05 | 0.28 | 2.46 | 1.13 | 8.09 | 2.07 | 0.47 | | 12.99 | | |
| 14 | Ollukkara | 15.72 | 4.98 | 5.55 | 4.94 | 31.78 | 2.97 | 4.53 | 0.10 | 11.29 | 0.06 | |
| 15 | Puzhakkal | 3.03 | 2.16 | 5.23 | 3.38 | 7.52 | 2.69 | 1.41 | 0.06 | 10.91 | | |
| 16 | Mathilakom | 2.90 | 2.06 | 2.40 | 2.57 | 6.31 | 2.81 | 3.94 | 0.19 | 7.32 | 0.02 | |
| | Blocks Total | 145.63 | 40.8 | 112.92 | 56.57 | 600.84 | 66.24 | 91.41 | 1.34 | 155.80 | 0.35 | |
| | Municipalities | 2.20 | 1.63 | 1.16 | 2.13 | 7.39 | 2.53 | 2.51 | 0.09 | 6.04 | | |
| | District Total | 147.83 | 42.43 | 114.08 | 58.7 | 608.23 | 68.77 | 93.92 | 1.43 | 161.84 | 0.35 | |

Table: 14.2 Continued.....

| Sl. No. | Name of Block | Tomato | Cauli flower | Beans | Other vegetables | Elephant foot yam | Colocasia | Yam | Koorika | Sweet potato | Nana kizhangu | (Area in Ha) | |
|---------|-----------------------|-------------|--------------|-------------|------------------|-------------------|---------------|-------------|---------------|--------------|---------------|--------------|----|
| | | | | | | | | | | | | 23 | 24 |
| 1 | 2 | 0.14 | 0.03 | | | 0.42 | 2.75 | 0.37 | 0.18 | 0.04 | | | |
| 2 | Mullassery | 0.03 | | 0.05 | 0.46 | 0.32 | 3.00 | 0.05 | 0.25 | 0.06 | | | |
| 3 | Thalikulam | 0.29 | | | 0.12 | 0.03 | 3.97 | 0.30 | 0.38 | 0.14 | | | |
| 4 | Chalakkudy | 0.06 | | | 1.29 | 5.32 | 13.81 | 1.88 | 1.35 | 0.07 | | | |
| 5 | Iringalakuda | | | | 0.95 | 9.95 | 10.77 | 0.16 | 0.25 | | | | |
| 6 | Kodakara | 0.05 | | | 2.81 | 13.15 | 31.97 | 0.16 | 1.04 | 0.21 | | | |
| 7 | Mala | 0.08 | 0.04 | | 2.56 | 7.29 | 10.78 | 1.36 | 0.66 | | | 0.39 | |
| 8 | Vellangalloor | | | | 1.36 | 8.50 | 16.73 | 0.19 | 1.35 | | | 0.07 | |
| 9 | Chowannoor | | 0.03 | | 1.23 | 2.32 | 10.24 | 0.58 | 0.96 | 0.06 | | | |
| 10 | Pazhayanoor | 0.43 | | | 6.84 | 15.67 | 38.51 | 0.46 | 3.57 | 0.28 | | 0.72 | |
| 11 | Wadakkanchery | | | | 3.62 | 8.75 | 20.33 | 0.87 | 198.42 | 0.77 | | | |
| 12 | Anthikkad | 0.33 | | | 0.91 | 0.15 | 4.24 | 0.13 | 0.03 | 0.04 | | | |
| 13 | Cherpu | 0.16 | 0.01 | | 1.84 | 0.86 | 4.73 | 0.16 | 0.11 | | | 0.08 | |
| 14 | Ollukkara | 0.18 | | | 5.85 | 5.80 | 14.59 | 0.99 | 5.46 | 0.20 | | 0.06 | |
| 15 | Puzhahal | 0.80 | | | 1.51 | 2.75 | 12.35 | 1.21 | 4.34 | 0.65 | | | |
| 16 | Mathilakom | 0.16 | 0.04 | | 1.07 | 1.30 | 6.21 | 0.35 | 0.18 | 0.02 | | | |
| | Blocks Total | 2.71 | 0.15 | 0.05 | 32.42 | 82.58 | 204.98 | 9.22 | 218.53 | 2.54 | | 1.32 | |
| | Municipalities | 0.20 | | 0.04 | 1.32 | 2.58 | 5.09 | 0.24 | 0.38 | 0.08 | | | |
| | District Total | 2.91 | 0.15 | 0.09 | 33.74 | 85.16 | 210.07 | 9.46 | 218.91 | 2.62 | | 1.32 | |

Table: 14.2 Continued.....

| Sl. No. | Name of Block | Other tubers | Pulses | Ginger | Turmeric | Ground nut | Coconut | Arecanut | Cashew | Pepper | Jack |
|----------|-----------------------|--------------|-------------|--------------|--------------|-------------|-----------------|----------------|----------------|----------------|----------------|
| 1 | 2 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 |
| 1 | Chavakkad | 0.48 | | 0.03 | 0.52 | | 7282.95 | 176.79 | 134.87 | 38.95 | 179.20 |
| 2 | Mullassery | 0.32 | | 0.14 | 0.60 | | 3849.78 | 70.89 | 64.63 | 41.65 | 103.60 |
| 3 | Thalikulam | 0.48 | | | 0.54 | | 5486.95 | 329.39 | 175.40 | 19.75 | 220.04 |
| 4 | Chalakkudy | | | 2.84 | 3.68 | | 5192.06 | 440.46 | 135.86 | 161.8 | 466.79 |
| 5 | Iringalakuda | | | 3.35 | 1.86 | | 4010.28 | 305.45 | 157.39 | 278.63 | 230.25 |
| 6 | Kodakara | 0.03 | | 3.84 | 5.25 | | 5899.33 | 753.89 | 155.68 | 129.32 | 432.49 |
| 7 | Mala | | | 5.60 | 5.14 | | 4829.09 | 463.35 | 208.75 | 183.31 | 446.29 |
| 8 | Vellangalloor | | | 8.05 | 6.23 | | 4749.13 | 244.39 | 250.02 | 160.94 | 305.34 |
| 9 | Chowannoor | 1.22 | | 1.90 | 1.59 | | 5016.80 | 909.26 | 102.91 | 141.53 | 341.48 |
| 10 | Pazhayanoor | 25.45 | 1.50 | 8.90 | 22.55 | | 5423.38 | 333.12 | 98.01 | 256.26 | 443.56 |
| 11 | Wadakkanchery | 10.74 | 0.08 | 5.36 | 9.25 | | 7333.85 | 830.01 | 333.21 | 196.96 | 587.65 |
| 12 | Anthikkad | 0.08 | | 0.14 | 0.82 | | 4326.82 | 249.32 | 56.19 | 67.81 | 248.63 |
| 13 | Cherpu | 0.05 | | 0.36 | 0.40 | | 3185.48 | 426.32 | 60.60 | 148.10 | 264.00 |
| 14 | Ollukkara | 0.08 | | 1.68 | 7.90 | 0.03 | 5882.18 | 359.43 | 89.82 | 79.67 | 292.69 |
| 15 | Puzhakkal | 0.90 | | 3.13 | 3.62 | | 5190.65 | 368.51 | 269.77 | 108.82 | 368.83 |
| 16 | Mathilakom | | | 0.16 | 0.51 | | 6984.17 | 462.89 | 121.20 | 30.43 | 218.37 |
| | Blocks Total | 39.83 | 1.58 | 45.48 | 70.46 | 0.03 | 84642.90 | 6723.47 | 2414.31 | 2043.93 | 5149.21 |
| | Municipalities | 0.18 | | 3.51 | 1.51 | | 5033.89 | 331.70 | 90.46 | 120.88 | 181.83 |
| | District Total | 40.01 | 1.58 | 48.99 | 71.97 | 0.03 | 89676.79 | 7055.17 | 2504.77 | 2164.81 | 5331.04 |

Table: 14.2 Continued.....

| Sl. No. | Name of Block | Mango tree | Tamarind | Clove | Nutmeg | Cocoa | Pappaya | Banana | Pine apple | Plantain | Orange |
|----------|-----------------------|----------------|----------------|-------------|----------------|--------------|----------------|----------------|--------------|----------------|-------------|
| 1 | 2 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 |
| 1 | Chavakkad | 308.48 | 31.64 | | 3.22 | 0.01 | 40.79 | | 1.25 | 128.53 | |
| 2 | Mullassey | 263.09 | 43.65 | 0.48 | 12.46 | 0.02 | 43.74 | 15.72 | 0.59 | 81.48 | |
| 3 | Thalikulam | 366.78 | 43.68 | | 36.39 | 0.58 | 65.30 | 0.24 | 1.08 | 64.60 | 0.04 |
| 4 | Chalakkudy | 419.11 | 88.27 | 0.76 | 1437.52 | 19.17 | 64.27 | 478.02 | 18.96 | 239.17 | |
| 5 | Iringalakuda | 194.11 | 51.24 | 0.31 | 632.28 | | 71.48 | 299.99 | 1.00 | 202.72 | |
| 6 | Kodakara | 506.65 | 110.60 | 0.13 | 1049.06 | 3.14 | 72.56 | 425.23 | 4.49 | 546.72 | |
| 7 | Mala | 470.14 | 98.53 | 0.96 | 1332.32 | 18.64 | 78.92 | 151.18 | 5.10 | 310.28 | |
| 8 | Vellangalloor | 289.72 | 98.73 | 0.30 | 450.39 | 0.70 | 61.37 | 70.92 | 1.64 | 131.58 | 0.05 |
| 9 | Chowannoor | 473.71 | 119.87 | 0.50 | 31.50 | 0.41 | 59.52 | 10.23 | 2.05 | 558.78 | |
| 10 | Pazhayanoor | 684.27 | 413.68 | 0.45 | 9.82 | 0.93 | 65.86 | 208.98 | 8.77 | 455.63 | |
| 11 | Wadakkanchery | 940.85 | 246.61 | 0.59 | 17.36 | 0.42 | 83.71 | 196.99 | 4.68 | 409.32 | |
| 12 | Anthikkad | 437.52 | 91.71 | 0.09 | 97.58 | 0.11 | 74.31 | 17.32 | 1.76 | 155.94 | |
| 13 | Cherpu | 617.17 | 86.97 | 0.46 | 107.08 | 0.15 | 105.80 | 33.62 | 0.26 | 279.58 | |
| 14 | Ollukkara | 486.67 | 86.51 | 1.96 | 127.68 | 0.89 | 106.38 | 253.29 | 1.84 | 363.97 | |
| 15 | Puzhakal | 488.13 | 95.64 | 0.64 | 86.94 | 0.38 | 129.28 | 38.89 | 2.68 | 500.97 | |
| 16 | Mathilakom | 427.28 | 77.05 | 0.40 | 103.01 | 0.32 | 78.32 | 3.47 | 1.46 | 261.14 | |
| | Blocks Total | 7373.68 | 1784.38 | 8.03 | 5534.61 | 45.87 | 1201.61 | 2204.09 | 57.61 | 4690.41 | 0.09 |
| | Municipalities | 298.01 | 61.03 | | 398.52 | 0.07 | 68.97 | 36.09 | 0.81 | 207.52 | |
| | District Total | 7671.69 | 1845.41 | 8.03 | 5933.13 | 45.94 | 1270.58 | 2240.37 | 58.42 | 4897.93 | 0.09 |

Table: 14.2 Continued.....

| Sl. No. | Name of Block | Sugar cane | Sesamum | Lemon grass | Fodder grass | Green Manure Plants | Vanila | Teak | Medicinal Plants |
|----------|-----------------------|--------------|-------------|-------------|--------------|---------------------|-------------|----------------|------------------|
| 1 | 2 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 |
| 1 | Chavakkad | | | | | 34.80 | | 3.07 | 9.32 |
| 2 | Mullassery | 0.10 | | | 1.05 | 28.90 | | 12.82 | 4.42 |
| 3 | Thalikulam | | | | 5.14 | 78.37 | | 4.53 | 6.03 |
| 4 | Chalakkudy | | 1.06 | 0.13 | 13.41 | 64.16 | 0.16 | 101.68 | 6.53 |
| 5 | Iringalakuda | | | | 0.89 | 63.08 | | 54.15 | 1.77 |
| 6 | Kodakara | | 0.74 | | 4.32 | 69.23 | 0.17 | 101.61 | 4.27 |
| 7 | Mala | | | 0.66 | 5.70 | 74.33 | | 66.37 | 2.43 |
| 8 | Vellangalloor | 0.03 | 0.90 | 0.71 | 11.22 | 47.73 | 0.21 | 44.53 | 35.79 |
| 9 | Chowannoor | | | | 1.83 | 211.42 | | 66.42 | 5.54 |
| 10 | Pazhayanoor | 0.04 | | 0.26 | 4.75 | 197.06 | 0.50 | 363.57 | 32.01 |
| 11 | Wadakkanchery | | | | 1.17 | 246.87 | 0.24 | 330.35 | 17.53 |
| 12 | Anthikkad | | 1.88 | | 1.58 | 49.20 | | 22.95 | 2.51 |
| 13 | Cherpu | | | | 0.67 | 51.84 | 0.01 | 48.63 | 9.96 |
| 14 | Ollukkara | | | | 6.99 | 80.3 | 0.64 | 47.73 | 13.42 |
| 15 | Puzhahal | | | | 1.93 | 84.43 | 0.04 | 36.33 | 9.88 |
| 16 | Mathilakom | | | 0.02 | 5.32 | 48.44 | 0.04 | 13.08 | 4.28 |
| | Blocks Total | 0.170 | 4.58 | 1.78 | 65.97 | 1430.16 | 2.01 | 1317.82 | 165.69 |
| | Municipalities | | | 4.94 | 0.55 | 37.79 | | 16.95 | 2.96 |
| | District Total | 0.17 | 4.58 | 6.72 | 66.52 | 1467.95 | 2.01 | 1334.77 | 168.65 |

Table: 14.3

BLOCK WISE AREA OF CROPS 2010-2011

| Sl. No. | Name of Block | Paddy | | | Pulses | Sugar cane | Palmyrah | Pepper | Ginger | Turmeric | Arecanut |
|---------|-----------------------|----------------|-----------------|----------------|--------------|-------------|---------------|----------------|--------------|--------------|----------------|
| | | Autumn | Winter | Summer | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 1 | Chavakkad | | 29.21 | 81.17 | 0.39 | | 1.08 | 94.44 | | 0.14 | 178.30 |
| 2 | Mullasserri | 77.14 | 228.29 | 875.95 | 0.15 | | 1.49 | 72.83 | 0.05 | 0.09 | 60.28 |
| 3 | Thalikulam | 0.45 | 0.24 | | 0.17 | | 0.04 | 41.57 | | 0.55 | 302.00 |
| 4 | Kodungalloor | | 2.02 | | | | | 24.26 | 0.14 | 0.37 | 120.94 |
| 5 | Mathilakom | 1.74 | 30.03 | | | | 0.31 | 66.21 | | 0.20 | 262.25 |
| 6 | Chalakkudy | 118.40 | 136.74 | 49.76 | 0.71 | 0.02 | 2.71 | 315.46 | 10.33 | 10.03 | 433.95 |
| 7 | Iringalakuda | 61.95 | 36.10 | 445.28 | | | 1.55 | 278.20 | 3.18 | 1.84 | 223.01 |
| 8 | Kodakara | 205.80 | 523.85 | 155.45 | 26.31 | | 5.08 | 292.71 | 5.96 | 7.08 | 690.91 |
| 9 | Mala | 325.70 | 430.99 | 275.57 | | | 3.56 | 441.02 | 7.68 | 8.46 | 439.44 |
| 10 | Vellangalloor | 78.57 | 377.79 | 136.94 | | 0.02 | 5.77 | 318.31 | 4.62 | 5.34 | 288.67 |
| 11 | Chowannoor | 43.02 | 1092.86 | 492.62 | | | 12.82 | 272.49 | 3.63 | 2.53 | 708.83 |
| 12 | Pazhayannoor | 1544.29 | 2985.05 | 5.01 | 1.01 | | 39.59 | 548.91 | 6.85 | 15.17 | 301.71 |
| 13 | Wadakkanchery | 301.67 | 2700.46 | 66.69 | 0.08 | 0.03 | 39.42 | 367.21 | 5.67 | 8.10 | 801.74 |
| 14 | Anthikkad | 47.80 | 212.01 | 1178.26 | | | 1.35 | 59.47 | 0.19 | 0.65 | 258.12 |
| 15 | Cherpu | 74.37 | 552.98 | 831.34 | | | 2.29 | 166.21 | 0.35 | 0.47 | 192.68 |
| 16 | Ollukkara | 38.27 | 403.80 | 40.81 | 0.02 | | 5.96 | 252.81 | 1.43 | 2.22 | 362.14 |
| 17 | Puzhakkal | 110.81 | 1066.43 | 1619.27 | 0.05 | 0.04 | 3.40 | 313.13 | 0.80 | 0.77 | 452.09 |
| | Municipalities | 3.48 | 55.13 | 107.78 | 0.30 | | 0.93 | 168.41 | 1.75 | 2.25 | 233.70 |
| | District Total | 3033.46 | 10863.98 | 6361.90 | 29.19 | 0.11 | 127.35 | 4093.65 | 52.63 | 66.26 | 6310.76 |

Table: 14.3 Continued.....

| Sl. No. | Name of Block | Tamarind | Vanila | Clove | Nutmeg | Cinnamon | Jack | Mango | Banana | Plantain | Pineapple |
|----------|-----------------------|----------------|-------------|--------------|----------------|--------------|----------------|----------------|----------------|----------------|--------------|
| 1 | 2 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 |
| 1 | Chavakkad | 29.95 | | | 6.68 | 2.37 | 146.49 | 305.06 | | 134.54 | 0.68 |
| 2 | Mullasserri | 32.47 | | 0.06 | 11.97 | 1.21 | 78.70 | 263.57 | 3.63 | 86.48 | 0.16 |
| 3 | Thalikulam | 34.11 | | 0.05 | 35.78 | 1.76 | 174.45 | 309.37 | | 72.76 | 1.18 |
| 4 | Kodungalloor | 11.24 | | | 41.21 | 0.09 | 64.64 | 92.75 | 1.80 | 83.84 | 0.64 |
| 5 | Mathilakom | 55.88 | 0.12 | 0.33 | 106.71 | 2.46 | 126.74 | 238.69 | 1.46 | 177.87 | 1.50 |
| 6 | Chalakkudy | 67.84 | 0.16 | 0.67 | 1212.81 | 1.30 | 361.70 | 254.00 | 446.50 | 237.75 | 9.42 |
| 7 | Iringalakuda | 23.66 | | 0.11 | 480.17 | 0.12 | 162.35 | 127.46 | 33.01 | 204.75 | 3.92 |
| 8 | Kodakara | 72.77 | 0.57 | 10.03 | 1044.12 | 0.76 | 302.06 | 379.56 | 566.88 | 501.25 | 4.89 |
| 9 | Mala | 72.88 | 0.50 | 2.14 | 1321.77 | 3.31 | 311.94 | 307.86 | 103.41 | 300.07 | 5.48 |
| 10 | Vellangalloor | 44.62 | 0.23 | 0.06 | 454.57 | 1.98 | 228.15 | 219.62 | 73.12 | 190.45 | 2.64 |
| 11 | Chowannoor | 77.56 | | 0.16 | 23.72 | 0.25 | 231.35 | 302.67 | 7.88 | 326.52 | 1.22 |
| 12 | Pazhayannoor | 270.96 | 1.76 | 0.20 | 31.10 | 1.56 | 362.07 | 523.63 | 286.07 | 354.05 | 8.98 |
| 13 | Wadakkanchery | 173.90 | 0.41 | 0.27 | 29.82 | 0.46 | 507.47 | 749.57 | 288.89 | 474.10 | 1.83 |
| 14 | Anthikkad | 44.65 | 0.01 | 0.08 | 37.20 | 0.81 | 115.18 | 150.94 | 19.15 | 158.73 | 1.29 |
| 15 | Cherpu | 64.23 | 0.10 | 1.10 | 130.55 | 0.61 | 165.08 | 287.56 | 79.65 | 183.90 | 1.16 |
| 16 | Ollukkara | 130.55 | 0.95 | 0.09 | 172.26 | 2.47 | 347.75 | 552.99 | 273.56 | 634.06 | 1.32 |
| 17 | Puzhakkal | 66.77 | 0.11 | 1.20 | 57.99 | 0.60 | 230.10 | 255.16 | 57.66 | 370.27 | 1.16 |
| | Municipalities | 41.55 | 0.23 | 0.09 | 365.63 | 0.94 | 150.86 | 213.26 | 40.69 | 205.08 | 1.27 |
| | District Total | 1315.59 | 5.15 | 16.64 | 5564.06 | 23.06 | 4067.08 | 5533.72 | 2283.36 | 4696.08 | 48.74 |

Table: 14.3 Continued.....

| Sl. No. | Name of Block | Pappaya | Orange | Lemon (big) | Lemon (small) | Cashew | Tapioca | Elephant foot yam | Colocasia | Yam | Sweet potato |
|---------|-----------------------|---------------|-------------|--------------|---------------|----------------|----------------|-------------------|---------------|--------------|--------------|
| 1 | 2 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 |
| 1 | Chavakkad | 36.50 | 0.02 | 0.81 | 0.32 | 97.04 | 4.64 | 0.04 | 0.66 | 1.98 | 0.34 |
| 2 | Mullasserri | 28.76 | | 0.23 | 0.25 | 64.22 | 1.24 | 0.09 | 0.72 | 2.09 | 0.13 |
| 3 | Thalikulam | 64.74 | 0.09 | 1.19 | 0.85 | 134.24 | 2.29 | 0.06 | 0.80 | 2.81 | 0.27 |
| 4 | Kodungalloor | 16.51 | | 0.18 | 0.11 | 17.62 | 2.08 | 0.97 | 2.70 | 0.74 | 0.02 |
| 5 | Mathilakom | 92.22 | | 0.46 | 0.47 | 95.65 | 5.09 | 1.07 | 7.67 | 0.43 | 0.09 |
| 6 | Chalakkudy | 58.21 | | 2.59 | 1.47 | 114.38 | 571.31 | 6.35 | 16.97 | 1.55 | 0.09 |
| 7 | Iringalakuda | 43.98 | | 0.29 | 0.20 | 60.88 | 19.53 | 7.78 | 10.70 | | |
| 8 | Kodakara | 60.71 | | 1.03 | 0.70 | 137.20 | 229.48 | 15.06 | 27.69 | 0.64 | 0.09 |
| 9 | Mala | 78.43 | | 2.26 | 2.70 | 175.40 | 149.29 | 8.47 | 17.26 | 0.31 | 0.28 |
| 10 | Vellangalloor | 49.56 | 0.15 | 2.16 | 1.83 | 162.00 | 45.89 | 5.87 | 16.75 | 1.19 | 0.31 |
| 11 | Chowannoor | 35.38 | | 1.83 | 1.31 | 64.64 | 10.43 | 5.68 | 13.56 | 0.50 | 0.15 |
| 12 | Pazhayannoor | 39.21 | 0.71 | 4.76 | 8.02 | 96.10 | 111.85 | 20.09 | 33.02 | 1.84 | 0.55 |
| 13 | Wadakkanchery | 74.36 | | 3.11 | 1.58 | 374.26 | 103.78 | 17.07 | 24.16 | 0.95 | 0.69 |
| 14 | Anthikkad | 29.83 | | 1.28 | 0.41 | 48.93 | 1.66 | 1.05 | 2.16 | 0.09 | 0.06 |
| 15 | Cherpu | 43.79 | | 0.87 | 0.90 | 68.69 | 5.20 | 0.67 | 2.88 | | 0.02 |
| 16 | Ollukkara | 122.98 | 0.18 | 3.25 | 7.02 | 124.21 | 23.90 | 4.84 | 11.51 | 0.27 | |
| 17 | Puzhakkal | 59.08 | 0.02 | 0.40 | 1.76 | 72.25 | 18.72 | 1.92 | 4.27 | 0.13 | 0.10 |
| | Municipalities | 49.99 | | 0.97 | 0.48 | 45.57 | 55.34 | 2.04 | 6.95 | 0.93 | 0.19 |
| | District Total | 984.24 | 1.17 | 27.67 | 30.38 | 1953.28 | 1361.72 | 99.12 | 200.43 | 16.45 | 3.38 |

Table: 14.3 Continued.....

| Sl. No. | Name of Block | Koorka | Nana kizhangu | Other tubers | Drumstick | Amaran thus | Bitter gourd | Snake gourd | Ladies finger | Brinjal | Green chilli |
|----------|-----------------------|---------------|---------------|--------------|----------------|--------------|---------------|--------------|---------------|--------------|---------------|
| 1 | 2 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 |
| 1 | Chavakkad | 0.58 | 0.18 | 0.09 | 55.89 | 2.53 | 1.31 | 0.05 | 0.85 | 0.67 | 2.61 |
| 2 | Mullasser | 0.38 | 0.04 | 0.03 | 23.22 | 1.75 | 0.87 | 0.25 | 0.75 | 0.46 | 2.89 |
| 3 | Thalikulam | 0.13 | 0.09 | 0.20 | 80.92 | 2.13 | 1.28 | 0.58 | 0.70 | 0.75 | 3.04 |
| 4 | Kodungalloor | | 0.09 | | 8.55 | 3.98 | 1.19 | 0.60 | 1.57 | 1.23 | 2.07 |
| 5 | Mathilakom | 0.24 | 0.02 | | 40.34 | 6.80 | 1.96 | 1.02 | 1.70 | 3.91 | 6.53 |
| 6 | Chalakkudy | 12.17 | 0.02 | | 30.81 | 4.39 | 7.96 | 6.14 | 9.22 | 3.87 | 11.16 |
| 7 | Iringalakuda | 1.55 | | | 52.15 | 1.80 | 2.78 | 3.45 | 2.21 | 1.72 | 10.25 |
| 8 | Kodakara | 3.77 | | 0.07 | 90.93 | 6.81 | 6.87 | 2.22 | 7.38 | 3.28 | 20.13 |
| 9 | Mala | 12.82 | 0.33 | 0.07 | 55.70 | 7.76 | 6.72 | 8.15 | 10.88 | 6.66 | 11.07 |
| 10 | Vellangalloor | 0.71 | 0.48 | | 32.69 | 2.89 | 3.59 | 1.65 | 4.19 | 2.42 | 8.24 |
| 11 | Chowannoor | 0.71 | | 1.26 | 48.32 | 2.91 | 4.39 | 2.58 | 5.28 | 3.96 | 10.21 |
| 12 | Pazhayannoor | 15.44 | 0.08 | 30.80 | 147.34 | 6.27 | 67.42 | 5.14 | 10.45 | 7.71 | 13.22 |
| 13 | Wadakkanchery | 304.55 | 0.03 | 11.40 | 136.47 | 7.38 | 11.15 | 2.22 | 9.05 | 6.47 | 22.06 |
| 14 | Anthikkad | 0.06 | | 0.11 | 36.20 | 2.06 | 0.72 | 0.22 | 0.85 | 0.26 | 3.74 |
| 15 | Cherpu | 0.72 | | | 90.95 | 1.99 | 0.67 | 0.39 | 0.88 | 0.42 | 3.14 |
| 16 | Ollukkara | 6.92 | 0.08 | | 154.34 | 6.73 | 6.49 | 7.29 | 2.27 | 1.67 | 5.95 |
| 17 | Puzhakkal | 11.04 | 0.08 | | 84.04 | 2.51 | 1.27 | 0.68 | 2.54 | 1.96 | 7.14 |
| | Municipalities | 0.51 | 0.03 | | 55.58 | 2.18 | 2.33 | 1.32 | 3.20 | 0.86 | 5.49 |
| | District Total | 372.30 | 1.55 | 44.03 | 1224.44 | 72.87 | 128.97 | 43.95 | 73.97 | 48.28 | 148.94 |

Table 14.3 Continued.....

| Sl. No. | Name of Block | Bottle gourd | Little gourd | Ash gourd | Pumpkin | Cucumber | Payar | Cabbage | Tomato | Cauli flower | Other Vegetables |
|---------|-----------------------|--------------|--------------|--------------|--------------|--------------|---------------|-------------|-------------|--------------|------------------|
| 1 | 2 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 |
| 1 | Chavakkad | | 0.64 | 1.68 | 1.98 | 0.89 | 3.27 | | | | 0.06 |
| 2 | Mullasserri | 0.02 | 0.33 | 0.29 | 0.95 | 0.55 | 3.55 | | 0.13 | 0.03 | 0.23 |
| 3 | Thalikulam | 0.06 | 1.02 | 1.20 | 1.51 | 0.23 | 2.24 | | 0.14 | | 0.02 |
| 4 | Kodungalloor | 0.08 | 1.00 | 0.99 | 1.54 | 0.49 | 1.94 | | | | 0.40 |
| 5 | Mathilakom | 0.17 | 2.27 | 2.16 | 3.95 | 1.76 | 7.10 | | 0.03 | | 1.49 |
| 6 | Chalakkudy | 0.74 | 1.62 | 2.98 | 3.04 | 0.78 | 43.19 | | | | |
| 7 | Irungalakuda | | 0.95 | 1.68 | 3.10 | 2.11 | 14.67 | | | | |
| 8 | Kodakara | 0.03 | 3.26 | 6.33 | 3.99 | 1.17 | 58.37 | 1.74 | 0.03 | 0.56 | 2.53 |
| 9 | Mala | 1.11 | 3.10 | 8.59 | 7.57 | 12.22 | 37.89 | 0.07 | | 0.64 | 0.42 |
| 10 | Vellangalloor | 0.24 | 1.40 | 2.35 | 5.05 | 4.39 | 14.67 | | | | 0.28 |
| 11 | Chowannoor | 0.10 | 1.24 | 3.20 | 4.73 | 3.03 | 11.66 | | | | 1.28 |
| 12 | Pazhayannoor | | 10.49 | 11.40 | 16.24 | 2.41 | 183.41 | | 0.64 | | 9.47 |
| 13 | Wadakkanchery | 0.47 | 7.06 | 8.14 | 7.37 | 0.82 | 37.95 | | | | 3.19 |
| 14 | Anthikkad | 0.08 | 0.55 | 0.53 | 1.01 | 0.28 | 2.05 | | 0.07 | | 0.41 |
| 15 | Cherpu | 0.06 | 1.37 | 0.40 | 0.69 | 0.14 | 2.12 | 0.02 | 0.15 | | 0.70 |
| 16 | Ollukkara | | 7.02 | 3.31 | 3.28 | 3.56 | 8.40 | 0.03 | 0.12 | | 3.20 |
| 17 | Puzhakkal | 0.03 | 0.43 | 1.58 | 1.37 | 0.05 | 5.45 | | 0.03 | | 0.81 |
| | Municipalities | 0.19 | 1.48 | 6.01 | 3.26 | 10.23 | 7.07 | | 0.05 | | 0.13 |
| | District Total | 3.38 | 45.23 | 62.82 | 70.63 | 45.11 | 445.00 | 1.86 | 1.39 | 1.23 | 24.62 |

Table: 14.3 Continued.....

| Sl. No. | Name of Block | Sesamum | Coconut | Betel leaves | Lemon grass | Cocoa | Fodder grass | Green Manure Plants | Teak |
|----------|-----------------------|--------------|-----------------|--------------|--------------|--------------|--------------|---------------------|----------------|
| 1 | 2 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 |
| 1 | Chavakkad | | 6462.44 | | | | 0.19 | 51.59 | 2.56 |
| 2 | Mullasserri | | 3639.05 | 0.04 | | 0.08 | 0.49 | 23.10 | 6.14 |
| 3 | Thalikulam | | 4631.12 | | | 0.25 | 3.01 | 82.36 | 3.37 |
| 4 | Kodungalloor | | 2258.01 | | | 0.02 | 0.88 | 10.59 | 4.06 |
| 5 | Mathilakom | 4.12 | 4816.98 | | | 0.40 | 3.20 | 37.53 | 13.00 |
| 6 | Chalakkudy | | 3998.71 | 3.69 | 0.02 | 26.02 | 7.87 | 73.47 | 159.28 |
| 7 | Iringalakuda | | 3069.21 | 0.09 | 0.02 | 0.08 | 3.38 | 44.99 | 25.56 |
| 8 | Kodakara | 15.21 | 5277.58 | 3.52 | | 10.13 | 5.73 | 77.26 | 96.47 |
| 9 | Mala | | 4449.33 | 0.32 | 0.57 | 9.78 | 5.90 | 80.76 | 67.94 |
| 10 | Vellangalloor | | 4002.71 | 0.04 | 0.24 | 0.94 | 5.87 | 55.58 | 56.59 |
| 11 | Chowannoor | | 3774.55 | 0.36 | | 0.74 | 0.03 | 130.67 | 31.12 |
| 12 | Pazhayannoor | 11.77 | 5405.99 | 0.24 | 0.63 | 1.58 | 8.46 | 253.60 | 365.98 |
| 13 | Wadakkanchery | 4.18 | 6419.56 | 0.34 | 0.60 | 1.97 | 0.43 | 237.53 | 311.62 |
| 14 | Anthikkad | | 3941.28 | 0.08 | 0.02 | 0.04 | 1.24 | 54.14 | 16.60 |
| 15 | Cherpu | | 2753.64 | 0.12 | | 1.29 | 2.10 | 121.93 | 34.06 |
| 16 | Ollukkara | | 5097.64 | 0.03 | 0.03 | 2.93 | 5.92 | 75.61 | 55.15 |
| 17 | Puzhakkal | | 2292.66 | 0.08 | 0.21 | 1.63 | 1.72 | 32.78 | 17.54 |
| | Municipalities | | 3073.97 | 0.69 | 8.84 | 0.59 | 0.56 | 77.92 | 22.34 |
| | District Total | 35.28 | 75364.43 | 9.64 | 11.18 | 58.47 | 56.98 | 1521.41 | 1289.38 |

Table: 14.4 Continued.....

| Sl. No. | Name of Block | Other Plantain | Pineapple | Tapioca | Pappaya | Sesamum | Coconut (Million No.) | Nutmeg | Cashew | Cocoa | Betel leaves | (Production in Tonnes) | |
|----------|-----------------------|-----------------|---------------|-----------------|----------------|-------------|-----------------------|----------------|---------------|--------------|---------------|------------------------|--|
| | | | | | | | | | | | | | |
| 1 | 2 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | | |
| 1 | Chavakkad | 362.71 | 3.38 | 38.66 | 138.89 | | 42.73 | 0.94 | 31.15 | | | | |
| 2 | Mullassery | 168.50 | 1.55 | 48.06 | 169.75 | | 28.11 | 3.70 | 16.99 | | | | |
| 3 | Thalikulam | 225.84 | 2.33 | 50.90 | 213.40 | | 45.03 | 8.11 | 37.18 | | | | |
| 4 | Chalakkudy | 1631.61 | 225.47 | 30462.79 | 327.97 | 0.30 | 40.77 | 1335.45 | 34.10 | 7.68 | 13.80 | | |
| 5 | Iringalakuda | 1033.66 | 7.66 | 492.48 | 237.81 | | 20.91 | 308.55 | 32.26 | | | | |
| 6 | Kodakara | 2977.98 | 30.06 | 3431.43 | 493.55 | 0.24 | 40.72 | 557.05 | 51.21 | 3.93 | 106.02 | | |
| 7 | Mala | 1268.73 | 34.62 | 5516.48 | 487.33 | | 28.73 | 913.76 | 68.26 | 12.11 | 4.00 | | |
| 8 | Vellangalloor | 550.13 | 11.86 | 1406.18 | 338.51 | 0.22 | 34.71 | 207.63 | 63.25 | 1.02 | 2.40 | | |
| 9 | Chowannoor | 3535.96 | 13.08 | 392.81 | 451.93 | | 36.00 | 9.63 | 25.00 | | 5.78 | | |
| 10 | Pazhayanoor | 3852.80 | 81.63 | 3859.81 | 514.10 | | 34.11 | 1.56 | 36.85 | | | | |
| 11 | Wadakkanchery | 2879.56 | 37.14 | 3299.75 | 526.62 | | 52.62 | 2.63 | 109.29 | 0.33 | 11.80 | | |
| 12 | Anthikad | 658.22 | 9.08 | 57.81 | 108.41 | 0.39 | 30.11 | 25.27 | 16.63 | | 0.35 | | |
| 13 | Cherpu | 2413.33 | 1.48 | 115.86 | 333.90 | | 22.07 | 30.83 | 17.99 | | 0.45 | | |
| 14 | Ollukkara | 2583.45 | 16.45 | 2209.68 | 233.29 | | 42.98 | 46.09 | 32.24 | | 1.08 | | |
| 15 | Puzhakkal | 1703.29 | 23.81 | 236.77 | 366.50 | | 38.58 | 19.30 | 73.37 | 0.04 | 3.15 | | |
| 16 | Mathilakom | 1162.59 | 7.56 | 108.14 | 301.61 | | 40.22 | 26.68 | 22.78 | | | | |
| | Blocks Total | 27008.36 | 507.16 | 51727.61 | 5243.57 | 1.15 | 578.46 | 3497.18 | 668.55 | 25.11 | 148.83 | | |
| | Municipalities | 1006.60 | 27.68 | 909.62 | 278.41 | | 29.52 | 296.48 | 23.54 | | | | |
| | District Total | 28014.96 | 534.84 | 52637.23 | 5521.98 | 1.15 | 607.98 | 3793.66 | 692.09 | 25.11 | 148.83 | | |

Table: 14.5

BLOCK WISE PRODUCTION OF CROPS 2010-11

| Sl. No. | Name of Block | Rice | | | Black Pepper | Cured Ginger | Cured Turmeric | Arecanut | Tamarind | Jack (Million No.) | Banana |
|---------|-----------------------|----------------|-----------------|-----------------|---------------|---------------|----------------|----------------|----------------|--------------------|-----------------|
| | | Autumn | Winter | Summer | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 1 | Chavakkad | | 40.68 | 246.43 | 15.04 | | 0.18 | 65.73 | 28.66 | 0.58 | |
| 2 | Mullassery | 170.25 | 794.02 | 3125.53 | 12.29 | 0.09 | 0.11 | 22.41 | 40.37 | 0.22 | 24.51 |
| 3 | Thalikulam | 0.66 | 0.15 | | 7.83 | | 0.70 | 177.18 | 41.37 | 0.56 | |
| 4 | Kodungalloor | | 0.60 | | 0.82 | 0.16 | 0.30 | 57.76 | 26.12 | 0.16 | 10.89 |
| 5 | Mathilakom | | 31.20 | | 1.15 | | 0.18 | 131.04 | 65.10 | 0.23 | 8.51 |
| 6 | Chalakkudy | 235.73 | 284.55 | 95.98 | 76.55 | 29.49 | 21.99 | 139.55 | 141.75 | 1.28 | 2766.55 |
| 7 | Iringalakuda | 142.41 | 73.38 | 1242.16 | 37.48 | 8.07 | 4.05 | 74.93 | 34.00 | 0.85 | 327.72 |
| 8 | Kodakara | 389.88 | 999.52 | 422.41 | 26.45 | 15.50 | 17.86 | 509.33 | 300.12 | 1.98 | 4508.41 |
| 9 | Mala | 648.65 | 825.97 | 636.75 | 54.13 | 23.10 | 18.17 | 110.62 | 153.92 | 1.68 | 1098.48 |
| 10 | Vellangalloor | 122.75 | 689.07 | 319.86 | 63.65 | 14.94 | 15.54 | 139.78 | 99.16 | 1.00 | 645.99 |
| 11 | Chowannoor | 81.14 | 2919.68 | 1884.62 | 47.76 | 8.65 | 3.58 | 738.78 | 69.11 | 0.70 | 47.18 |
| 12 | Pazhayanoor | 3128.89 | 7829.26 | 11.57 | 88.18 | 17.93 | 21.01 | 338.06 | 1161.24 | 1.74 | 2417.87 |
| 13 | Wadakkanchery | 545.84 | 5697.49 | 57.61 | 44.25 | 11.75 | 13.45 | 795.93 | 174.18 | 1.33 | 2885.32 |
| 14 | Anthikkad | 102.69 | 581.99 | 4129.91 | 5.70 | 0.17 | 0.78 | 148.23 | 59.40 | 0.36 | 64.03 |
| 15 | Cherpu | 168.57 | 1678.32 | 2637.55 | 32.81 | 0.55 | 0.60 | 113.57 | 31.88 | 0.53 | 572.61 |
| 16 | Ollukkara | 59.06 | 1054.48 | 145.34 | 39.13 | 1.39 | 1.50 | 147.04 | 186.49 | 0.77 | 1842.20 |
| 17 | Puzhakai | 209.49 | 3294.06 | 4889.50 | 45.13 | 0.94 | 0.88 | 482.37 | 104.45 | 0.81 | 379.48 |
| | Municipalities | 6.25 | 48.69 | 378.66 | 16.05 | 3.61 | 5.13 | 115.45 | 31.88 | 0.51 | 362.77 |
| | District Total | 6012.26 | 26843.11 | 20223.88 | 614.40 | 136.34 | 126.01 | 4307.76 | 2749.20 | 15.29 | 17962.52 |

Table: 14.5 Continued.....

| Sl. No. | Name of Block | Other Plantain | Pineapple | Tapioca | Pappaya | Sesamum | Coconut (Million No.) | Nutmeg | Cocoa | Raw Cashew nuts | Betel leaves | (Production in Tonnes) | |
|---------|-----------------------|-----------------|---------------|-----------------|----------------|-------------|-----------------------|----------------|--------------|-----------------|---------------|------------------------|----|
| | | | | | | | | | | | | 13 | 14 |
| 1 | 2 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | | |
| 1 | Chavakkad | 719.65 | 3.05 | 81.20 | 77.16 | | 54.14 | | | 34.62 | | | |
| 2 | Mullassery | 294.72 | 0.57 | 29.70 | 95.28 | | 20.71 | 3.36 | | 25.23 | 3.08 | | |
| 3 | Thalikulam | 333.75 | 3.97 | 38.74 | 214.22 | | 35.21 | 8.44 | | 41.63 | | | |
| 4 | Kodungalloor | 194.67 | 2.49 | 20.15 | 38.73 | | 8.41 | 13.02 | | 4.52 | | | |
| 5 | Mathilakom | 909.80 | 5.82 | 43.47 | 161.75 | | 30.21 | 21.02 | | 19.00 | | | |
| 6 | Chalakkudy | 1739.37 | 35.39 | 24923.39 | 119.91 | | 30.04 | 994.50 | 14.89 | 39.89 | 132.84 | | |
| 7 | Iringalakuda | 1154.63 | 31.01 | 594.04 | 200.76 | | 13.72 | 331.79 | | 29.85 | 3.78 | | |
| 8 | Kodakara | 4138.82 | 35.01 | 9609.47 | 207.203 | 4.19 | 44.35 | 675.54 | 18.32 | 63.29 | 98.56 | | |
| 9 | Mala | 1537.55 | 40.65 | 4441.37 | 428.22 | | 25.93 | 742.83 | 5.04 | 76.93 | 17.60 | | |
| 10 | Vellangalloor | 1101.37 | 21.65 | 1527.26 | 284.82 | | 22.84 | 196.82 | 0.18 | 71.01 | 0.76 | | |
| 11 | Chowannoor | 2220.66 | 8.61 | 294.97 | 202.69 | | 23.52 | 4.31 | 0.17 | 23.05 | 4.68 | | |
| 12 | Pazhayanoor | 3244.86 | 85.56 | 3830.86 | 193.50 | 1.41 | 33.63 | 5.41 | | 61.50 | 1.68 | | |
| 13 | Wadakkanchery | 3820.29 | 12.87 | 2929.60 | 397.90 | 0.41 | 34.55 | 5.60 | 0.43 | 206.00 | 6.80 | | |
| 14 | Anthikkad | 726.03 | 7.88 | 38.27 | 78.69 | | 21.78 | 13.80 | | 23.86 | 1.60 | | |
| 15 | Cherpu | 663.14 | 7.11 | 91.32 | 103.47 | | 17.38 | 74.15 | 0.21 | 40.04 | 2.76 | | |
| 16 | Ollukkara | 5027.46 | 10.36 | 675.17 | 297.85 | | 42.35 | 48.57 | 0.65 | 58.44 | 0.51 | | |
| 17 | Puzhahal | 1371.48 | 5.53 | 437.58 | 80.23 | | 17.32 | 16.23 | 0.74 | 23.79 | 1.84 | | |
| | Municipalities | 902.08 | 6.66 | 1551.05 | 164.64 | | 17.07 | 246.39 | | 13.92 | 7.79 | | |
| | District Total | 30100.33 | 324.19 | 51157.61 | 3347.02 | 6.01 | 493.16 | 3401.78 | 40.63 | 856.57 | 284.28 | | |

Table: 14.6

PRODUCTION OF IMPORTANT CROPS

| Year | Rice | | | Black pepper | Green chillies | Pulses including Tur | Cured Ginger | Cured Turmeric | Areca nut |
|---------|----------|----------|----------|--------------|----------------|----------------------|--------------|----------------|-----------|
| | Autumn | Winter | Summer | | | | | | |
| | 1 | 2 | 3 | | | | | | |
| 2011-12 | 5819 | 28523 | 27974 | 776 | 149 | 2 | 124 | 152 | 4701 |
| 2010-11 | 6012 | 26843 | 20224 | 614 | 137 | 29 | 136 | 126 | 4308 |
| 2009-10 | 6922 | 28603 | 28329 | 895 | 210 | 1 | 164 | 177 | 7095 |

| Year | Tamarind | Mango | Jack (Million Nos) | Banana | Other plantain | Pineapple | Tapioca | Sweet potato | Pappaya |
|----------|-----------|-----------|--------------------|-----------|----------------|-----------|-----------|--------------|-----------|
| 1 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 |
| 2011-12 | 2573 | 36389 | 13 | 20671 | 28015 | 535 | 52637 | 11 | 5522 |
| 2010-11 | 2749 | 26248 | 15 | 17963 | 30100 | 324 | 51158 | 11 | 3347 |
| 2009-10 | 1442 | 31079 | 20 | 19455 | 23277 | 362 | 28236 | 66 | 3762 |

| Year | Drumstick | Sesamum | Coconut (Million Nuts) | Nutmeg | Tea | Rubber | Cocoa | Raw cashew nuts | Betel leaves | Clove |
|----------|-----------|-----------|------------------------|-----------|-----------|-----------|-----------|-----------------|--------------|-----------|
| 1 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 |
| 2011-12 | 1926 | 1 | 608 | 3794 | 1419 | 23660 | 25 | 692 | 149 | 2 |
| 2010-11 | 1349 | 6 | 493 | 3402 | 1833 | 22820 | 41 | 857 | 284 | 5 |
| 2009-10 | 1608 | 11 | 538 | 3092 | 1657 | 21800 | 11 | 933 | 232 | 2 |

Source: Agricultural Statistics

SEED RATE FOR IMPORTANT CROPS OF KERALA

| | | | |
|-------------------------------|-----------------------|---|-------------------------|
| 1. Rice | Transplanting | - | 60-85kg/ha |
| | Broadcasting | - | 80-100kg/ha |
| | Dibbling | - | 80-90kg/ha |
| 2. Maize | | - | 20kg/ha |
| 3. Ragi | Direct sown | - | 5kg/ha |
| | Transplanted crop | - | 4-5kg/ha |
| 4. Sorghum | | - | 12-15kg/ha |
| 5. Black gram | Pure crop | - | 20kg/ha |
| | Mixed crop | - | 6kg/ha |
| 6. Cowpea | | | |
| 1. For vegetable type | | | |
| | a. Bush | - | 20-25kg/ha |
| | b. Trailing | - | 4-5kg/ha |
| 2. For grain and dual purpose | | | |
| | a. Broadcasting | - | 60-65kg/ha |
| | b. Dibbling | - | 50-60kg/ha |
| 7. Green gram | | | |
| | Pure crop | - | 20-25kg/ha |
| | Mixed crop | - | 6kg/ha |
| 8. Green pea | | - | 60kg/ha |
| 9. Horse gram | | - | 25-30kg/ha |
| 10. Red gram | | | |
| | Pure crop | - | 15-20kg/ha |
| | Mixed crop | - | 6-7kg/ha |
| 11. Amorphophallus | | - | 9-12tonnes/ha |
| 12. Colocasia | | - | 800-1200kg/ha |
| 13. Greater yam (Kachil) | | - | 3000-3700kg/ha |
| 14. Lesser yam (Nanakizhangu) | | - | 1800-2700kg/ha |
| 15. Sweet potato | | - | 80kg tubers/ha |
| 16. Tapioca | | - | 2000 stems/ha |
| 17. Rubber | | - | 450-500plants/ha |
| 18. Ground nut | | | |
| | Pure crop | - | 100kg kernels/ha |
| | Inter crop in coconut | - | 80kg kernel/ha |
| | Inter crop in Tapioca | - | 40-50kg kernel/ha |
| 19. Sesamum | | - | 4-5kg/ha |
| 20. Mango ginger | | - | 1500kg/ha |
| 21. Ginger | | - | 1500kg/ha |
| 22. Turmeric | | - | 2000-2500kg/ha |
| 23. Betel vine | | - | 20000to25000cuttings/ha |
| 24. Okra | | - | 7-8.5kg/ha |
| 25. Bitter gourd | | - | 5-6kg/ha |
| 26. Coleus | | - | 75-100kg/tubers/ha |
| 27. Snake gourd | | - | 3-4kg/ha |

| | | |
|------------------|---|---------------------------|
| 28. Cucumber | - | 0.5-0.75kg/ha |
| 29. Watermelon | - | 1-1.5kg/ha |
| 30. Bottle gourd | - | 3-4kg/ha |
| 31. Pumpkin | - | 1-1.5kg/ha |
| 32. Ash gourd | - | 0.75-1kg/ha |
| 33. Brinjal | - | 370-500g/ha |
| 34. Chilli | - | 1kg/ha |
| 35. Tomato | - | 400g/ha |
| 36. Cabbage | - | 500-750g/ha |
| 37. Cauliflower | - | 600-750g/ha |
| 38. Carrot | - | 5-6kg/ha |
| 39. Beetroot | - | 7-8kg/ha |
| 40. Radish | - | 7-8kg/ha |
| 41. Potato | - | 1000-2000kg seed tuber/ha |
| 42. Garlic | - | 500kg of cloves/ha |
| 43. Winged bean | - | 15-20kg/ha |
| 44. Cluster bean | - | 10-12kg/ha |
| 45. Clove bean | - | 6-7kg/ha |
| 46. Smooth gourd | - | 2.5-3kg/ha |
| 47. Ridge gourd | - | 2.5-3kg/ha |
| 48. Bell pepper | - | 400-600g/ha |

CONVERSION RATES BETWEEN RAW MATERIALS AND PROCESSED PRODUCTS

| | | |
|-----------|--|---|
| Paddy | Rice | Cleaned 2/3 by weight of paddy |
| Groundnut | Kernels to nuts in shell | 70 percent |
| | Oil to nuts in shell | 28 percent |
| | Oil to Kernels crushed | 40 percent |
| | Cake to Kernels crushed | 60 percent |
| | Sesamum | Oil to seeds crushed |
| Coconut | Cake to seeds crushed | 60 percent |
| | Copra to nuts | 6,773 nuts gives one tone of copra (average), presently it is 7250-7500 nuts due to mite attack |
| Pepper | Cake to copra | 38 percent |
| | Green to dry | 21-39 percent by weight |
| Sugarcane | Gur from cane | 10 percent |
| | Crystal sugar from gur | 62.4 percent |
| | Crystal sugar from cane | 9.9 percent |
| | Molasses from cane | 3.5 percent |
| Cashew | Cashew Kernel | 25 percent of nuts |
| Arecanut | Husked Champan to unhusked | 35 percent by weight |
| | (Processed tender nut to Unhusked champan) | 12 percent |
| Tapioca | Starch | 28-30 percent on the weight of fresh tubers |

| | | |
|---------------|---|-----------------------------|
| Turmeric | Cured to raw (Dry 17-25% of the raw stuff) | 16-20 percent of the weight |
| Ginger | Dry Ginger | 21-30 percent by weight |
| Cocoa | Pod to wet beans | 40 percent by weight |
| | Wet beans to dried beans | 35-40 percent by weight |
| Coffee | Robusta-Berried to clean coffee | 4.5 to 3.6:1 |
| | Wet beans to dried beans | 5.0 to 3.3:1 |
| Cardamom | Green to dry | 25-35 percent |
| Oil Palm | Palm Oil | 20% by weight of Bunch |
| Soyabean seed | Oil to soyabean seed crushed | 18 percent |
| | Meal to soyabean seed crushed | 73 percent |
| | Hull from soyabean seed crushed | 8 percent |
| Neem seed | Oil to kernel crushed | 45-50 percent |
| | Cake to kernel crushed | 50-55 percent |

CONVERSION FACTORS FOR COCONUT

A. Number of Coconuts to a tonne of Copra:

| | |
|--------------|---|
| Kerala | 6,250 to 6,850 (at present it is 7250-7500 nuts due to mite attack) |
| Andrapradesh | 8,820 |
| Tamilnadu | 7,000 |
| Laccadives | 12,000 |

B. Copra yield from coconut in different months in Kerala at 6% moisture level/1000 nuts

| | |
|-----------|-------|
| January | 163kg |
| February | 181kg |
| March | 178kg |
| April | 176kg |
| May | 179kg |
| June | 165kg |
| July | 152kg |
| August | 139kg |
| September | 147kg |
| October | 148kg |
| November | 155kg |
| December | 158kg |

C. Nuts to shell, Coconut water etc.

| | |
|-----------|-----------------------------|
| 1000 nuts | 114kg shell |
| 1000 nuts | 100 litres of coconut water |
| 1000 nuts | 35kg of charcoal |

D. Coconut Oil from Copra

| | |
|-----------|--------|
| Chekkus | 58-60% |
| Rotories | 62-63% |
| Expellers | 63-65% |

E. Ball copra from coconut (per 1000 nuts)

| |
|--------------------|
| 1.5tonne (grade 1) |
| 1.3tonne (average) |

F. Desiccated coconut (per 1000 nuts)

| |
|---------------|
| 1 tonne of DC |
|---------------|

- G. Cake yield as percentage of copra crushed**
 Chekkus 38%
 Rottories 36%
 Expellers 34%
- H. Coconut to Fibre (per 1000 nuts)**
 81.8kg - Kerala
 68.3kg - Andhrapradesh
 90.0kg - Tamilnadu
 81.9kg - Karnataka
 56.9kg - Others
- I. Composition of Coconut (Husked)**
 Shell 27.9% (23.5 to 32.8)
 Kernel 55.2% (48.2 to 62.0)
 Water 17.0% (8.2 to 25.1)
- J. Composition of Standard Copra**
 Moisture 6%
 Oil 68 to 71%
 Free Fatty Acids 2%

| <u>Composition</u> | <u>Kernel (%)</u> | <u>Copra (%)</u> | <u>Cake (%)</u> |
|--------------------|-------------------|------------------|-----------------|
| Moisture | 46.3 | 5.8 | 10.7 |
| Protein | 4.1 | 8.9 | 19.1 |
| Fat | 37.3 | 67.0 | 11.1 |
| Carbohydrates | 7.9 | 12.4 | 40.9 |
| Crude Fibre | 3.4 | 4.1 | 14.1 |
| Ash | 1.0 | 1.8 | 4.1 |

- K. Fatty Acid Composition of Coconut Oil**
 Saturated Fatty Acids
 Lauric Acid
 Caprylic Acid
 Myristic Acid
 Straric Acid
 Arachidic Acid
- Un-Saturated Fatty Acids
 Palmitoleic Acid
 Oleic Acid
 Linoleic Acid
 Arachidonic Acid
- L. Coir pith per 10000 husk** 2 tonnes
M. Charcoal yield from shell (per 3 tonnes of shell) 1 tonne
N. Processed coconut cream/1000 coconut 200kg cream
O. Coconut Vinegar (per 100 litres coconut water) 110 litre vinegar

Source:- Farm Guide.

PLANTATION CROPS

Plantation crops are perennial crops which are grown in larger areas and commercially important. Plantation crops in general are either export oriented or import substituting and therefore assume special significance from the national point of view. Kerala has a substantial share in the four plantation crops of rubber, tea, coffee and cocoa.

Rubber: - Natural Rubber occupies the prime position in Kerala among plantation crops. In Kerala the coverage under the crop in 2011-12 was 5.39 lakh ha. higher by 5335 ha over the previous year. The production of natural rubber in Kerala during the period was 7.89 lakh tonnes indicating 2.4% increase over the previous year. In 2011-12, the productivity increased slightly to 1462 kg/ha from 1442 kg/ha in 2010-11. 87.3% of total rubber production in the country was from Kerala in the current year of 2011-12. The total area of rubber cultivation in the district during 2011-12 is 15460 ha.

Tea: - Tea is greater significant to Kerala because of high land productivity relative to other crops, exports earnings and employment in rural and backward areas. The share of Kerala in tea production is 6.9% in 2011-12. There is slight increase in production of tea in Kerala and it ranged from .57 lakh MT in 2010-11 to .58 lakh MT in 2011-12. The total tea production in the district during 2010-11 is 1833 tonnes decreased to 1419 tonnes during 2011-12.

Coffee: - Area under coffee production in Kerala was 0.84 lakh ha and share of production in the State is nearly 22% during 2011-12. The total area of coffee production in Kerala state during 2011-12 is 37,028 ha and district is having no area under coffee plantation.

Cocoa: - The total area of cocoa production in the Kerala State is 12,764 ha. and only 46 ha of area is under cocoa production in district during 2011-12 period.

Table: 15.1

RUBBER STATISTICS

| Type- wise Production & Consumption of NR & SR | (Metric Tonnes) | | | | | | Percentage increase (+)/ decrease (-) of (3) & (4) |
|--|-----------------|---------------|----------------------------|----------------------------|--------------------------|---|--|
| | January 2013 | January 2012 | April 2012 to January 2013 | April 2011 to January 2012 | April 2011 to March 2012 | 5 | |
| | 1 | 2 | 3 | 4 | 5 | 6 | |
| PRODUCTION | | | | | | | |
| Natural Rubber (NR) | | | | | | | |
| Ribbed Smoked Sheet (RSS) | 74690 | 77923 | 588920 | 575424 | 658200 | | |
| Solid Block Rubber | 12905 | 11851 | 101255 | 101085 | 119815 | | |
| Latex Concentrates (drc) | 7820 | 7506 | 61795 | 63896 | 76490 | | |
| Others | 5585 | 5220 | 46230 | 43995 | 49195 | | |
| Total | 101000 | 102500 | 798200 | 784400 | 903700 | | 1.8 |
| Synthetic Rubber (SR) | | | | | | | |
| Styrene Butadiene (SBR) | 1774 | 2137 | 15705 | 16015 | 18791 | | |
| Poly Butadiene (BR) | 6420 | 6780 | 64798 | 66030 | 78745 | | |
| Others | 809 | 1497 | 10039 | 10850 | 13063 | | |
| Total | 9003 | 10414 | 90542 | 92895 | 110599 | | -2.5 |
| Total NR & SR | 110003 | 112914 | 888742 | 877295 | 1014299 | | 1.3 |
| CONSUMPTION | | | | | | | |
| Natural Rubber (NR) | | | | | | | |
| Ribbed Smoked Sheet (RSS) | 44090 | 51080 | 483215 | 512835 | 616215 | | |
| Solid Block Rubber | 22980 | 23625 | 248940 | 204910 | 248285 | | |
| Latex Concentrates (drc) | 6920 | 5850 | 64070 | 61155 | 73190 | | |
| Others | 1820 | 1980 | 22065 | 22850 | 26725 | | |
| Total | 75810 | 82535 | 818290 | 801750 | 964415 | | 2.1 |

| Type- wise Production & Consumption of NR & SR | January 2013 | January 2012 | April 2012 to January 2013 | April 2011 to January 2012 | April 2011 to March 2012 | Percentage increase (+)/ decrease (-) of (3) & (4) |
|--|---------------|---------------|----------------------------|----------------------------|--------------------------|--|
| Total | 75810 | 82535 | 818290 | 801750 | 964415 | 2.1 |
| Out of which Auto Tyre Manufactures | 47419 | 54293 | 534372 | 525702 | 631410 | 1.6 |
| Synthetic Rubber (SR) | | | | | | |
| Styrene Butadiene (SBR) | 16390 | 15605 | 163530 | 152985 | 185265 | |
| Poly Butadiene (BR) | 11865 | 11620 | 122100 | 110825 | 134630 | |
| Others | 8870 | 7160 | 85430 | 88585 | 103455 | |
| Total | 37125 | 34385 | 371060 | 352395 | 423350 | 5.3 |
| Out of which Auto Tyre Manufactures | 26337 | 24914 | 270231 | 256287 | 307365 | 5.4 |
| Total NR & SR | 112935 | 116920 | 1189350 | 1154145 | 1387765 | 3.1 |
| Out of which Auto Tyre Manufactures | 73756 | 79207 | 804603 | 781989 | 938775 | 2.9 |

| Production Consumption and Stock of RR | (Metric Tonnes) | | | | |
|---|-----------------|--------------|----------------------------|----------------------------|--------------------------|
| | January 2013 | January 2012 | April 2012 to January 2013 | April 2011 to January 2012 | April 2011 to March 2012 |
| Reclaimed Rubber (RR) | 1 | 2 | 3 | 4 | 5 |
| Production | 9225 | 8915 | 96695 | 84990 | 103565 |
| Consumption | 9055 | 8785 | 95925 | 84410 | 102435 |
| Out of which Auto Tyre Manufactures | 3545 | 3650 | 38929 | 35679 | 43178 |
| Stock with Manufactures (end of month/year) □ | 6850 | 5530 | | | |

Source:- Rubber Board

ANIMAL HUSBANDRY

Animal husbandry plays an important role in generating employment and income to the weaker sections of the population. The preservation and the development of cattle wealth and poultry are also significant to the production of major livestock products of nutritional standard and the district is covered by the Integrated Dairy Development Project. As per live stock census 2007 there were 320675 live stock populations and poultry population stood at 1267838 in the district, cattle alone accounted for 134669. Based on 2009-10 report there were 283 Dairy Co-operative Societies, 122 Veterinary Institutions.

Table: 16.1

NUMBER OF CASES TREATED UNDER IMPORTANT CATEGORIES OF DISEASES IN VARIOUS DEPARTMENT INSTITUTIONS DURING 2010-11

| | | |
|----------------------|----------|-------|
| Digestive disorders | Cattle | 60158 |
| | Buffaloe | 7549 |
| | Goat | 44701 |
| | Others | 44760 |
| Respiratory Diseases | Cattle | 7653 |
| | Buffaloe | 627 |
| | Goat | 8110 |
| | Others | 16741 |
| Metabolic Diseases | Cattle | 7306 |
| | Buffaloe | 395 |
| | Goat | 2717 |
| | Others | 805 |
| Deficiency Diseases | Cattle | 4682 |
| | Buffaloe | 588 |
| | Goat | 4071 |
| | Others | 2388 |
| Coccidiosis | Cattle | 3337 |
| | Buffaloe | 270 |
| | Goat | 1696 |
| | Others | 8919 |
| Babesiosis | Cattle | 1049 |
| | Buffaloe | 85 |
| | Goat | 80 |
| | Others | 7 |
| Other endoparasites | Cattle | 76613 |
| | Buffaloe | 11173 |
| | Goat | 40158 |
| | Others | 19628 |

| | | |
|-----------------------------|----------|-------|
| Ectoparasitic conditions | Cattle | 12090 |
| | Buffaloe | 1526 |
| | Goat | 9113 |
| | Others | 23045 |
| Abortion | Cattle | 967 |
| | Buffaloe | 37 |
| | Goat | 976 |
| | Others | 11 |
| Dystocia | Cattle | 2236 |
| | Buffaloe | 65 |
| | Goat | 1382 |
| | Others | 30 |
| Other reproductive disorder | Cattle | 27446 |
| | Buffaloe | 1742 |
| | Goat | 4880 |
| | Others | 167 |
| Poisoning | Cattle | 490 |
| | Buffaloe | 90 |
| | Goat | 253 |
| | Others | 178 |
| Mastitis | Cattle | 10404 |
| | Buffaloe | 243 |
| | Goat | 2927 |
| | Others | 14 |

Table: 16.2

ANTI RABIES VACCINATIONS DONE IN 2010-11

| Prophylactic in dogs | Post Exposure Vaccinations | | | | | Number of deaths due to rabies | | | | |
|-------------------------|----------------------------|---------|------|--------|------------------|--------------------------------|---------|------|--------|------------------|
| | Cattle | Buffalo | Goat | Canine | Other Animals | Cattle | Buffalo | Goat | Canine | Other Animals |
| 19,803 | 27 | 5 | 125 | 108 | 1 | 4 | 0 | 0 | 4 | 0 |

Table: 16.3

DAIRY CO-OPERATIVE SOCIETIES AS ON 31-03-2011

| | |
|--------------------|-----|
| Primary Societies | 283 |
| Regional Unions | |
| Total | 283 |
| Anand Mode (APCOS) | 214 |
| Traditional | 69 |
| Total | 283 |

Table: 16.4

OUTBREAKS, ATTACKS, DEATHS ETC.DUE TO CONTAGIOUS DISEASES AND NUMBER OF ANIMALS PROTECTED/VACCINATED DURING THE YEAR 2009-10

| Foot and Mouth | | | | Anthrax | | | | Black Quarter | | | |
|------------------------|--------|-------|--------------------------|------------------|--------|-------|--------------------------|---------------------------|--------|-------|--------------------------|
| Out Break | Attack | Death | Protected/ Vaccinated | Out Break | Attack | Death | Protected/ Vaccinated | Out Break | Attack | Death | Protected/ Vaccinated |
| 11 | 77 | 0 | 114198 | 2 | 2 | 2 | 3758 | 0 | 0 | 0 | 1566 |
| Hemorrhagic Septicemia | | | | Canine Distemper | | | | Parvo Virus | | | |
| Out Break | Attack | Death | Protected/ Vaccinated | Out Break | Attack | Death | Protected/ Vaccinated | Out Break | Attack | Death | Protected/ Vaccinated |
| 0 | 0 | 0 | 3712 | 12 | 15 | 3 | 1896 | 15 | 33 | 7 | 2200 |
| Ranikhet | | | | Fowl Pox | | | | Infectious Bursal Disease | | | |
| Out Break | Attack | Death | Protected/ Vaccinated | Out Break | Attack | Death | Protected/ Vaccinated | Out Break | Attack | Death | Protected/ Vaccinated |
| 23 | 1968 | 345 | 959171 | 10 | 94 | 4 | 21725 | 0 | 0 | 0 | 9150 |
| Duck Plague | | | | Others | | | | Total | | | |
| Out Break | Attack | Death | Protected/ Vaccinated | Out Break | Attack | Death | Protected/ Vaccinated | Out Break | Attack | Death | Protected/ Vaccinated |
| 2 | 35 | 18 | 46345 | 3 | 54 | 0 | 6763 | 78 | 2278 | 379 | 1170484 |

Source: Bulletin 2011, AHD.

Table: 16.5

ACTIVITIES IN THE ANIMAL HUSBANDRY SECTOR IN KERALA (2003-04 to 2010-12)

| Sl. No. | Activities | Unit ('000) | 2003-04 | 2004-05 | 2005-06 | 2006-07 | 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12 |
|---------|--|-------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1 | Cases treated | Nos. | 4629 | 4879 | 5029 | 5260 | 5015 | 4873 | 4663 | 4 287 | 4830 |
| 2 | Operations Performed | Nos. | 136 | 135 | 125 | 120 | 121 | 116 | 122 | 86 | 78 |
| 3 | Castration done | Nos. | 6 | 6 | 5 | 5 | 4.8 | 5.6 | 4.7 | 4.37 | 3.94 |
| 4 | Vaccination done | | | | | | | | | | |
| a) | Livestock | Nos. | 4414 | 1334 | 3440 | 2723 | 2517 | 2282 | 3653 | 1636 | 1681 |
| b) | Poultry | Nos. | 4554 | 6170 | 9603 | 8752 | 7251 | 7008 | 8829 | 8903 | 10222 |
| 5 | Anti Rabies Vaccinations done in Dogs | Nos. | 132 | 113 | 101 | 197 | 173 | 207 | 176 | 141.04 | 167.8 |
| 6 | Artificial Insemination done | Nos. | 1231 | 1176 | 1180 | 1204 | 1075 | 1196.96 | 1298.55 | 1387.46 | 1485.17 |
| 7 | Calvings recorded | Nos. | 354 | 358 | 355 | 383 | 358 | 346.90 | 326.70 | 368.92 | 413 |
| 8 | Chicks hatched out in Department Poultry Farms | Nos. | 977 | 747 | 515 | 859 | 369 | 603 | 792 | 1054.77 | 1388 |
| 9 | Vaccines produced in Veterinary Biologicals | | | | | | | | | | |
| a) | Poultry | Doses | 17967 | 13488 | 10948 | 20892 | 11103 | 19285 | 138.49 | 23661.1 | 18908 |
| b) | Livestock | Doses | 534 | 329 | 184 | 440 | 678 | 494 | 227 | 326 | 456 |

Source: Economic Review 2012.

FISHERIES

In Kerala fishing industry occupies an important position in its economy. With a coastal line of about 590 Km long, Kerala offers immense possibilities for fishing both marine and inland. The activities covered in this sector are (i) fishing in ocean, coastal, offshore and inland waters for commercial purposes (ii) Subsistence fishing in inland waters (iii) Gathering of sea weeds, seashells and other ocean and coastal water products (iv) Fish curing. The important factor that has a decisive note in the fishery potential of the State is the existence of mud-banks, locally known as 'Chakara', closed to the coast. Fisheries sector occupies an important position in Thrissur district and long tradition in the field of fishing industry. The coastal area of the district extends to a length of 54 Km between Azhikode and Puthankadapuram. Main fishing centres in the district are Chavakkad, Nattika and Kodungallur. Mechanised boats are also engaged for fishing in the district. There are 18 marine and 8 inland fishing villages. According to 2011-12 report annual fish production was 64995MT from marine and 17387MT from inland sector. The fishermen population in the district is 90306 with a breakup of 70954 from marine and 19352 from inland sector during the same year.

Table: 17.1

FRESH WATER RESOURCES IN THRISSUR DISTRICT

| Year | Panchayat ponds | | Holy ponds and streams | | Village ponds and other water holds | | Irrigation tanks | |
|------|-----------------|-----------|------------------------|-----------|-------------------------------------|-----------|------------------|-----------|
| | No. | Area (Ha) | No. | Area (Ha) | No. | Area (Ha) | No. | Area (Ha) |
| 2009 | 959 | 240.68 | 305 | 111.77 | 3 | 40.48 | 228 | 507.72 |
| 2010 | 959 | 240.68 | 305 | 111.77 | 3 | 40.48 | 228 | 507.72 |

Table: 17.2

DETAILS OF DISTRICT WISE PADASEKHARAMS IN KERALA

| Sl. No. | Name of District | No. of Panchayats | No. of Padasekharams | Area in | |
|----------|------------------|-------------------|----------------------|---------------|-------------|
| | | | | Acre | Cent |
| 1 | Kollam | 17 | 104 | 6837 | 31.5 |
| 2 | Alappuzha | 52 | 557 | 68173 | 67 |
| 3 | Kottayam | 18 | 206 | 15810 | 40 |
| 4 | Ernakulam | 40 | 257 | 10432 | 20 |
| 5 | Thrissur | 10 | 92 | 6002 | 30 |
| 6 | Palakkad | 11 | 44 | 1638 | 16 |
| 7 | Malappuram | 15 | 85 | 580 | 34 |
| 8 | Kozhikode | 3 | 8 | 173 | |
| 9 | Kannur | 41 | 117 | 3381 | 69 |
| 10 | Kasaragod | 11 | 80 | 2479 | 78 |
| | Total | 218 | 1550 | 115505 | 85.5 |

Table: 17.3

CHECK DAMS IN THRISSUR DISTRICT

| Year | Name of the Check dam | Area in Ha. | Location | | Type of construction | Ownership |
|------|-----------------------|--------------|---------------|--------------|----------------------|-----------------|
| | | | Block | Panchayat | | |
| 2010 | Thumburmuzhi | 5.20 | Chalakkudy | Athirappilly | | KSEB |
| | Asuramkundu | 0.41 | Wadakkanchery | Mulloorkara | Earthern | PWD |
| | Vazhodu dam | 0.41 | Pazhayannur | Kondazhy | Earthern | Govt. of Kerala |
| | Cheerakuzhy | 4.80 | Pazhayannur | Pazhayannur | Earthern | Govt. of Kerala |
| | Total | 10.82 | | | | |

| Year | Name of the Check dam | Area in Ha. | Location | | Type of construction | Ownership |
|------|-----------------------|--------------|---------------|--------------|----------------------|-----------------|
| | | | Block | Panchayat | | |
| 2009 | Thumburmuzhi | 5.20 | Chalakkudy | Athirappilly | | KSEB |
| | Asuramkundu | 0.41 | Wadakkanchery | Mulloorkara | Earthern | PWD |
| | Vazhodu dam | 0.41 | Pazhayannur | Kondazhy | Earthern | Govt. of Kerala |
| | Cheerakuzhy | 4.80 | Pazhayannur | Pazhayannur | Earthern | Govt. of Kerala |
| | Total | 10.82 | | | | |

Total: 17.4

DISTRICT WISE SPECIES WISE INLAND FISH LANDINGS IN THRISSUR (QTY in MT)

| 2008-2009 | | |
|------------------|------------------|--------------|
| Sl. No. | Name of Fish | Quantity |
| 1 | Prawn | 1518 |
| 2 | Etroplus | 162 |
| 3 | Murrels | 465 |
| 4 | Mullet | 442 |
| 5 | Cat fish | 464 |
| 6 | Jew fish | 113 |
| 7 | Tilapia | 357 |
| 8 | Labeo fimbriatus | 0 |
| 9 | Barbus | 56 |
| 10 | Mrigal | 1226 |
| 11 | Crabs | 0 |
| 12 | Common crabs | 1465 |
| 13 | Catla | 2170 |
| 14 | Gourami | 0 |
| 15 | Chamos | 8 |
| 16 | Eels | 3 |
| 17 | Labeo Rohitha | 1939 |
| 18 | Shrimp | 0 |
| 19 | Mussel | 11 |
| 20 | Edible Oyster | 0 |
| 21 | Miscellaneous | 286 |
| | Total | 10685 |

| 2009-2010 | | |
|------------------|------------------|--------------|
| Sl. No. | Name of Fish | Quantity |
| 1 | Prawn | 1548 |
| 2 | Etroplus | 162 |
| 3 | Murrels | 469 |
| 4 | Mullet | 440 |
| 5 | Cat fish | 467 |
| 6 | Jew fish | 112 |
| 7 | Tilapia | 353 |
| 8 | Labeo fimbriatus | 0 |
| 9 | Barbus | 56 |
| 10 | Mrigal | 1539 |
| 11 | Crabs | 0 |
| 12 | Common crabs | 1753 |
| 13 | Catla | 2891 |
| 14 | Gourami | 0 |
| 15 | Chamos | 8 |
| 16 | Eels | 3 |
| 17 | Labeo Rohitha | 2249 |
| 18 | Shrimp | 236 |
| 19 | Mussel | 15 |
| 20 | Edible Oyster | 0 |
| 21 | Miscellaneous | 266 |
| | Total | 12567 |

Total: 17.5

DISTRICT WISE SPECIES WISE VALUES OF INLAND FISHES IN THRISSUR (Rs in 000's)

| 2008-2009 | | |
|-----------|------------------|---------------|
| Sl. No. | Name of Fish | Value |
| 1 | Prawn | 333960 |
| 2 | Etroplus | 12150 |
| 3 | Murrels | 23250 |
| 4 | Mulletts | 41990 |
| 5 | Cat fish | 21808 |
| 6 | Jew fish | 4068 |
| 7 | Tilapia | 12495 |
| 8 | Labeo fimbriatus | 0 |
| 9 | Barbus | 1568 |
| 10 | Mrigal | 51492 |
| 11 | Crabs | 0 |
| 12 | Common crabs | 65925 |
| 13 | Catla | 97650 |
| 14 | Gourami | 0 |
| 15 | Chamos | 480 |
| 16 | Eels | 108 |
| 17 | Labeo Rohitha | 87255 |
| 18 | Shrimp | 0 |
| 19 | Mussel | 198 |
| 20 | Edible Oyster | 0 |
| 21 | Miscellaneous | 13728 |
| | Total | 768125 |

| 2009-2010 | | |
|-----------|------------------|---------------|
| Sl. No. | Name of Fish | Value |
| 1 | Prawn | 340560 |
| 2 | Etroplus | 21060 |
| 3 | Murrels | 23450 |
| 4 | Mulletts | 41800 |
| 5 | Cat fish | 21949 |
| 6 | Jew fish | 4032 |
| 7 | Tilapia | 12355 |
| 8 | Labeo fimbriatus | 0 |
| 9 | Barbus | 1568 |
| 10 | Mrigal | 64638 |
| 11 | Crabs | 0 |
| 12 | Common crabs | 78885 |
| 13 | Catla | 130095 |
| 14 | Gourami | 0 |
| 15 | Chamos | 480 |
| 16 | Eels | 108 |
| 17 | Labeo Rohitha | 101205 |
| 18 | Shrimp | 43660 |
| 19 | Mussel | 270 |
| 20 | Edible Oyster | 0 |
| 21 | Miscellaneous | 12768 |
| | Total | 898883 |

Source: Inland Fisheries Statistics, Dept of Fisheries

WETLAND

Wetlands play a vital role in maintaining the fragile environmental balance. Wetlands serve as sinks, sources and transformers of innumerable chemical, biological and genetic materials. They offer a unique habitat for a wide variety of flora and fauna as well. Wetlands are lands transitional between terrestrial and aquatic ecosystem where the water table is usually at or near the surface or the land is covered by shallow water. This definition, given by Cowardin et al (1979), is widely accepted by wetland scientists of the United States and is also used in India (Mitsch and Gosselink, 1989). Wetlands include the swamps, bogs, marshes, mires, fens and other wet ecosystems found throughout the world under different names. Wetland is an area of ground that is saturated with water either permanently or seasonally. Wetlands are categorized by their characteristic vegetation, which is adapted to these unique soil conditions.

Wetlands are found on every continent except Antarctica. The main functions of wetlands are as water purification systems flood control, shoreline stability and as reservoirs of biodiversity. Wetlands may be converted to agriculture or development or constructed as a water management tool as in the recent developing field of water sensitive urban design.

Wetlands have been categorized both biomes and ecosystem. A patch of land that develops pools of water after a rain storm would not be considered as a 'wetland' though the land is wet. Wetlands have unique characteristics. They are generally distinguished from other water bodies or landforms based on their water level and on the types of plants that thrive within their specifically wetlands are characterized as having a water table that stands at or near the land surface either permanently or seasonally for a large enough period each year to support aquatic plants.

Wetlands vary widely due to local and regional differences in topography, hydrology, vegetation and other factors including human interference. Wetlands can be divided into two main classes, tidal and non-tidal areas.

Wetland hydrology is associated with the spatial and dispersion, flow, and physio chemical attributes of surface and ground water in its reservoirs. Based on hydrology wetlands can be categorized as riveries (associated with streams) lacustrine (associated with lakes and reservoirs) and palustrine (isolated). Salinity

has a very strong influence on wetland water chemistry. In non-reverine wetlands natural salinity is regulated by interaction between ground and surface water, which may be influenced by human activity.

Carbon is the major nutrient cycled within wetlands. Most nutrients such as carbon, sulfur, phosphorus and nitrogen are found within the soil of wetlands. The biota of a wetland system includes its vegetation zones and structure as well as animal population and distribution which are highly dependent of water chemistry. The chemistry of water flowing into wetlands depends on the source of water and the geological material in which it flows through as well as the nutrients discharged from organic matter in the soils and plants at higher elevation as the slope wetlands.

There are four main groups of hydrophytes that found in wetland systems. Submerged water plants - found completely underwater, floating water plants usually small although it may take up a large surface area in wetland systems, emergent water plants seen above the surface of water but whose roots are completely submerged.

Fish are more dependent on wetland ecosystems than any other type of habitant. Frogs are the most crucial amphibian species in wetland systems.

Temperatures vary greatly depending on the location of the wetland. Rainfall also varies according its location.

Wetland reservoirs are very rich in our country which exhibit significant ecological diversity because of variability in climate conditions and topography.

Though small in size Kerala is land of affluent in water sources. 44 rivers drain the land of, which are west flowing and 3 flows east. Apart from these 44 rivers their tributaries and a countless number of streams and rivulets crisscross the land making it green and fertile and also serve as inland waterways.

Besides these rivers Kerala is bestowed with a number of lakes and backwater lagoon which add to the beauty of the land. The important wetlands of Kerala are Ashtamudi Lake, Vembanadu Lake and Sasthamkotta Lake. In the State of Kerala 1762 wetlands have been delineated. Total wetlands area estimated to 160590 ha. The major wetland types are River/stream (65162 ha) Lagoons (38442 ha) Reservoirs (26167 ha) and waterlogged (20305 ha). Analysis of wetland status in terms of open water and aquatic vegetation showed that around 88 and 83% of wetland area is under open water category during post monsoon and pre monsoon

respectively. Aquatic vegetation (floating/emergent) occupies around 8 and 6% of wetland area during post and pre monsoon respectively.

The wetlands can be broadly classified into inland fresh and saline as well as coastal fresh and saline areas. The coastal wetland ecosystems are often classified as tidal salt marshes, tidal freshwater marshes and mangrove wetlands; the inland wetland ecosystems, as inland fresh water marshes, peatlands, deepwater swamps and riparian wetlands. Examples of artificial wetlands are those of wild-life sanctuaries of Bharathpur and Kaziranga in India and the extensive man-managed rice fields in different parts of Asia.

The wetlands are among the most important ecosystems of the Earth. On a short-time scale, wetlands are useful as sources, sinks and transformers of a multitude of chemical, biological and genetic materials. They have been found to cleanse polluted waters, prevent floods, protect shorelines and recharge groundwater aquifers; further more wetlands provide unique habitats for a wide variety of flora and fauna. In a long-time scale, the swampy environment of the carboniferous Period produced and preserved many of the fossil fuels on which we depend now. Some scientists have rightly called the wetlands as 'nature's kidneys' because of the natural functions they perform.

Wetlands are the most productive life-supports system in the world and are of immense socio-economic and ecological importance to mankind. The management of these wetlands has become the most important concern of mankind today. The paddy wetlands are a potential source for the food security of the state. The area of these wetlands is shrinking at an alarming rate due to the shift from rice to cash crops and non-agricultural use. Scientific Management coupled with socioeconomic considerations will provide an effective tool to the planner for recognizing wetlands as one of the prime life-sustaining ecosystems. To save this unique inter-tidal ecosystem from being endangered its conservation and management as well as in river basin management policies/programmes.

Table:18.1

ANTHIKKAD BLOCK

| SI.No. | Category | Area (Ha) | | | | |
|--------|-------------------------------|----------------|----------------|----------------|----------------|----------------|
| | | Anthikkad | Arimpoor | Chazhoor | Manaloor | Thanniyam |
| 1 | Paddy - Virippu + Mundakan | 74.28 | 843.77 | 297.00 | 371.41 | 128.21 |
| 2 | Paddy Converted to Arecanut | | | | | |
| 3 | Paddy Converted to Banana | | 1.68 | 7.94 | | |
| 4 | Paddy Converted to Coconut | 705.93 | 10.57 | 858.89 | 270.36 | 425.44 |
| 5 | Paddy Converted to Mixed crop | 8.08 | | 4.61 | 58.93 | 12.79 |
| 6 | Other Land Use | 481.53 | 1330.95 | 1507 | 1128.63 | 1019.37 |
| | Panchayath Total | 1269.82 | 2186.97 | 2675.44 | 1829.33 | 1585.81 |
| | Block Total | | | 9547.37 | | |

Table:18.2

CHAVAKKAD BLOCK

| SI.No. | Category | Area (Ha) | | | | |
|--------|-------------------------------|---------------|---------------|----------------|----------------|----------------|
| | | Kadappuram | Orumanayoor | Punnayoor | Punnayoorkulam | Vadakkakkad |
| 1 | Paddy - Virippu + Mundakan | 9.14 | 5.85 | 211.24 | 186.25 | 201.19 |
| 2 | Paddy Converted to Arecanut | | | | | |
| 3 | Paddy Converted to Banana | | | | 8.30 | |
| 4 | Paddy Converted to Coconut | 8.72 | 2.39 | 194.63 | 45.33 | 0.21 |
| 5 | Paddy Converted to Mixed crop | | | | | |
| 6 | Other Land Use | 764.73 | 748.08 | 1237.36 | 1722.87 | 1168.34 |
| | Panchayath Total | 782.59 | 756.32 | 1643.23 | 1962.75 | 1369.74 |
| | Block Total | | | 6514.63 | | |

Table:18.3

PAZHAYANNOOR BLOCK

| SI.No. | Category | Chelakkara | Kondazhy | Panjai | Pazhayannoor | Thiruvilwamala | Vallathol Nagar |
|--------|-------------------------------|----------------|----------------|-----------------|----------------|----------------|-----------------|
| 1 | Paddy - Virippu + Mundakan | 1044.62 | 495.25 | 471.01 | 1090.16 | 735.90 | 651.35 |
| 2 | Paddy Converted to Arecanut | | | | | | |
| 3 | Paddy Converted to Banana | 2.77 | | 2.09 | | | 0.43 |
| 4 | Paddy Converted to Coconut | 6.37 | | 7.58 | 0.54 | | 0.88 |
| 5 | Paddy Converted to Mixed crop | | | | | | |
| 6 | Other Land Use | 4997.42 | 2531.55 | 2349.32 | 8036.26 | 3107.31 | 1248.31 |
| | Panchayath Total | 6051.18 | 3026.80 | 2830.00 | 9126.96 | 3843.21 | 1900.97 |
| | Block Total | | | 26779.12 | | | |

Table:18.4

PUZHAKKAL BLOCK

| SI.No. | Category | Adat | Avannoor | Kaiparamb | Kolazhy | Mulamkunna thukavu | Tholloor |
|--------|-------------------------------|----------------|----------------|-----------------|----------------|--------------------|----------------|
| 1 | Paddy - Virippu + Mundakan | 378.02 | 398.99 | 571.06 | 508.18 | 226.43 | 470.18 |
| 2 | Paddy Converted to Arecanut | 0.51 | | | | | |
| 3 | Paddy Converted to Banana | | | | | | |
| 4 | Paddy Converted to Coconut | 10.62 | 0.41 | 60.67 | 133.51 | 15.08 | 50.46 |
| 5 | Paddy Converted to Mixed crop | | | 0.69 | | | |
| 6 | Other Land Use | 1976.74 | 1331.13 | 1430.49 | 1041.16 | 1872.59 | 1035.22 |
| | Panchayath Total | 2365.89 | 1730.53 | 2062.91 | 1682.85 | 2114.10 | 1555.86 |
| | Block Total | | | 11512.14 | | | |

Table:18.5

CHERPPU BLOCK

| Sl.No. | Category | Area (Ha) | | | | |
|--------|-------------------------------|---------------|----------------|----------------|---------------|--|
| | | Avinissery | Cherppu | Paralam | Vallachira | |
| 1 | Paddy - Virippu + Mundakan | 27.11 | 521.62 | 391.24 | 76.69 | |
| 2 | Paddy Converted to Arecanut | | | | | |
| 3 | Paddy Converted to Banana | | 3.77 | 3.08 | 6.98 | |
| 4 | Paddy Converted to Coconut | 0.95 | 61.06 | 2.38 | 8.37 | |
| 5 | Paddy Converted to Mixed crop | 5.48 | 11.16 | | 3.59 | |
| 6 | Other Land Use | 739.4 | 1524.13 | 1311.08 | 877 | |
| | Panchayath Total | 772.94 | 2121.74 | 1707.78 | 972.63 | |
| | Block Total | | 5575.09 | | | |

Table:18.6

IRINGALAKUDA BLOCK

| Sl.No. | Category | Area (Ha) | | | | |
|--------|-------------------------------|----------------|----------------|----------------|----------------|--|
| | | Karalam | Kattoor | Muriyad | Parappukkara | |
| 1 | Paddy - Virippu + Mundakan | 581.12 | 140.43 | 382.13 | 668.84 | |
| 2 | Paddy Converted to Arecanut | | | | | |
| 3 | Paddy Converted to Banana | 8.84 | 1.89 | 8.25 | | |
| 4 | Paddy Converted to Coconut | 68.82 | 130.27 | 6.17 | 116.78 | |
| 5 | Paddy Converted to Mixed crop | | 0.34 | 2.55 | 0.43 | |
| 6 | Other Land Use | 1264.66 | 831.48 | 1959.75 | 1281.85 | |
| | Panchayath Total | 1923.44 | 1104.41 | 2358.85 | 2067.90 | |
| | Block Total | | 7454.60 | | | |

Table:18.7

CHALAKKUDY BLOCK

| Sl.No. | Category | Area (Ha) | | | | | |
|--------|-------------------------------|-----------------|-----------------|-----------------|----------------|----------------|----------------|
| | | Athirappilly | Kadlukutty | Kodassery | Koratty | Meloor | Pariyaram |
| 1 | Paddy - Virippu + Mundakan | 1.75 | 285.69 | 127.47 | 248.76 | 26.08 | 31.27 |
| 2 | Paddy Converted to Arecanut | | | | | | |
| 3 | Paddy Converted to Banana | | | | | | |
| 4 | Paddy Converted to Coconut | | 1.58 | | | | |
| 5 | Paddy Converted to Mixed crop | | | | | | |
| 6 | Other Land Use | 37589.87 | 1443.36 | 13512.77 | 2086.5 | 2337.64 | 2729.73 |
| | Panchayath Total | 37591.62 | 1730.63 | 13640.24 | 2335.26 | 2363.72 | 2761.00 |
| | Block Total | | 60422.47 | | | | |

Table:18.8

MALA BLOCK

| Sl.No. | Category | Area (Ha) | | | | | |
|--------|-------------------------------|----------------|-----------------|----------------|----------------|----------------|--|
| | | Aloor | Annamanada | Kuzhoor | Mala | Poyya | |
| 1 | Paddy - Virippu + Mundakan | 166.47 | 315.62 | 809.19 | 352.49 | 866.23 | |
| 2 | Paddy Converted to Arecanut | | | | | | |
| 3 | Paddy Converted to Banana | | | 0.83 | | | |
| 4 | Paddy Converted to Coconut | 1.81 | 1.47 | 28.64 | | 2.28 | |
| 5 | Paddy Converted to Mixed crop | 1.56 | 57.05 | | 1.57 | 9.7 | |
| 6 | Other Land Use | 3426.61 | 2088.66 | 1122.46 | 2443.93 | 1074.54 | |
| | Panchayath Total | 3596.45 | 2462.80 | 1961.12 | 2797.99 | 1952.75 | |
| | Block Total | | 12771.11 | | | | |

Table:18.9

KODAKARA BLOCK

| Sl.No. | Category | Alagappa Nagar | Kodakara | Mattathoor | Nenmani kvara | Pudukkad | Thrikkoor | Varanthara ppilly | Area (Ha) |
|--------|-------------------------------|----------------|----------------|-----------------|-----------------|----------------|----------------|-------------------|-----------|
| 1 | Paddy - Virippu + Mundakan | 600.58 | 188.62 | 348.93 | 122.07 | 274.09 | 295.47 | 277.99 | |
| 2 | Paddy Converted to Arecanut | | | | | | | | |
| 3 | Paddy Converted to Banana | | | | 3.41 | 0.04 | | | |
| 4 | Paddy Converted to Coconut | 21.48 | | | 114.60 | 33.91 | 104.00 | 7.80 | |
| 5 | Paddy Converted to Mixed crop | | 24.72 | | 17.20 | | 1.72 | | |
| 6 | Other Land Use | 1186.66 | 2000.57 | 14485.02 | 1030.09 | 1236.87 | 2027.79 | 11227.44 | |
| | Panchayath Total | 1808.72 | 2213.91 | 14833.95 | 1287.37 | 1544.91 | 2428.98 | 11513.23 | |
| | Block Total | | | | 35631.07 | | | | |

Table:18.10

MATHILAKOM BLOCK

| Sl.No. | Category | Edathiruthy | Edavilangu | Eriyad | Kaipaman galam | Mathilakom | Perinjanam | Sreenarayana puram | Area (Ha) |
|--------|-------------------------------|----------------|---------------|----------------|----------------|----------------|---------------|--------------------|-----------|
| 1 | Paddy - Virippu + Mundakan | 81.59 | | | 2.65 | 1.52 | 0.05 | 14.90 | |
| 2 | Paddy Converted to Arecanut | | | | | | | | |
| 3 | Paddy Converted to Banana | | | | 1.92 | | | | |
| 4 | Paddy Converted to Coconut | 249.38 | 84.67 | 52.74 | 12.69 | 154.65 | 34.00 | 172.30 | |
| 5 | Paddy Converted to Mixed crop | | 3.91 | | | 20.15 | | 9.88 | |
| 6 | Other Land Use | 1347.83 | 623.47 | 1495.43 | 1440.29 | 1151.21 | 849.79 | 1736.88 | |
| | Panchayath Total | 1678.80 | 712.05 | 1548.17 | 1457.55 | 1327.53 | 883.84 | 1933.96 | |
| | Block Total | | | | 9541.90 | | | | |

Table:18.11

MULLASSERY BLOCK

| Sl.No. | Category | Area (Ha) | | | | |
|--------|-------------------------------|----------------|----------------|---------------|----------------|--|
| | | Elavally | Mullassery | Pavaratty | Venkidangu | |
| 1 | Paddy - Virippu + Mundakan | 352.65 | 642.92 | 11.17 | 318.89 | |
| 2 | Paddy Converted to Arecanut | | | | | |
| 3 | Paddy Converted to Banana | | 2.81 | | 0.36 | |
| 4 | Paddy Converted to Coconut | 168.90 | 119.12 | 4.13 | 31.34 | |
| 5 | Paddy Converted to Mixed crop | 45.14 | 9.85 | | | |
| 6 | Other Land Use | 1170.62 | 993.33 | 932.20 | 1755.55 | |
| | Panchayath Total | 1737.31 | 1768.03 | 947.50 | 2106.14 | |
| | Block Total | 6558.98 | | | | |

Table:18.12

OLLOOKARA BLOCK

| Sl.No. | Category | Area (Ha) | | | | |
|--------|-------------------------------|----------------|-----------------|-----------------|-----------------|--|
| | | Madakkathara | Nadathara | Pananchery | Puthoor | |
| 1 | Paddy - Virippu + Mundakan | 250.81 | 319.49 | 220.39 | 494.83 | |
| 2 | Paddy Converted to Arecanut | | | | | |
| 3 | Paddy Converted to Banana | 1.89 | 0.71 | | 1.46 | |
| 4 | Paddy Converted to Coconut | 42.15 | 56.56 | 6.36 | 163.51 | |
| 5 | Paddy Converted to Mixed crop | | | | 106.4 | |
| 6 | Other Land Use | 2654.33 | 1707.85 | 9889.19 | 13092.36 | |
| | Panchayath Total | 2949.18 | 2084.61 | 10115.94 | 13858.56 | |
| | Block Total | | 29008.29 | | | |

Table:18.13

THALIKKULAM BLOCK

| SI.No. | Category | Engandiyoor | Nattika | Thalikulam | Area (Ha) | | |
|--------|-------------------------------|----------------|---------------|----------------|----------------|----------------|----------|
| | | | | | Vadanappilly | Valappad | Valappad |
| 1 | Paddy - Virippu + Mundakan | 5.19 | 1.34 | 6.11 | 4.86 | 20.20 | |
| 2 | Paddy Converted to Arecanut | | | | | | |
| 3 | Paddy Converted to Banana | | | | | | |
| 4 | Paddy Converted to Coconut | | | | 17.76 | 22.49 | |
| 5 | Paddy Converted to Mixed crop | | | | | | |
| 6 | Other Land Use | 1615.45 | 941.01 | 1008.38 | 1323.62 | 1577.17 | |
| | Panchayath Total | 1620.64 | 942.35 | 1014.49 | 1346.24 | 1619.86 | |
| | Block Total | | | 6543.58 | | | |

Table:18.14

VELLANGALLOOR BLOCK

| SI.No. | Category | Padiyoor | Poomangalam | Puthenchira | Area (Ha) | | |
|--------|-------------------------------|----------------|----------------|-----------------|----------------|----------------|------------|
| | | | | | Vellangalloor | Velookkara | Velookkara |
| 1 | Paddy - Virippu + Mundakan | 328.33 | 307.73 | 388.53 | 406.57 | 351.55 | |
| 2 | Paddy Converted to Arecanut | | | | | 0.59 | |
| 3 | Paddy Converted to Banana | | | | | | |
| 4 | Paddy Converted to Coconut | 15.56 | 11.38 | 8.47 | 104.49 | 51.16 | |
| 5 | Paddy Converted to Mixed crop | 72.85 | 32.74 | 8.12 | 6.10 | 19.09 | |
| 6 | Other Land Use | 1372.86 | 841.11 | 1982.45 | 1821.34 | 2363.27 | |
| | Panchayath Total | 1789.60 | 1192.96 | 2387.57 | 2338.50 | 2785.66 | |
| | Block Total | | | 10494.29 | | | |

Table:18.15

CHOWANNOOR BLOCK

| Sl. No. | Category | Choondal | Chowannoor | Kadangode | Kadavalloor | Kandanassery | Kattakampal | Porkulam | Area (Ha) | |
|---------|-------------------------------|----------------|----------------|----------------|-----------------|----------------|----------------|----------------|----------------|--|
| | | | | | | | | | Velloor | |
| 1 | Paddy - Virippu + Mundakan | 612.61 | 671.33 | 728.25 | 545.34 | 317.57 | 268.43 | 238.40 | 741.07 | |
| 2 | Paddy Converted to Arecanut | | | | | | | | | |
| 3 | Paddy Converted to Banana | | | | | | 20.76 | 1.85 | | |
| 4 | Paddy Converted to Coconut | 437.51 | 11.85 | 27.26 | 13.32 | 122.64 | 36.12 | 16.79 | 144.06 | |
| 5 | Paddy Converted to Mixed crop | | | | | 59.05 | 2.68 | | 0.38 | |
| 6 | Other Land Use | 999.17 | 1226.44 | 2523.82 | 1870.94 | 1002.57 | 1371.11 | 1073.23 | 2610.41 | |
| | Panchayath Total | 2049.29 | 1909.62 | 3279.33 | 2429.60 | 1501.83 | 1699.10 | 1330.27 | 3495.92 | |
| | Block Total | | | | 17694.96 | | | | | |

Table:18.16

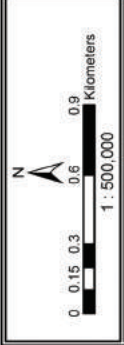
WADAKKANCHERY BLOCK

| Sl. No. | Category | Desaman galam | Eruma petty | Mulloorkara | Mundathi kode | Thekkum kara | Wadakkan chery | Varavoor | Area (Ha) | |
|---------|-------------------------------|----------------|----------------|----------------|-----------------|----------------|----------------|----------------|-----------|--|
| | | | | | | | | | | |
| 1 | Paddy - Virippu + Mundakan | 523.23 | 567.71 | 410.52 | 472.85 | 463.13 | 395.00 | 407.24 | | |
| 2 | Paddy Converted to Arecanut | | | | | | | | | |
| 3 | Paddy Converted to Banana | | 2.60 | | | | | 1.24 | | |
| 4 | Paddy Converted to Coconut | 3.73 | 46.45 | | 22.52 | 78.87 | 51.64 | 8.42 | | |
| 5 | Paddy Converted to Mixed crop | | | | | 0.64 | | | | |
| 6 | Other Land Use | 1741.41 | 2290.28 | 4191.43 | 1900 | 3496.11 | 2147.34 | 2560.48 | | |
| | Panchayath Total | 2268.37 | 2907.04 | 4601.95 | 2395.37 | 4038.75 | 2593.98 | 2977.38 | | |
| | Block Total | | | | 21782.84 | | | | | |

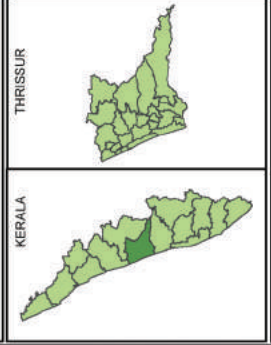
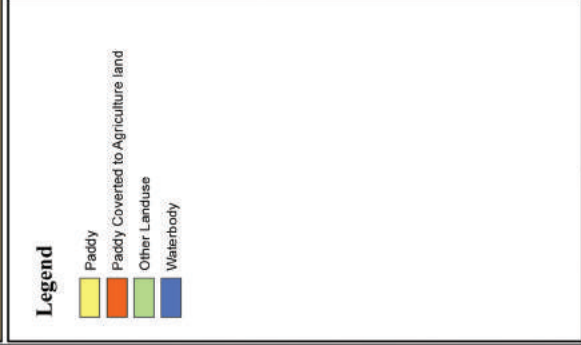
Table:18.17

MUNICIPALITY/CORPORATION

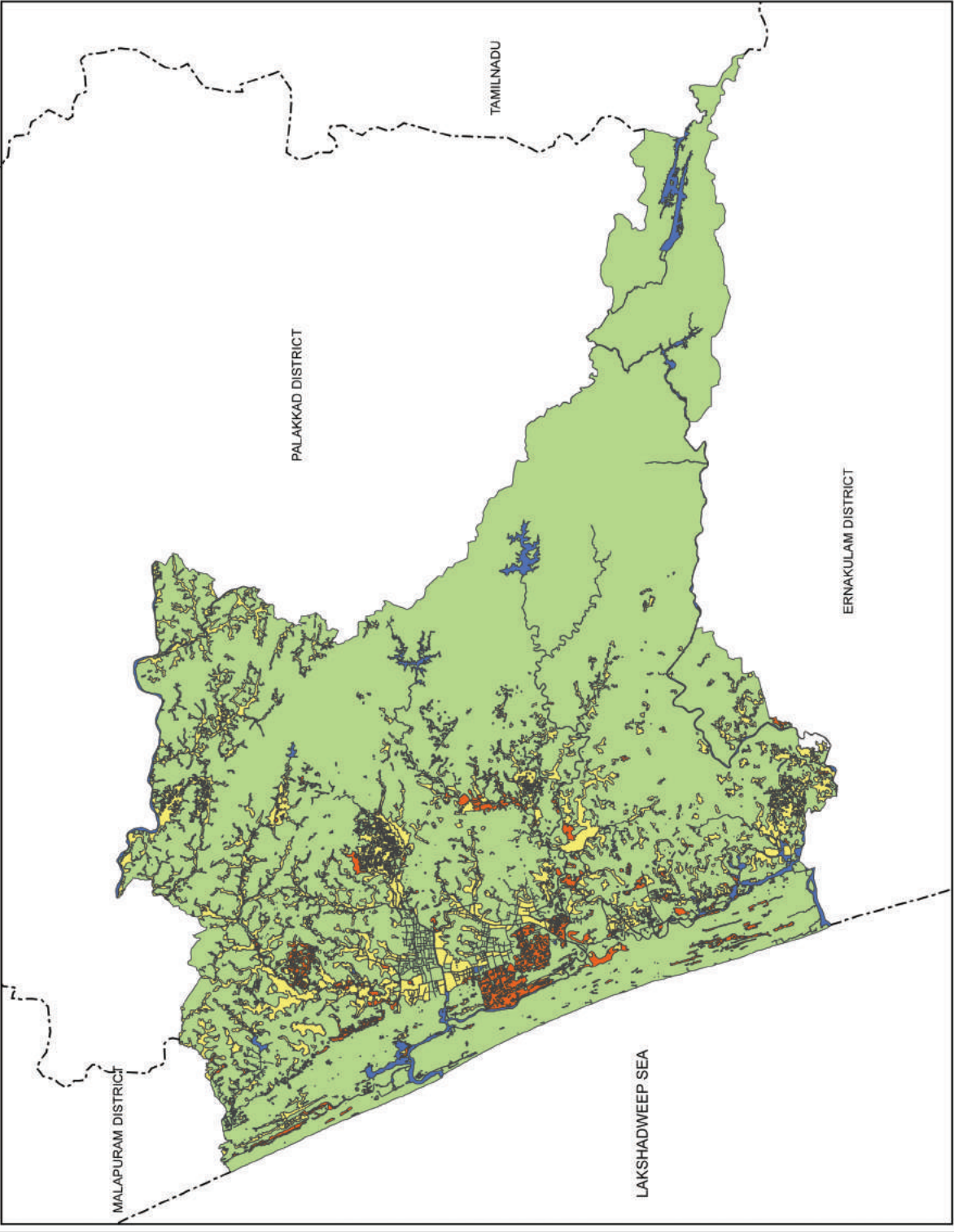
| Sl. No. | Category | Area (Ha) | | | | | | |
|---------|-------------------------------|----------------|----------------|-------------------------|------------------|------------------|-----------------|----------------|
| | | Chalakkudy (M) | Chavakkad (M) | Guruvayoor Township (M) | Iringalakuda (M) | Kodungalloor (M) | Kunnamkulam (M) | Thrissur (C) |
| 1 | Paddy - Virippu + Mundakan | 103.82 | 21.75 | 115.84 | 678.52 | 288.83 | 286.86 | 1498.73 |
| 2 | Paddy Converted to Arecanut | | | | | 0.73 | | |
| 3 | Paddy Converted to Banana | | | | 5.46 | | 4.32 | 3.16 |
| 4 | Paddy Converted to Coconut | | 80.68 | 82.85 | 164.21 | 34.31 | 6.43 | 18.18 |
| 5 | Paddy Converted to Mixed crop | 15.33 | | 2.27 | 89.87 | 9.90 | | |
| 6 | Other Land Use | 2414.28 | 1138.54 | 2738.44 | 2059.14 | 2569.55 | 1673.41 | |
| | Total | 2533.43 | 1240.97 | 2939.40 | 2997.20 | 2903.32 | 1971.02 | 1520.07 |



**WETLAND
THRISSUR DISTRICT**



Kerala State Land Use Board
Vikas Bhavan, Thiruvananthapuram-33



WASTELAND

Land is a critical natural resource

Land is one of the most important critical resources which determine the success of development planning of any region. Promoting optimum land use is an essential purpose in achieving the planned goals of economic efficiency and ecological activity. Identification of prime and unique lands for agriculture and prevention of its misuse, assume utmost importance for food, security and self-reliance. It is therefore imperative that for sustainable development, effort should be made to ensure that the available land in the state is put to wise and optimum use.

Wasteland in Kerala

It is a not an exaggeration to say that wasteland exist in Kerala, where the per capita availability of land is only 0.13 hectare and the average size of holding is 0.33 hectare. The studies by National Remote Sensing Agency (1985) using satellite imageries has revealed that cultivable and uncultivable wasteland exists in Kerala, and it amounts to 5.2 percent of the total geographical area. The State Land Use Board made an attempt to estimate the extent of wasteland in the State utilizing the primary data available from the Department of Economics and Statistics; the only source on land utilization statistics in the State (Extent of Wasteland in Kerala State Land Use Board, 1986). This study has shown that 8.15 percent of the geographical area or 11.09 percent of the non-forest area of the State is categorized as wasteland. Though the two figures are from two different methodologies and classifications, the area involved is much significant in the small State like ours, where the density of population and pressure on land are so high.

The National Wasteland Development Board has undertaken the mapping of wasteland in India on 1:50,000 scale during 1987-88. They have identified six districts having maximum area of wastelands, viz, Kasargod, Kannur, Wayanad, Malappuram, Palakkad and Idukki under Wasteland mapping Project Phase II at national level. Kerala State Land use Board undertook the task of identifying and mapping and completed the project, Later the remaining eight districts, viz. Alapuzha, Ernakulam, Kollam, Kottayam, Kozhikode, Pathanamthitta, Thiruvananthapuram and Thrissur were taken up under the project, Wasteland Mapping Phase V. The study revealed that there is a total area of 1457 sq.km (3.73 percent) under wasteland in the State.

Presently under this project, the updation of the wastelands was done using the LISS III satellite imagery of 2003. The data gathered by this task is presented for the use of various departments/agencies in the State engaged in the programme of reclamation of wastelands in the State.

Wasteland defined

Wasteland is defined as "degraded land which can be brought under vegetative cover with reasonable effort, and which is currently under utilized and land which is deteriorating for lack of appropriate water and soil management or on account of natural causes." Wastelands can result from inherent/imposed disabilities such as by location, environment, chemical and physical properties of the soil or financial or management constraints. These lands could fall under Government occupation, private occupation or forest lands. 13 categories of wasteland have been standardized and State and Central Government departments are using the same.

Wasteland classification

The wasteland categories standardized by National Remote Sensing Centre, Hyderabad for Kerala for this project is as follows:

1. Land with scrub
2. Land without scrub
3. Waterlogged – permanent
4. Waterlogged – seasonal
5. Under utilized/degraded notified forest land - scrub dominated
6. Degraded pastures/grazing land
7. Degraded land under plantation crop
8. Sands (riverine/coastal/desertic) - flood plain
9. Coastal sand
10. Mining/Industrial - Mining
11. Mining/Industrial – Industrial
12. Barren Rocky/Stony waste/Sheet rock
13. Steep slopping area

Brief description on spatial distribution and physical condition of wastelands in Thrissur district

Area and percentage to total of major categories of wasteland in the district are given below:-

Table: 19.1

| Sl. No. | Wasteland categories | Area in Ha. | Percentage to total Geographical area (Total area 302919 ha.) |
|---------|------------------------|-------------|---|
| 1 | Barren rocky area | 700.27 | 0.23 |
| 2 | Land with dense scrub | 2986.61 | 0.99 |
| 3 | Land with open scrub | 1445.62 | 0.47 |
| 4 | Sands reverine | 594.21 | 0.19 |
| 5 | Scrub dominated forest | 1442.95 | 0.47 |
| 6 | Waterlogged seasonal | 729.12 | 0.24 |
| 7 | Miscellaneous polygon | 294992.3 | 97.38 |

1. **Barren rocky area:-** It covers an area of 700.27 ha. which comes to 0.23% of the total geographical area of the district. It is mainly distributed in Thiruvilwamala (665.94 ha.), Athirappilly (27.70 ha.), Kodassery (6.63 ha.) Panchayats.
2. **Land with dense scrub:-** Land with dense scrub identified and mapped 2986.61 ha. which covers 0.99% of the total geographical area of the district. This is mainly distributed in Madakkathara (385.52 ha.), Panancherry (230.49 ha.), Thiruvilwamala (155.98 ha.) Panchayats.
3. **Land with open scrub:-** It is the third category of wasteland identified in the district. It covers in an area of 1445.62 ha. covering 0.47% of the total geographical area of the district. It is mainly identified in Mattathur (664.94 ha.), Athirappilly (169.95 ha.) and Varantharappilly (136.42 ha.) Panchayats.
4. **Sands reverine:-** This category of wasteland identified and mapped 594.21 ha. covering 0.19% of the total geographical area of the district. This is mainly seen in Desamangalam (201.46 ha.), Panjal (152.24 ha.) and Pazhayannur (126.53 ha.) Panchayats.

5. **Scrub dominated forest:-** It is another category of wasteland mapped in the district 1442.95 ha. area which covers 0.47% of the total geographical area. It is distributed mainly in Varantherappilly (793.71ha.), Mattathur (433.19 ha.) and Athirappilly (203.85 ha.) Panchayats.
6. **Waterlogged seasonal:-** This category of wasteland identified and mapped 729.12 ha. area which covers 0.24% of total geographical area of the district. This is distributed mainly in Puthur (340.38 ha.), Varantherappilly (198.68 ha.) and Kodakara (131.84 ha.) Panchayats.
7. **Miscellaneous Polygon:-** It is mapped an area of 294992.3 ha. covering 97.38% of the total geographical area of the district. These are distributed in Chalakkudy (37092.78 ha.), Mattathur (13498.73 ha.) and Puthur (13323.74 ha.) Panchayats.

Table:19.2

ANTHIKKAD BLOCK

| Sl.No. | Category | Area (Ha) | | | | | | |
|--------|-------------------------|----------------|----------------|----------------|----------------|-----------|--|----------------|
| | | Anthikkad | Arimpoor | Chazhoor | Manaloor | Thanniyam | | |
| 1 | Barren rocky area | | | | | | | |
| 2 | Coastal sands | | | | | | | |
| 3 | Land with dense scrub | | | | | | | |
| 4 | Land with open scrub | | | | | | | |
| 5 | Mining wastelands | | | | | | | |
| 6 | Miscellaneous polygon | 1269.82 | 2186.98 | 2675.45 | 1829.23 | | | 1585.81 |
| 7 | Sands - Riverine | | | | | | | |
| 8 | Scrub dominated forest | | | | | | | |
| 9 | Waterlogged - Seasonal | | | | | | | |
| | Panchayath Total | 1269.82 | 2186.98 | 2675.45 | 1829.23 | | | 1585.81 |
| | Block Total | | | 9547.29 | | | | |

Table:19.3

CHAVAKKAD BLOCK

| Sl.No. | Category | Area (Ha) | | | | | | |
|--------|-------------------------|---------------|---------------|----------------|----------------|-------------|--|----------------|
| | | Kadappuram | Orumanayoor | Punnayoor | Punnayoorkulam | Vadakkakkad | | |
| 1 | Barren rocky area | | | | | | | |
| 2 | Coastal sands | | | | | | | |
| 3 | Land with dense scrub | | | | | | | |
| 4 | Land with open scrub | | | | | | | |
| 5 | Mining wastelands | | | | | | | |
| 6 | Miscellaneous polygon | 782.58 | 756.32 | 1643.23 | 1962.75 | | | 1369.74 |
| 7 | Sands - Riverine | | | | | | | |
| 8 | Scrub dominated forest | | | | | | | |
| 9 | Waterlogged - Seasonal | | | | | | | |
| | Panchayath Total | 782.58 | 756.32 | 1643.23 | 1962.75 | | | 1369.74 |
| | Block Total | | | 6514.62 | | | | |

Table:19.4

CHERPPU BLOCK

| SI.No. | Category | Avinissery | Cherppu | Paralam | Vallachira | Area (Ha) |
|--------|-------------------------|---------------|----------------|----------------|------------|---------------|
| 1 | Barren rocky area | | | | | |
| 2 | Coastal sands | | | | | |
| 3 | Land with dense scrub | | | 14.04 | | |
| 4 | Land with open scrub | | | | | |
| 5 | Mining wastelands | | | | | |
| 6 | Miscellaneous polygon | 772.94 | 2121.74 | 1693.73 | | 972.63 |
| 7 | Sands - Riverine | | | | | |
| 8 | Scrub dominated forest | | | | | |
| 9 | Waterlogged - Seasonal | | | | | |
| | Panchayath Total | 772.94 | 2121.74 | 1707.77 | | 972.63 |
| | Block Total | | 5575.08 | | | |

Table:19.5

IRINGALAKKUDA BLOCK

| SI.No. | Category | Karalam | Kattoor | Muriyad | Parappookkara | Area (Ha) |
|--------|-------------------------|----------------|----------------|----------------|---------------|----------------|
| 1 | Barren rocky area | | | | | |
| 2 | Coastal sands | | | | | |
| 3 | Land with dense scrub | | | | | |
| 4 | Land with open scrub | | | | | |
| 5 | Mining wastelands | | | | | |
| 6 | Miscellaneous polygon | 1923.43 | 1104.41 | 2358.85 | | 2067.90 |
| 7 | Sands - Riverine | | | | | |
| 8 | Scrub dominated forest | | | | | |
| 9 | Waterlogged - Seasonal | | | | | |
| | Panchayath Total | 1923.43 | 1104.41 | 2358.85 | | 2067.90 |
| | Block Total | | 7454.59 | | | |

Table:19.6

CHALAKKUDY BLOCK

| SI.No. | Category | Athirappilly | Kadukutty | Kodassery | Koratty | Melloor | Pariyaram |
|--------|-------------------------|-----------------|----------------|-----------------|----------------|----------------|----------------|
| 1 | Barren rocky area | 27.70 | | 6.63 | | | |
| 2 | Coastal sands | | | | | | |
| 3 | Land with dense scrub | 42.47 | | 108.77 | 16.60 | | 48.00 |
| 4 | Land with open scrub | 169.95 | | 19.81 | 3.96 | | |
| 5 | Mining wastelands | | | | | | |
| 6 | Miscellaneous polygon | 37092.78 | 1730.64 | 13505.02 | 2314.71 | 2363.72 | 2713.00 |
| 7 | Sands - Riverine | | | | | | |
| 8 | Scrub dominated forest | 203.85 | | | | | |
| 9 | Waterlogged - Seasonal | 54.86 | | | | | |
| | Panchayath Total | 37591.61 | 1730.64 | 13640.23 | 2335.27 | 2363.72 | 2761.00 |
| | Block Total | | | 60422.47 | | | |

Area (Ha)

Table:19.7

MALA BLOCK

| SI.No. | Category | Aloor | Annamanada | Kuzhoor | Mala | Poyya |
|--------|-------------------------|----------------|----------------|-----------------|----------------|----------------|
| 1 | Barren rocky area | | | | | |
| 2 | Coastal sands | | | | | |
| 3 | Land with dense scrub | | | | | |
| 4 | Land with open scrub | | | | | |
| 5 | Mining wastelands | | | | | |
| 6 | Miscellaneous polygon | 3596.45 | 2462.81 | 1961.12 | 2797.99 | 1952.75 |
| 7 | Sands - Riverine | | | | | |
| 8 | Scrub dominated forest | | | | | |
| 9 | Waterlogged - Seasonal | | | | | |
| | Panchayath Total | 3596.45 | 2462.81 | 1961.12 | 2797.99 | 1952.75 |
| | Block Total | | | 12771.12 | | |

Area (Ha)

Table:19.8

MULLASSERY BLOCK

| Sl.No. | Category | Elavally | Mullassery | Pavaratty | Vengidangu | Area (Ha) |
|--------|-------------------------|----------------|----------------|--------------|----------------|-----------|
| 1 | Barren rocky area | | | | | |
| 2 | Coastal sands | | | | | |
| 3 | Land with dense scrub | 33.65 | | | | |
| 4 | Land with open scrub | | | | | |
| 5 | Mining wastelands | | | | | |
| 6 | Miscellaneous polygon | 1703.66 | 1768.03 | 947.50 | 2106.14 | |
| 7 | Sands - Riverine | | | | | |
| 8 | Scrub dominated forest | | | | | |
| 9 | Waterlogged - Seasonal | | | | | |
| | Panchayath Total | 1737.31 | 1768.03 | 947.5 | 2106.14 | |
| | Block Total | | 6558.98 | | | |

Table:19.9

OLLOOKKARA BLOCK

| Sl.No. | Category | Madakkathara | Nadathara | Pananchery | Puthoor | Area (Ha) |
|--------|-------------------------|----------------|-----------------|-----------------|-----------------|-----------|
| 1 | Barren rocky area | | | | | |
| 2 | Coastal sands | | | | | |
| 3 | Land with dense scrub | 385.52 | 44.63 | 230.49 | 175.25 | |
| 4 | Land with open scrub | | 30.20 | 66.55 | 7.00 | |
| 5 | Mining wastelands | | | | | |
| 6 | Miscellaneous polygon | 2563.65 | 2009.79 | 9746.55 | 13323.74 | |
| 7 | Sands - Riverine | | | | | |
| 8 | Scrub dominated forest | | | | | 12.20 |
| 9 | Waterlogged - Seasonal | | | 72.34 | 340.38 | |
| | Panchayath Total | 2949.17 | 2084.62 | 10115.93 | 13858.57 | |
| | Block Total | | 29008.29 | | | |

Table:19.10

PAZHAYANNOOR BLOCK

| Sl.No. | Category | Chelakkara | Kondazhy | Panjaj | Pazhayannoor | Thiruvilwamala | Vallathol Nagar | Area (Ha) |
|--------|-------------------------|----------------|----------------|----------------|-----------------|----------------|-----------------|----------------|
| 1 | Barren rocky area | | | | | 665.94 | | |
| 2 | Coastal sands | | | | | | | |
| 3 | Land with dense scrub | 123.10 | 53.22 | 33.93 | 112.89 | 155.98 | | 46.97 |
| 4 | Land with open scrub | 85.95 | | 98.87 | 42.92 | 13.74 | | 9.97 |
| 5 | Mining wastelands | | | | | | | |
| 6 | Miscellaneous polygon | 5842.13 | 2847.05 | 2544.95 | 8963.29 | 2982.08 | | 1755.52 |
| 7 | Sands - Riverine | | 126.53 | 152.24 | | 25.47 | | 88.51 |
| 8 | Scrub dominated forest | | | | | | | |
| 9 | Waterlogged - Seasonal | | | | 7.86 | | | |
| | Panchayath Total | 6051.18 | 3026.80 | 2829.99 | 9126.96 | 3843.21 | | 1900.97 |
| | Block Total | | | | 26779.11 | | | |

Table:19.11

PUZHAKKAL BLOCK

| Sl.No. | Category | Adat | Avannoor | Kaiparamb | Kolazhy | Mulamkunnathu kavu | Tholloor | Area (Ha) |
|--------|-------------------------|----------------|----------------|----------------|-----------------|--------------------|----------|----------------|
| 1 | Barren rocky area | | | | | | | |
| 2 | Coastal sands | | | | | | | |
| 3 | Land with dense scrub | 13.14 | 81.27 | 4.27 | 2.31 | 91.45 | | 3.36 |
| 4 | Land with open scrub | | | | | | | |
| 5 | Mining wastelands | | | | | 2.37 | | |
| 6 | Miscellaneous polygon | 2352.75 | 1649.26 | 2058.64 | 1680.54 | 2008.42 | | 1552.51 |
| 7 | Sands - Riverine | | | | | | | |
| 8 | Scrub dominated forest | | | | | | | |
| 9 | Waterlogged - Seasonal | | | | | 11.86 | | |
| | Panchayath Total | 2365.89 | 1730.53 | 2062.91 | 1682.85 | 2114.10 | | 1555.87 |
| | Block Total | | | | 11512.15 | | | |

Table:19.12

MATHILAKOM BLOCK

| SI.No. | Category | Edathiruthy | Edavilangu | Eriyad | Kaipa mangalam | Mathilakom | Perinjanam | Sreenarayana puram |
|--------|-------------------------|----------------|---------------|----------------|----------------|----------------|---------------|--------------------|
| 1 | Barren rocky area | | | | | | | |
| 2 | Coastal sands | | | | | | | |
| 3 | Land with dense scrub | | | | | | | |
| 4 | Land with open scrub | | | | | | | |
| 5 | Mining wastelands | | | | | | | |
| 6 | Miscellaneous polygon | 1678.80 | 712.04 | 1548.17 | 1457.55 | 1327.53 | 883.85 | 1933.96 |
| 7 | Sands - Riverine | | | | | | | |
| 8 | Scrub dominated forest | | | | | | | |
| 9 | Waterlogged - Seasonal | | | | | | | |
| | Panchayath Total | 1678.80 | 712.04 | 1548.17 | 1457.55 | 1327.53 | 883.85 | 1933.96 |
| | Block Total | | | | 9541.90 | | | |

Table:19.13

KODAKARA BLOCK

| SI.No. | Category | Alagappa Nagar | Kodakara | Mattathoor | Nenmani kkarra | Pudukkad | Thrikkoor | Varanthara ppilly |
|--------|-------------------------|----------------|----------------|-----------------|-----------------|----------------|----------------|-------------------|
| 1 | Barren rocky area | | | | | | | |
| 2 | Coastal sands | | | | | | | |
| 3 | Land with dense scrub | 18.48 | 8.78 | 105.26 | | 1.14 | 30.89 | 216.68 |
| 4 | Land with open scrub | 12.85 | | 664.94 | | | | 136.42 |
| 5 | Mining wastelands | | | | | | | |
| 6 | Miscellaneous polygon | 1777.39 | 2205.12 | 13498.73 | 1287.37 | 1543.77 | 2398.1 | 10299.58 |
| 7 | Sands - Riverine | | | | | | | |
| 8 | Scrub dominated forest | | | 433.19 | | | | 793.71 |
| 9 | Waterlogged - Seasonal | | | 131.84 | | | | 66.84 |
| | Panchayath Total | 1808.72 | 2213.90 | 14833.96 | 1287.37 | 1544.91 | 2428.99 | 11513.23 |
| | Block Total | | | | 35631.08 | | | |

Table:19.14

CHOWANNOOR BLOCK

| Sl. No. | Category | Choondal | Chowannoor | Kadangode | Kadavalloor | Kandanassery | Kattakampal | Porkulam | Area (Ha) | |
|---------|-------------------------|----------------|----------------|----------------|-----------------|----------------|----------------|----------------|-----------|----------------|
| | | | | | | | | | Velloor | |
| 1 | Barren rocky area | | | | | | | | | |
| 2 | Coastal sands | | | | | | | | | |
| 3 | Land with dense scrub | 18.26 | 13.78 | 83.18 | 54.33 | 2.09 | | 12.22 | | 69.85 |
| 4 | Land with open scrub | | | 2.98 | | | | | | |
| 5 | Mining wastelands | | | | | | | | | |
| 6 | Miscellaneous polygon | 2031.04 | 1895.83 | 3193.17 | 2375.27 | 1499.74 | 1699.10 | 1318.06 | | 3426.06 |
| 7 | Sands - Riverine | | | | | | | | | |
| 8 | Scrub dominated forest | | | | | | | | | |
| 9 | Waterlogged - Seasonal | | | | | | | | | |
| | Panchayath Total | 2049.30 | 1909.61 | 3279.33 | 2429.6 | 1501.83 | 1699.10 | 1330.28 | | 3495.91 |
| | Block Total | | | | 17694.96 | | | | | |

Table:19.15

WADAKKANCHERY BLOCK

| Sl. No. | Category | Desaman galam | Erumapetty | Mulloorkara | Mundathikode | Thekkumkara | Wadakkanchery | Varavoor | Area (Ha) | |
|---------|-------------------------|----------------|----------------|----------------|-----------------|----------------|----------------|----------------|-----------|--|
| | | | | | | | | | | |
| 1 | Barren rocky area | | | | | | | | | |
| 2 | Coastal sands | | | | | | | | | |
| 3 | Land with dense scrub | 85.88 | 33.66 | 14.63 | 40.79 | 42.91 | 41.03 | 92.75 | | |
| 4 | Land with open scrub | 33.45 | | 28.66 | 2.93 | | | 14.47 | | |
| 5 | Mining wastelands | | | | | | | | | |
| 6 | Miscellaneous polygon | 1947.57 | 2873.38 | 4553.94 | 2351.65 | 3957.22 | 2552.94 | 2870.16 | | |
| 7 | Sands - Riverine | 201.46 | | | | | | | | |
| 8 | Scrub dominated forest | | | | | | | | | |
| 9 | Waterlogged - Seasonal | | | 4.52 | | 38.62 | | | | |
| | Panchayath Total | 2268.36 | 2907.04 | 4601.75 | 2395.37 | 4038.75 | 2593.97 | 2977.38 | | |
| | Block Total | | | | 21782.62 | | | | | |

Table:19.16

VELLANGALLOOR BLOCK

| SI.No. | Category | Padiyoor | Poomangalam | Puthenchira | Vellangalloor | Velookkara |
|--------|-------------------------|-----------------|----------------|----------------|---------------|----------------|
| 1 | Barren rocky area | | | | | |
| 2 | Coastal sands | | | | | |
| 3 | Land with dense scrub | | | | | |
| 4 | Land with open scrub | | | | | |
| 5 | Mining wastelands | | | | | |
| 6 | Miscellaneous polygon | 1789.61 | 1192.96 | 2387.56 | 2338.5 | 2785.65 |
| 7 | Sands - Riverine | | | | | |
| 8 | Scrub dominated forest | | | | | |
| 9 | Waterlogged - Seasonal | | | | | |
| | Panchayath Total | 1789.61 | 1192.96 | 2387.56 | 2338.5 | 2785.65 |
| | Block Total | 10494.28 | | | | |

Table:19.17

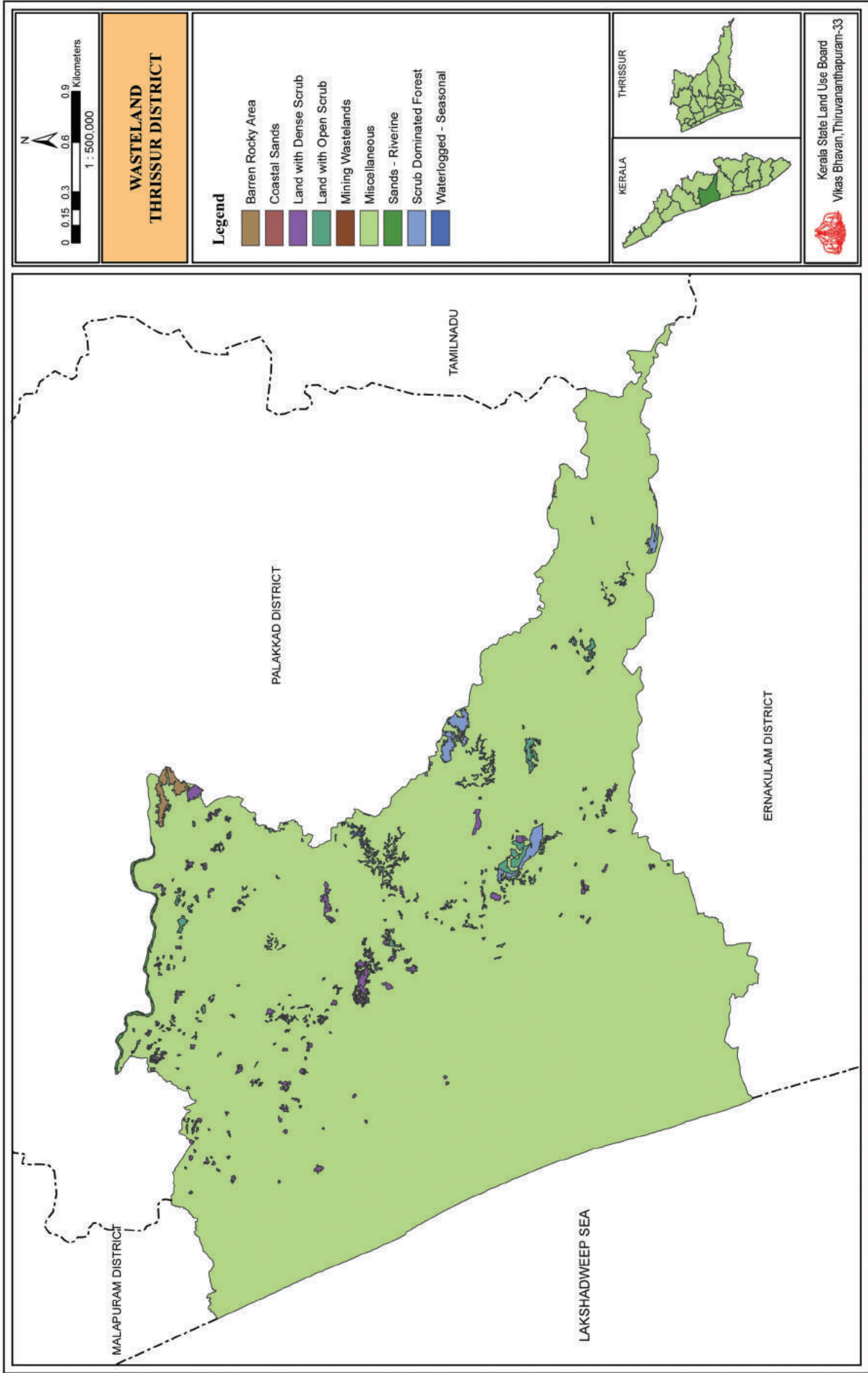
THALIKULAM BLOCK

| SI.No. | Category | Engandiyoor | Nattika | Thalikulam | Vadanappilly | Valappad |
|--------|-------------------------|----------------|---------------|----------------|----------------|----------------|
| 1 | Barren rocky area | | | | | |
| 2 | Coastal sands | | | | | |
| 3 | Land with dense scrub | | | | | |
| 4 | Land with open scrub | | | | | |
| 5 | Mining wastelands | | | | | |
| 6 | Miscellaneous polygon | 1620.65 | 942.36 | 1014.49 | 1346.24 | 1619.86 |
| 7 | Sands - Riverine | | | | | |
| 8 | Scrub dominated forest | | | | | |
| 9 | Waterlogged - Seasonal | | | | | |
| | Panchayath Total | 1620.65 | 942.36 | 1014.49 | 1346.24 | 1619.86 |
| | Block Total | 6543.60 | | | | |

Table:19.18

MUNICIPALITY/CORPORATION

| Sl. No. | Category | Area (Ha) | | | | | | | |
|---------|------------------------|----------------|----------------|-------------------------|------------------|-----------------|------------------|-----------------|--------|
| | | Chalakkudy (M) | Chavakkad (M) | Guruvayoor Township (M) | Iringalakuda (M) | Kunnamkulam (M) | Kodungalloor (M) | Thrissur (C) | |
| 1 | Barren rocky area | | | | | | | | |
| 2 | Coastal sands | | | | | | | | |
| 3 | Land with dense scrub | 10.04 | | | | | | | 168.67 |
| 4 | Land with open scrub | | | | | | | | |
| 5 | Mining wastelands | | | | | | | | |
| 6 | Miscellaneous polygon | 2523.40 | 1240.98 | 2939.40 | 2997.21 | 1971.01 | 2903.33 | 10307.22 | |
| 7 | Sands - Riverine | | | | | | | | |
| 8 | Scrub dominated forest | | | | | | | | |
| 9 | Waterlogged - Seasonal | | | | | | | | |
| | Total | 2533.44 | 1240.98 | 2939.40 | 2997.21 | 1971.01 | 2903.33 | 10475.89 | |



WATERSHED

Watershed development and management is an integration of technology within the natural boundary of a drainage area for optimum development of land, water and plant resources to meet the basic minimum needs of the people in a sustained manner. The poor in the rural areas who are struggling for survival cannot be expected to pay heed to the conservation strategy unless their daily needs of food, fiber and fuel are met with. A still more urgent need is for assured and full employment for all. Integrated watershed development and management is not only the most effective solutions to many of the problems mentioned above, but also effective solution to many other common problems like drought, floods etc. It includes the integration of many scattered programs of soil conservation, afforestation, minor irrigation, crop production, tree plantation, fodder development and other development activities into a well prepared micro watershed project based on study of climate, land, water & plant resources on the one hand and man, animal resources on the other, offers hope for bringing about sustained natural resources development.

It also provides solution to many environmental problems like soil erosion, siltation, improper land use, lowering ground water table etc. Once these are solved the overall productivity, income of the family and employment opportunity in the villages could be increased and thereby the living conditions of the rural population can be enhanced.

The rain water after absorbed by the soil, flows as runoff in small gullies, rivulets and joins the stream and form river system. This represents a natural drainage system. The river basin at macro level and watershed /sub watershed at microlevel represent the Natural Drainage System.

A watershed is an area from which runoff, resulting from precipitation flows past a single point into a large stream, river, lake or an ocean. In other words a watershed is that area in which all the precipitation converges and drains past a particular point. The term watershed, catchment area of drainage basin can be used interchangeably. A watershed may be only a few hectares as in the case of small ponds, or hundreds of square kilometers as in the case of rivers or big reservoirs. For convenience watershed are classified in terms of size into: Basins, Catchments, Sub catchments, Watershed, Sub watershed, Mini & Micro watersheds. Each watershed is an independent hydrological unit; any modification of the land use in the watershed will be reflected on the water as well as in the sediment yield of the watershed.

The watershed can be demarcated from the topo sheet. But for a small (micro) watershed a detailed topographical survey has to be made and a contour map may have to be prepared. The ridge points are marked and the area below the ridge line is known as the watershed area. This contour map can be imposed with the village map. In case of small watershed, it could be demarcated by walking over the ridge point.

Watershed has become an acceptable unit of planning for optimum use and conservation of soil and water resources. A watershed is hydrological units which produce water as an end product by interaction of rainfall and watershed factor.

Table: 20.1

WATERSHED DETAILS

| Block | Panchayath | WS Code | Area (Ha) | | |
|--------------|-------------------|----------------|------------------|--------|------|
| Anthikkad | Anthikkad | 17K1a | 56.18 | | |
| | | 17K39a | 1.03 | | |
| | | 18K42a | 4.79 | | |
| | | 18K46a | 6.32 | | |
| | | 18K47a | 1195.09 | | |
| | | 18K49a | 1.61 | | |
| | | 18K51a | 4.79 | | |
| | | | 1269.82 | | |
| | | Arimpoor | Arimpoor | 18K37a | 0.03 |
| | | | | 18K40s | 4.66 |
| 18K41a | 807.37 | | | | |
| 18K42a | 1041.70 | | | | |
| 18K43a | 293.39 | | | | |
| 18K45a | 5.66 | | | | |
| 18K46a | 21.68 | | | | |
| 18K47a | 7.24 | | | | |
| 18K48a | 5.24 | | | | |
| | 2186.98 | | | | |
| Chazhoor | Chazhoor | 17K2a | 823.51 | | |
| | | 17K36a | 1.10 | | |
| | | 17K3a | 519.28 | | |
| | | 17K4a | 311.57 | | |
| | | 17K5a | 0.73 | | |
| | | 17K7a | 0.13 | | |
| | | 17K8a | 47.31 | | |
| | | 18K42a | 11.05 | | |
| | | 18K46a | 322.68 | | |
| | | 18K47a | 638.09 | | |
| | | | 2675.45 | | |
| | | Manaloor | Manaloor | 18K37a | 0.55 |
| | | | | 18K41a | 0.71 |
| 18K47a | 364.12 | | | | |
| 18K48a | 630.78 | | | | |
| 18K49a | 815.85 | | | | |
| 18K50a | 17.19 | | | | |
| 18K8a | 0.14 | | | | |
| | 1829.33 | | | | |
| Thanniyam | Thanniyam | 17K1a | 1235.52 | | |
| | | 17K2a | 220.64 | | |
| | | 17K36a | 0.39 | | |
| | | 17K37a | 9.17 | | |
| | | 17K39a | 21.56 | | |
| | 17K3a | 7.01 | | | |

| Block | Panchayath | WS Code | Area (Ha) |
|------------|--------------|---------|----------------|
| | | 18K47a | 91.53 |
| | | | 1585.81 |
| | | | 9547.39 |
| Chalakkudy | Athirappilly | 14P30e | 546.51 |
| | | 14P30f | 6.34 |
| | | 14P30h | 1426.95 |
| | | 14P30i | 16.65 |
| | | 14P30j | 86.27 |
| | | 14P30k | 199.17 |
| | | 14P30l | 125.71 |
| | | 16C10a | 224.83 |
| | | 16C11a | 289.16 |
| | | 16C12a | 511.00 |
| | | 16C13a | 179.17 |
| | | 16C13b | 489.83 |
| | | 16C13c | 412.36 |
| | | 16C14a | 632.11 |
| | | 16C15a | 614.31 |
| | | 16C16a | 1122.00 |
| | | 16C16b | 794.31 |
| | | 16C16c | 10.87 |
| | | 16C16f | 261.58 |
| | | 16C16g | 742.02 |
| | | 16C16h | 652.73 |
| | | 16C16i | 376.90 |
| | | 16C17a | 293.33 |
| | | 16C18a | 338.32 |
| | | 16C18b | 1074.32 |
| | | 16C18c | 689.04 |
| | | 16C19a | 716.98 |
| | | 16C20a | 756.52 |
| | | 16C21a | 1356.62 |
| | | 16C22a | 452.89 |
| | | 16C22b | 292.87 |
| | | 16C22o | 1.80 |
| | | 16C32a | 9.59 |
| | | 16C33a | 56.66 |
| | | 16C33b | 39.60 |
| | | 16C34a | 0.03 |
| | | 16C35a | 0.06 |
| | | 16C36a | 0.16 |
| | | 16C37a | 0.03 |
| | | 16C38a | 2.30 |
| | | 16C38b | 0.11 |
| | | 16C38c | 766.31 |
| | | 16C38d | 972.99 |

| Block | Panchayath | WS Code | Area (Ha) |
|-------|------------|---------|-----------------|
| | | 16C38e | 1357.45 |
| | | 16C38f | 451.73 |
| | | 16C38g | 691.91 |
| | | 16C38h | 392.95 |
| | | 16C38i | 592.94 |
| | | 16C38j | 794.69 |
| | | 16C38k | 624.59 |
| | | 16C38l | 647.19 |
| | | 16C38m | 791.87 |
| | | 16C38n | 646.30 |
| | | 16C38o | 358.23 |
| | | 16C38p | 1080.12 |
| | | 16C39a | 522.35 |
| | | 16C40a | 1096.48 |
| | | 16C41a | 999.76 |
| | | 16C42a | 490.93 |
| | | 16C42b | 1613.19 |
| | | 16C42c | 1569.52 |
| | | 16C43a | 1401.06 |
| | | 16C44a | 855.89 |
| | | 16C44b | 406.75 |
| | | 16C44c | 248.36 |
| | | 16C45a | 366.87 |
| | | 16C45b | 11.31 |
| | | 16C45c | 29.55 |
| | | 16C46a | 58.20 |
| | | 16C47a | 30.95 |
| | | 16C48a | 28.64 |
| | | 16C8d | 2.65 |
| | | 16C8e | 433.49 |
| | | 16C8f | 32.27 |
| | | 16C8g | 3.92 |
| | | 16C9a | 48.54 |
| | | 17K28aa | 1319.46 |
| | | 17K28y | 50.19 |
| | | | 37591.62 |
| | Kadukutty | 14P15c | 4.23 |
| | | 14P15d | 20.77 |
| | | 16C2a | 0.00 |
| | | 16C4a | 36.70 |
| | | 16C52a | 0.16 |
| | | 16C53a | 1066.61 |
| | | 16C54a | 119.02 |
| | | 16C54c | 1.14 |
| | | 16C5a | 474.12 |
| | | 16C6a | 7.88 |

| Block | Panchayath | WS Code | Area (Ha) |
|-------|------------|---------|-----------------|
| | | | 1730.64 |
| | Kodassery | 16C13b | 0.07 |
| | | 16C16b | 13.71 |
| | | 16C16c | 795.99 |
| | | 16C16d | 439.50 |
| | | 16C16e | 293.67 |
| | | 16C16f | 1244.25 |
| | | 16C22a | 7.00 |
| | | 16C22b | 893.24 |
| | | 16C22c | 565.57 |
| | | 16C22m | 0.41 |
| | | 16C22o | 1.41 |
| | | 16C7a | 1.55 |
| | | 16C8a | 470.09 |
| | | 16C8b | 573.68 |
| | | 16C8c | 745.58 |
| | | 16C8d | 963.38 |
| | | 16C8e | 147.00 |
| | | 16C8f | 6.13 |
| | | 17K28aa | 1407.65 |
| | | 17K28ab | 549.88 |
| | | 17K28ac | 114.77 |
| | | 17K28ag | 5.46 |
| | | 17K28ah | 1828.47 |
| | | 17K28ai | 669.06 |
| | | 17K28x | 15.95 |
| | | 17K28y | 972.91 |
| | | 17K28z | 486.22 |
| | | 17K31b | 427.65 |
| | | | 13640.24 |
| | Koratty | 14P21c | 118.53 |
| | | 16C51a | 212.51 |
| | | 16C52a | 141.03 |
| | | 16C53a | 357.41 |
| | | 16C54a | 278.14 |
| | | 16C54b | 808.35 |
| | | 16C54c | 419.30 |
| | | | 2335.26 |
| | Meloor | 16C49a | 271.39 |
| | | 16C50a | 444.08 |
| | | 16C51a | 788.63 |
| | | 16C52a | 821.47 |
| | | 16C53a | 38.15 |
| | | | 2363.72 |
| | Pariyaram | 16C10a | 172.83 |
| | | 16C11a | 108.37 |

| Block | Panchayath | WS Code | Area (Ha) |
|-------------------------|----------------|---------|-----------------|
| | | 16C48a | 26.15 |
| | | 16C49a | 29.62 |
| | | 16C50a | 33.15 |
| | | 16C51a | 22.76 |
| | | 16C7a | 462.89 |
| | | 16C8a | 185.09 |
| | | 16C8b | 0.62 |
| | | 16C8c | 31.56 |
| | | 16C8d | 3.66 |
| | | 16C8e | 7.60 |
| | | 16C8f | 833.55 |
| | | 16C8g | 420.20 |
| | | 16C9a | 422.95 |
| | | | 2761.00 |
| | | | 60422.48 |
| Chalakkudy Municipality | | 16C51a | 0.70 |
| | | 16C52a | 51.81 |
| | | 16C53a | 32.13 |
| | | 16C6a | 28.52 |
| | | 16C6b | 130.55 |
| | | 16C6c | 965.82 |
| | | 16C6d | 959.09 |
| | | 16C7a | 179.73 |
| | | 16C8a | 1.45 |
| | | 17K31b | 130.51 |
| | | 17K31c | 53.13 |
| | | | 2533.44 |
| | | | 2533.44 |
| Chavakkad | Kadappuram | 18K1a | 299.07 |
| | | 18K3a | 79.80 |
| | | 18K4a | 378.63 |
| | | 18K50a | 6.00 |
| | | 18K6a | 0.00 |
| | | 18K7a | 19.07 |
| | | | 782.58 |
| | Orumanayoor | 18K1a | 743.89 |
| | | 18K3a | 12.36 |
| | | 18K4a | 0.07 |
| | | | 756.32 |
| | Punnayoor | 18K1a | 196.06 |
| | | 18K2a | 42.43 |
| | | 19K20a | 1404.74 |
| | | | 1643.23 |
| | Punnayoorkulam | 19K14a | 0.07 |
| | | 19K14c | 112.71 |
| | | 19K14d | 665.86 |

| Block | Panchayath | WS Code | Area (Ha) |
|------------------------|-------------|---------|----------------|
| | | 19K15a | 15.48 |
| | | 19K19a | 748.84 |
| | | 19K20a | 339.56 |
| | | 19K5a | 15.73 |
| | | 999 | 64.50 |
| | | | 1962.75 |
| | Vadakkekkad | 18K2a | 92.38 |
| | | 19K14c | 55.30 |
| | | 19K14d | 858.74 |
| | | 19K20a | 363.32 |
| | | | 1369.74 |
| | | | 6514.63 |
| Chavakkad Municipality | | 18K1a | 767.10 |
| | | 18K2a | 163.31 |
| | | 18K3a | 157.99 |
| | | 18K4a | 91.05 |
| | | 18K5a | 61.52 |
| | | | 1240.98 |
| | | | 1240.98 |
| Cherppu | Avinissery | 17K7a | 356.10 |
| | | 17K9a | 170.63 |
| | | 18K45a | 246.22 |
| | | | 772.94 |
| | Cherppu | 17K30a | 7.68 |
| | | 17K35a | 9.79 |
| | | 17K3a | 5.42 |
| | | 17K4a | 33.80 |
| | | 17K5a | 195.61 |
| | | 17K6a | 2.42 |
| | | 17K7a | 905.98 |
| | | 17K8a | 928.70 |
| | | 17K9a | 32.33 |
| | | | 2121.74 |
| | Paralam | 17K2a | 0.29 |
| | | 17K3a | 35.48 |
| | | 17K5a | 159.28 |
| | | 17K6a | 439.67 |
| | | 17K7a | 302.65 |
| | | 18K42a | 0.57 |
| | | 18K43a | 4.29 |
| | | 18K45a | 656.34 |
| | | 18K46a | 99.61 |
| | | 18K47a | 9.59 |
| | | | 1707.77 |
| | Vallachira | 17K27c | 1.75 |
| | | 17K28a | 0.10 |

| Block | Panchayath | WS Code | Area (Ha) |
|------------|--------------|---------|----------------|
| | | 17K28ak | 0.97 |
| | | 17K29a | 77.46 |
| | | 17K30a | 26.54 |
| | | 17K8a | 366.46 |
| | | 17K9a | 499.36 |
| | | | 972.63 |
| | | | 5575.09 |
| Chowannoor | Choondal | 18K10a | 25.66 |
| | | 18K11a | 641.11 |
| | | 18K28a | 0.05 |
| | | 18K29a | 544.72 |
| | | 18K30a | 611.04 |
| | | 18K33a | 22.64 |
| | | 18K9b | 204.08 |
| | | | 2049.30 |
| | Chowannoor | 18K11a | 1124.39 |
| | | 18K12a | 4.57 |
| | | 18K9b | 430.15 |
| | | 19K14b | 350.50 |
| | | | 1909.62 |
| | Kadangode | 18K11a | 382.01 |
| | | 18K12a | 710.48 |
| | | 18K12b | 324.53 |
| | | 18K12c | 756.09 |
| | | 18K13a | 830.63 |
| | | 18K14a | 205.02 |
| | | 18K29a | 6.71 |
| | | 19K14b | 63.86 |
| | | | 3279.33 |
| | Kadavalloor | 18K12a | 114.84 |
| | | 18K12b | 226.54 |
| | | 18K12c | 0.31 |
| | | 19K10a | 959.23 |
| | | 19K11a | 779.84 |
| | | 19K14b | 258.10 |
| | | 19K6a | 0.60 |
| | | 19K7d | 0.52 |
| | | 19K8a | 2.92 |
| | | 19K9a | 86.71 |
| | | | 2429.60 |
| | Kandanassery | 18K10a | 490.67 |
| | | 18K11a | 9.25 |
| | | 18K30a | 82.79 |
| | | 18K9a | 1.24 |
| | | 18K9b | 489.11 |
| | | 18K9c | 411.51 |

| Block | Panchayath | WS Code | Area (Ha) |
|----------------------------------|-------------|---------|-----------------|
| | | 18K9d | 17.26 |
| | | | 1501.84 |
| | Kattakampal | 19K11a | 82.79 |
| | | 19K12a | 450.23 |
| | | 19K13a | 300.40 |
| | | 19K14a | 619.69 |
| | | 19K14b | 224.32 |
| | | 19K14c | 10.40 |
| | | 19K14d | 1.86 |
| | | 19K5a | 4.49 |
| | | 19K6a | 4.90 |
| | | | 1699.10 |
| | Porkulam | 18K11a | 95.40 |
| | | 19K11a | 0.13 |
| | | 19K14a | 275.72 |
| | | 19K14b | 950.83 |
| | | 19K14c | 8.20 |
| | | | 1330.27 |
| | Veloor | 18K12a | 21.88 |
| | | 18K12c | 56.41 |
| | | 18K13a | 399.90 |
| | | 18K14a | 257.96 |
| | | 18K14c | 37.64 |
| | | 18K15a | 34.19 |
| | | 18K26b | 110.09 |
| | | 18K27a | 759.05 |
| | | 18K28a | 965.58 |
| | | 18K29a | 89.82 |
| | | 18K33a | 302.49 |
| | | 18K34a | 219.83 |
| | | 18K40b | 101.18 |
| | | 18K40c | 139.90 |
| | | | 3495.92 |
| | | | 17694.98 |
| Guruvayoor Township Municipality | | 18K1a | 4.94 |
| | | 18K2a | 1125.69 |
| | | 18K3a | 4.23 |
| | | 18K4a | 38.11 |
| | | 18K5a | 534.44 |
| | | 18K6a | 526.61 |
| | | 18K7a | 53.66 |
| | | 18K9a | 132.99 |
| | | 18K9b | 437.29 |
| | | 18K9c | 1.62 |
| | | 19K14d | 79.30 |
| | | 19K20a | 0.52 |

| Block | Panchayath | WS Code | Area (Ha) |
|---------------------------|---------------|---------|----------------|
| | | | 2939.40 |
| | | | 2939.40 |
| Iringalakuda Municipality | | 14P10a | 54.90 |
| | | 17K29a | 127.56 |
| | | 17K30a | 381.55 |
| | | 17K32a | 1057.44 |
| | | 17K33a | 201.20 |
| | | 17K34a | 1075.60 |
| | | 17K35a | 98.54 |
| | | 17K8a | 0.42 |
| | | | 2997.21 |
| | | | 2997.21 |
| Iringalakuda | Karalam | 17K30a | 2.10 |
| | | 17K34a | 988.75 |
| | | 17K35a | 439.89 |
| | | 17K36a | 470.55 |
| | | 17K3a | 6.09 |
| | | 17K4a | 12.42 |
| | | 17K8a | 3.62 |
| | | | 1923.43 |
| | Kattoor | 17K1a | 5.80 |
| | | 17K2a | 0.02 |
| | | 17K34a | 152.38 |
| | | 17K36a | 941.69 |
| | | 17K37a | 1.70 |
| | | 17K3a | 2.83 |
| | | | 1104.41 |
| | Muriyad | 14P15b | 125.38 |
| | | 17K31a | 12.51 |
| | | 17K31c | 80.59 |
| | | 17K31d | 215.69 |
| | | 17K32a | 1924.69 |
| | | | 2358.85 |
| | Parappookkara | 17K28a | 20.09 |
| | | 17K28aj | 126.81 |
| | | 17K28ak | 220.89 |
| | | 17K28b | 19.08 |
| | | 17K29a | 700.43 |
| | | 17K31a | 490.63 |
| | | 17K31b | 198.74 |
| | | 17K31c | 39.76 |
| | | 17K31d | 215.82 |
| | | 17K32a | 32.53 |
| | | 17K33a | 2.00 |
| | | 17K8a | 1.11 |
| | | | 2067.90 |

| Block | Panchayath | WS Code | Area (Ha) |
|----------|----------------|---------|-----------------|
| | | | 7454.59 |
| Kodakara | Alagappa Nagar | 17K27a | 111.44 |
| | | 17K27c | 1446.80 |
| | | 17K28a | 15.86 |
| | | 17K28b | 233.66 |
| | | 17K9a | 0.97 |
| | | | 1808.73 |
| | Kodakara | 16C6c | 11.59 |
| | | 17K31b | 952.94 |
| | | 17K31c | 1249.38 |
| | | | 2213.91 |
| | Mattathoor | 16C16c | 31.18 |
| | | 16C16d | 424.97 |
| | | 16C16f | 0.61 |
| | | 16C22c | 280.90 |
| | | 17K28ab | 182.73 |
| | | 17K28ac | 726.04 |
| | | 17K28ad | 509.21 |
| | | 17K28ag | 1672.32 |
| | | 17K28ah | 628.63 |
| | | 17K28ai | 888.66 |
| | | 17K28aj | 129.48 |
| | | 17K28b | 25.25 |
| | | 17K28h | 2.50 |
| | | 17K28i | 9.33 |
| | | 17K28j | 2.88 |
| | | 17K28k | 5.18 |
| | | 17K28l | 7.61 |
| | | 17K28m | 14.85 |
| | | 17K28n | 0.89 |
| | | 17K28o | 6.92 |
| | | 17K28p | 1066.65 |
| | | 17K28q | 753.10 |
| | | 17K28r | 991.18 |
| | | 17K28s | 521.63 |
| | | 17K28t | 625.15 |
| | | 17K28u | 1001.36 |
| | | 17K28v | 677.47 |
| | | 17K28w | 1909.52 |
| | | 17K28x | 780.74 |
| | | 17K28y | 724.78 |
| | | 17K28z | 0.75 |
| | | 17K31b | 231.50 |
| | | | 14833.95 |
| | Nenmanikkara | 17K10a | 94.09 |
| | | 17K26a | 0.55 |

| Block | Panchayath | WS Code | Area (Ha) |
|-------|------------------|---------|----------------|
| | | 17K27a | 0.16 |
| | | 17K27c | 293.89 |
| | | 17K28a | 183.51 |
| | | 17K28ak | 6.38 |
| | | 17K9a | 708.79 |
| | | | 1287.37 |
| | Pudukkad | 17K27c | 186.79 |
| | | 17K28a | 768.59 |
| | | 17K28aj | 0.93 |
| | | 17K28ak | 1.43 |
| | | 17K28b | 587.17 |
| | | | 1544.91 |
| | Thrikkoor | 17K10a | 4.05 |
| | | 17K26a | 690.16 |
| | | 17K27a | 437.87 |
| | | 17K27b | 896.29 |
| | | 17K27c | 78.77 |
| | | 17K28b | 72.49 |
| | | 17K28c | 5.77 |
| | | 17K28d | 239.79 |
| | | 17K28e | 0.48 |
| | | 17K9a | 3.33 |
| | | | 2428.99 |
| | Varantharappilly | 17K20b | 35.02 |
| | | 17K21a | 21.20 |
| | | 17K27c | 33.06 |
| | | 17K28ad | 125.48 |
| | | 17K28ae | 541.50 |
| | | 17K28af | 391.47 |
| | | 17K28ag | 488.97 |
| | | 17K28ai | 0.42 |
| | | 17K28b | 1464.86 |
| | | 17K28c | 512.19 |
| | | 17K28d | 388.30 |
| | | 17K28e | 1.51 |
| | | 17K28f | 2.80 |
| | | 17K28g | 164.30 |
| | | 17K28h | 1728.46 |
| | | 17K28i | 501.84 |
| | | 17K28j | 527.69 |
| | | 17K28k | 791.71 |
| | | 17K28l | 1270.68 |
| | | 17K28m | 222.45 |
| | | 17K28n | 1840.35 |
| | | 17K28o | 160.22 |
| | | 17K28p | 236.58 |

| Block | Panchayath | WS Code | Area (Ha) |
|---------------------------|------------|---------|-----------------|
| | | 17K28q | 0.24 |
| | | 17K28r | 2.64 |
| | | 17K28s | 0.41 |
| | | 17K28t | 1.30 |
| | | 17K28u | 54.82 |
| | | 17K28v | 2.77 |
| | | | 11513.23 |
| | | | 35631.09 |
| Kodungalloor Municipality | | 14P12a | 1.78 |
| | | 14P13a | 1084.39 |
| | | 14P14a | 7.93 |
| | | 14P153a | 1.42 |
| | | 14P154a | 4.14 |
| | | 14P16a | 30.35 |
| | | 14P3a | 308.79 |
| | | 14P4a | 1196.00 |
| | | 14P5a | 268.53 |
| | | | 2903.33 |
| | | | 2903.33 |
| Kunnamkulam Municipality | | 18K9b | 564.73 |
| | | 19K14a | 0.72 |
| | | 19K14b | 372.40 |
| | | 19K14c | 528.08 |
| | | 19K14d | 505.08 |
| | | | 1971.01 |
| | | | 1971.01 |
| Mala | Aloor | 14P15b | 375.63 |
| | | 14P15c | 245.16 |
| | | 16C6a | 740.67 |
| | | 16C6b | 578.77 |
| | | 16C6c | 0.02 |
| | | 16C6d | 1.94 |
| | | 17K31c | 452.51 |
| | | 17K32a | 1201.75 |
| | | | 3596.45 |
| | Annamanada | 14P15d | 330.00 |
| | | 16C2a | 385.28 |
| | | 16C3a | 377.26 |
| | | 16C4a | 438.34 |
| | | 16C53a | 34.48 |
| | | 16C54a | 91.90 |
| | | 16C54c | 384.73 |
| | | 16C55a | 204.66 |
| | | 16C56a | 6.98 |
| | | 16C5a | 209.17 |
| | | | 2462.81 |

| Block | Panchayath | WS Code | Area (Ha) |
|------------|----------------|---------|-----------------|
| | Kuzhoor | 14P17a | 80.12 |
| | | 16C1a | 919.76 |
| | | 16C2a | 782.38 |
| | | 16C3a | 116.11 |
| | | 16C57a | 62.73 |
| | | | 1961.12 |
| | Mala | 14P15a | 12.31 |
| | | 14P15c | 1184.33 |
| | | 14P15d | 653.45 |
| | | 14P16a | 220.51 |
| | | 14P17a | 10.20 |
| | | 16C2a | 190.30 |
| | | 16C53a | 4.68 |
| | | 16C5a | 197.70 |
| | | 16C6a | 323.95 |
| | | 16C6d | 0.55 |
| | | | 2797.99 |
| | Poyya | 14P13a | 6.57 |
| | | 14P15a | 8.09 |
| | | 14P15d | 84.78 |
| | | 14P16a | 1438.97 |
| | | 14P17a | 400.13 |
| | | 16C1a | 14.21 |
| | | | 1952.75 |
| | | | 12771.12 |
| Mathilakom | Edathiruthy | 17K1a | 34.49 |
| | | 17K34a | 22.66 |
| | | 17K36a | 18.02 |
| | | 17K37a | 1317.44 |
| | | 17K38a | 286.18 |
| | | | 1678.80 |
| | Edavilangu | 14P2a | 346.95 |
| | | 14P3a | 264.44 |
| | | 14P5a | 100.66 |
| | | | 712.04 |
| | Eriyad | 14P155a | 1.13 |
| | | 14P2a | 279.21 |
| | | 14P3a | 1212.10 |
| | | 14P4a | 48.13 |
| | | 14P5a | 7.60 |
| | | | 1548.17 |
| | Kaippamangalam | 14P1a | 535.98 |
| | | 14P2a | 222.01 |
| | | 14P7a | 257.75 |
| | | 14P8a | 5.57 |
| | | 17K34a | 5.32 |

| Block | Panchayath | WS Code | Area (Ha) |
|------------|-------------------|---------|----------------|
| | | 17K37a | 200.26 |
| | | 17K38a | 230.66 |
| | | | 1457.55 |
| | Mathilakom | 14P10a | 0.30 |
| | | 14P11a | 0.37 |
| | | 14P1a | 235.61 |
| | | 14P2a | 547.80 |
| | | 14P6a | 541.61 |
| | | 14P9a | 1.84 |
| | | | 1327.53 |
| | Perinjanam | 14P1a | 237.06 |
| | | 14P2a | 244.34 |
| | | 14P6a | 324.11 |
| | | 14P7a | 73.18 |
| | | 14P8a | 4.51 |
| | | 14P9a | 0.65 |
| | | | 883.85 |
| | Sreenarayanapuram | 14P11a | 14.87 |
| | | 14P12a | 99.57 |
| | | 14P13a | 17.09 |
| | | 14P2a | 913.17 |
| | | 14P3a | 173.81 |
| | | 14P5a | 513.08 |
| | | 14P6a | 202.38 |
| | | | 1933.96 |
| | | | 9541.91 |
| Mullassery | Elavally | 18K10a | 279.34 |
| | | 18K30a | 1.21 |
| | | 18K31a | 0.61 |
| | | 18K7a | 344.71 |
| | | 18K9a | 278.93 |
| | | 18K9c | 280.27 |
| | | 18K9d | 552.24 |
| | | | 1737.31 |
| | Mullassery | 18K10a | 94.22 |
| | | 18K31a | 3.33 |
| | | 18K32a | 136.34 |
| | | 18K37a | 5.28 |
| | | 18K7a | 372.53 |
| | | 18K8a | 263.98 |
| | | 18K9a | 283.42 |
| | | 18K9d | 608.96 |
| | | | 1768.03 |
| | Pavaratty | 18K4a | 9.53 |
| | | 18K50a | 0.06 |
| | | 18K6a | 165.00 |

| Block | Panchayath | WS Code | Area (Ha) |
|-----------|--------------|---------|----------------|
| | | 18K7a | 772.91 |
| | | | 947.50 |
| | Venkidangu | 18K37a | 332.57 |
| | | 18K41a | 1.53 |
| | | 18K48a | 3.28 |
| | | 18K49a | 5.42 |
| | | 18K50a | 73.18 |
| | | 18K7a | 537.94 |
| | | 18K8a | 1142.42 |
| | | 18K9d | 9.80 |
| | | | 2106.14 |
| | | | 6558.98 |
| Ollookara | Madakkathara | 17K12a | 33.25 |
| | | 18K40i | 161.68 |
| | | 18K40j | 31.79 |
| | | 18K40k | 0.63 |
| | | 18K40m | 629.65 |
| | | 18K40n | 426.26 |
| | | 18K40o | 253.41 |
| | | 18K40p | 1068.35 |
| | | 18K40r | 344.13 |
| | | | 2949.17 |
| | Nadathara | 17K10a | 254.39 |
| | | 17K11a | 834.67 |
| | | 17K24a | 261.02 |
| | | 17K25a | 538.98 |
| | | 17K26a | 93.78 |
| | | 17K28e | 16.71 |
| | | 18K40r | 80.90 |
| | | 18K45a | 4.16 |
| | | | 2084.61 |
| | Pananchery | 17K11a | 72.97 |
| | | 17K12a | 900.52 |
| | | 17K12b | 552.92 |
| | | 17K12c | 337.55 |
| | | 17K13a | 506.33 |
| | | 17K13b | 554.28 |
| | | 17K13c | 1096.61 |
| | | 17K14a | 486.60 |
| | | 17K15a | 612.26 |
| | | 17K15b | 1202.65 |
| | | 17K15c | 542.77 |
| | | 17K15d | 656.92 |
| | | 17K16a | 206.29 |
| | | 17K17a | 673.92 |
| | | 17K18a | 161.03 |

| Block | Panchayath | WS Code | Area (Ha) |
|--------------|------------|---------|-----------------|
| | | 17K23a | 328.22 |
| | | 17K24a | 716.93 |
| | | 17K25a | 151.42 |
| | | 18K22b | 32.94 |
| | | 18K40m | 141.22 |
| | | 18K40p | 93.82 |
| | | 20B39bg | 36.94 |
| | | 20B39bi | 34.39 |
| | | 20B39bj | 14.42 |
| | | 20B41c | 2.03 |
| | | | 10115.94 |
| | Puthoor | 17K10a | 569.02 |
| | | 17K11a | 4.63 |
| | | 17K14a | 108.65 |
| | | 17K15a | 91.26 |
| | | 17K16a | 175.28 |
| | | 17K17a | 9.66 |
| | | 17K18a | 762.85 |
| | | 17K19a | 1347.45 |
| | | 17K20a | 416.50 |
| | | 17K20b | 654.23 |
| | | 17K20c | 448.62 |
| | | 17K21a | 859.29 |
| | | 17K22a | 1093.93 |
| | | 17K23a | 735.02 |
| | | 17K24a | 126.72 |
| | | 17K25a | 361.42 |
| | | 17K26a | 1977.50 |
| | | 17K27b | 41.13 |
| | | 17K28d | 295.99 |
| | | 17K28e | 2167.30 |
| | | 17K28f | 984.09 |
| | | 17K28g | 425.34 |
| | | 17K28h | 23.07 |
| | | 17K28i | 3.18 |
| | | 17K28l | 6.99 |
| | | 17K28n | 0.09 |
| | | 17K9a | 111.27 |
| | | 18K45a | 58.09 |
| | | | 13858.56 |
| | | | 29008.28 |
| Pazhayannoor | Chelakkara | 20B39bl | 168.07 |
| | | 20B39bm | 101.63 |
| | | 20B39bn | 78.96 |
| | | 20B39bo | 93.73 |
| | | 20B40a | 659.87 |

| Block | Panchayath | WS Code | Area (Ha) |
|-------|--------------|---------|----------------|
| | | 20B41a | 1444.26 |
| | | 20B41b | 1610.55 |
| | | 20B41c | 711.83 |
| | | 20B41d | 1182.27 |
| | | | 6051.17 |
| | Kondazhy | 20B11a | 2.78 |
| | | 20B12a | 7.70 |
| | | 20B12d | 4.30 |
| | | 20B13a | 2.55 |
| | | 20B13l | 4.66 |
| | | 20B14a | 1.49 |
| | | 20B39a | 4.43 |
| | | 20B39bm | 322.12 |
| | | 20B39bn | 759.41 |
| | | 20B39bo | 788.22 |
| | | 20B40a | 454.86 |
| | | 20B41a | 674.28 |
| | | | 3026.80 |
| | Panjai | 20B10a | 1.39 |
| | | 20B11a | 7.04 |
| | | 20B40a | 831.21 |
| | | 20B41a | 856.39 |
| | | 20B41d | 78.94 |
| | | 20B41e | 604.98 |
| | | 20B41f | 372.98 |
| | | 20B42a | 77.08 |
| | | | 2830.00 |
| | Pazhayannoor | 17K15b | 25.64 |
| | | 17K15d | 5.17 |
| | | 18K21a | 141.62 |
| | | 18K22a | 315.43 |
| | | 18K22b | 624.65 |
| | | 18K22c | 276.39 |
| | | 18K40l | 263.78 |
| | | 18K40m | 221.86 |
| | | 20B39a | 0.68 |
| | | 20B39b | 0.03 |
| | | 20B39bg | 9.52 |
| | | 20B39bh | 172.71 |
| | | 20B39bi | 1129.40 |
| | | 20B39bj | 1215.91 |
| | | 20B39bk | 332.97 |
| | | 20B39bl | 2014.96 |
| | | 20B39bm | 1359.46 |
| | | 20B41b | 93.23 |
| | | 20B41c | 923.53 |

| Block | Panchayath | WS Code | Area (Ha) |
|-----------|-----------------|---------|-----------------|
| | | | 9126.96 |
| | Thiruvilwamala | 20B14a | 18.52 |
| | | 20B15a | 0.41 |
| | | 20B37g | 19.44 |
| | | 20B38a | 1157.86 |
| | | 20B39a | 2312.99 |
| | | 20B39b | 312.58 |
| | | 20B39bl | 0.76 |
| | | 20B39bm | 8.89 |
| | | 20B39bn | 8.30 |
| | | 20B39bo | 3.46 |
| | | | 3843.21 |
| | Vallathol Nagar | 20B10a | 2.98 |
| | | 20B41e | 215.92 |
| | | 20B41f | 229.48 |
| | | 20B42a | 1439.17 |
| | | 20B43a | 1.48 |
| | | 20B44c | 3.72 |
| | | 20B9e | 8.21 |
| | | | 1900.96 |
| | | | 26779.10 |
| Puzhakkal | Adat | 18K32a | 66.98 |
| | | 18K33a | 2.07 |
| | | 18K35a | 260.21 |
| | | 18K36a | 467.03 |
| | | 18K37a | 366.61 |
| | | 18K38a | 2.75 |
| | | 18K39a | 747.98 |
| | | 18K40a | 351.44 |
| | | 18K40f | 11.58 |
| | | 18K40g | 20.19 |
| | | 18K40h | 17.47 |
| | | 18K40q | 0.28 |
| | | 18K40s | 46.54 |
| | | 18K41a | 4.74 |
| | | | 2365.88 |
| | Avannoor | 18K34a | 46.37 |
| | | 18K35a | 58.93 |
| | | 18K40a | 409.99 |
| | | 18K40b | 442.86 |
| | | 18K40c | 37.77 |
| | | 18K40e | 151.87 |
| | | 18K40f | 554.69 |
| | | 18K40g | 28.04 |
| | | | 1730.53 |
| | Kaiparamb | 18K30a | 195.86 |

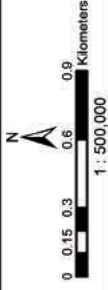
| Block | Panchayath | WS Code | Area (Ha) |
|------------|-------------------|---------|-----------------|
| | | 18K31a | 155.13 |
| | | 18K33a | 412.49 |
| | | 18K34a | 492.88 |
| | | 18K35a | 484.25 |
| | | 18K40a | 322.30 |
| | | 18K40f | 0.01 |
| | | | 2062.92 |
| | Kolazhy | 18K40a | 2.77 |
| | | 18K40f | 110.40 |
| | | 18K40g | 676.85 |
| | | 18K40h | 885.18 |
| | | 18K40q | 7.65 |
| | | | 1682.85 |
| | Mulamkunnathukavu | 18K24a | 1.20 |
| | | 18K40d | 16.69 |
| | | 18K40f | 610.94 |
| | | 18K40g | 201.19 |
| | | 18K40h | 653.17 |
| | | 18K40i | 364.92 |
| | | 18K40j | 265.98 |
| | | | 2114.10 |
| | Tholloor | 18K10a | 5.22 |
| | | 18K30a | 175.00 |
| | | 18K31a | 414.42 |
| | | 18K32a | 502.81 |
| | | 18K33a | 278.68 |
| | | 18K35a | 0.47 |
| | | 18K36a | 112.93 |
| | | 18K37a | 61.81 |
| | | 18K9d | 4.52 |
| | | | 1555.87 |
| | | | 11512.15 |
| Thalikulam | Engandiyoor | 18K1a | 167.91 |
| | | 18K50a | 900.16 |
| | | 18K51a | 549.08 |
| | | 18K7a | 3.50 |
| | | | 1620.65 |
| | Nattika | 17K37a | 6.03 |
| | | 17K39a | 898.00 |
| | | 18K47a | 0.83 |
| | | 18K51a | 37.50 |
| | | | 942.36 |
| | Thalikulam | 17K39a | 253.84 |
| | | 18K47a | 0.49 |
| | | 18K49a | 0.30 |
| | | 18K50a | 66.96 |

| Block | Panchayath | WS Code | Area (Ha) |
|----------------------|--------------|---------|-----------------|
| | | 18K51a | 692.89 |
| | | | 1014.49 |
| | Vadanappilly | 18K1a | 53.38 |
| | | 18K49a | 0.40 |
| | | 18K50a | 509.47 |
| | | 18K51a | 782.99 |
| | | | 1346.24 |
| | Valappad | 17K37a | 184.01 |
| | | 17K38a | 834.43 |
| | | 17K39a | 601.41 |
| | | | 1619.86 |
| | | | 6543.58 |
| Thrissur Corporation | | 17K10a | 141.51 |
| | | 17K11a | 311.82 |
| | | 17K12a | 37.05 |
| | | 17K9a | 468.62 |
| | | 18K37a | 4.67 |
| | | 18K38a | 212.08 |
| | | 18K39a | 0.06 |
| | | 18K40h | 433.58 |
| | | 18K40i | 1034.04 |
| | | 18K40o | 0.91 |
| | | 18K40p | 92.65 |
| | | 18K40q | 294.88 |
| | | 18K40r | 1705.26 |
| | | 18K40s | 2094.11 |
| | | 18K41a | 58.48 |
| | | 18K43a | 70.29 |
| | | 18K44a | 1769.54 |
| | | 18K45a | 1746.36 |
| | | | 10475.89 |
| Wadakkanchery | Desamangalam | 20B42a | 134.65 |
| | | 20B43a | 1349.93 |
| | | 20B44a | 710.94 |
| | | 20B44b | 22.36 |
| | | 20B44c | 47.95 |
| | | 20B44e | 0.74 |
| | | 20B8a | 0.05 |
| | | 20B9a | 0.00 |
| | | 20B9e | 1.75 |
| | | | 2268.36 |
| | Erumapetty | 18K14a | 65.71 |
| | | 18K14b | 116.88 |
| | | 18K14c | 326.49 |
| | | 18K15a | 590.04 |
| | | 18K16a | 587.61 |

| Block | Panchayath | WS Code | Area (Ha) |
|-------|--------------|---------|----------------|
| | | 18K17a | 652.97 |
| | | 18K18a | 3.03 |
| | | 18K25a | 140.46 |
| | | 18K26a | 120.07 |
| | | 18K26b | 73.88 |
| | | 20B41e | 3.01 |
| | | 20B44c | 189.37 |
| | | 20B44d | 37.53 |
| | | | 2907.04 |
| | Mulloorkara | 18K17a | 156.52 |
| | | 18K18a | 496.03 |
| | | 18K19a | 284.31 |
| | | 18K20a | 488.10 |
| | | 18K21a | 182.16 |
| | | 20B41c | 77.27 |
| | | 20B41d | 846.31 |
| | | 20B41e | 1991.45 |
| | | 20B42a | 33.17 |
| | | 20B44c | 46.64 |
| | | | 4601.95 |
| | Mundathikode | 18K24a | 20.18 |
| | | 18K25a | 0.38 |
| | | 18K26a | 744.05 |
| | | 18K26b | 253.21 |
| | | 18K27a | 0.51 |
| | | 18K40b | 1.67 |
| | | 18K40c | 641.94 |
| | | 18K40d | 294.60 |
| | | 18K40e | 338.68 |
| | | 18K40f | 100.15 |
| | | | 2395.37 |
| | Thekkumkara | 18K19a | 328.49 |
| | | 18K20a | 63.92 |
| | | 18K21a | 41.28 |
| | | 18K22a | 181.68 |
| | | 18K22b | 53.11 |
| | | 18K22c | 13.07 |
| | | 18K23a | 301.80 |
| | | 18K24a | 970.85 |
| | | 18K26a | 126.65 |
| | | 18K40d | 350.64 |
| | | 18K40f | 94.32 |
| | | 18K40h | 3.65 |
| | | 18K40j | 187.14 |
| | | 18K40k | 720.39 |
| | | 18K40l | 370.63 |

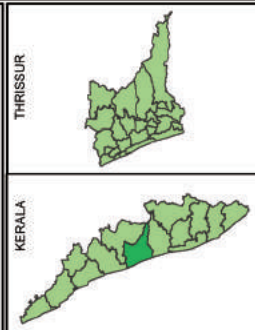
| Block | Panchayath | WS Code | Area (Ha) |
|---------------|---------------|---------|-----------------|
| | | 18K40m | 230.69 |
| | | 18K40n | 0.44 |
| | | | 4038.74 |
| | Wadakkanchery | 18K17a | 207.16 |
| | | 18K18a | 772.76 |
| | | 18K19a | 222.45 |
| | | 18K24a | 434.25 |
| | | 18K25a | 794.18 |
| | | 18K26a | 163.18 |
| | | | 2593.98 |
| | Varavoor | 18K14a | 55.21 |
| | | 18K14b | 420.38 |
| | | 18K14c | 3.91 |
| | | 18K15a | 87.41 |
| | | 18K16a | 150.54 |
| | | 20B42a | 145.71 |
| | | 20B44a | 391.25 |
| | | 20B44b | 486.68 |
| | | 20B44c | 375.72 |
| | | 20B44d | 243.95 |
| | | 20B44e | 581.93 |
| | | 20B44f | 34.69 |
| | | | 2977.38 |
| | | | 21782.83 |
| Vellangalloor | Padiyoor | 14P10a | 725.14 |
| | | 14P6a | 9.29 |
| | | 14P8a | 312.62 |
| | | 14P9a | 139.36 |
| | | 17K34a | 601.90 |
| | | 17K37a | 1.30 |
| | | | 1789.61 |
| | Poomangalam | 14P10a | 1072.99 |
| | | 17K34a | 119.97 |
| | | | 1192.96 |
| | Puthenchira | 14P10a | 0.64 |
| | | 14P13a | 26.13 |
| | | 14P14a | 670.13 |
| | | 14P15a | 948.40 |
| | | 14P15b | 465.20 |
| | | 14P15c | 228.69 |
| | | 14P16a | 48.37 |
| | | | 2387.56 |
| | Vellangalloor | 14P10a | 1153.91 |
| | | 14P11a | 714.78 |
| | | 14P12a | 2.86 |
| | | 14P13a | 2.38 |

| Block | Panchayath | WS Code | Area (Ha) |
|-------|------------|---------|------------------|
| | | 14P14a | 443.26 |
| | | 14P15b | 16.37 |
| | | 14P5a | 2.18 |
| | | 14P6a | 2.75 |
| | | | 2338.50 |
| | Velookkara | 14P10a | 678.07 |
| | | 14P15b | 1512.54 |
| | | 14P15c | 1.43 |
| | | 17K32a | 593.62 |
| | | | 2785.65 |
| | | | 10494.28 |
| | | | 302893.73 |

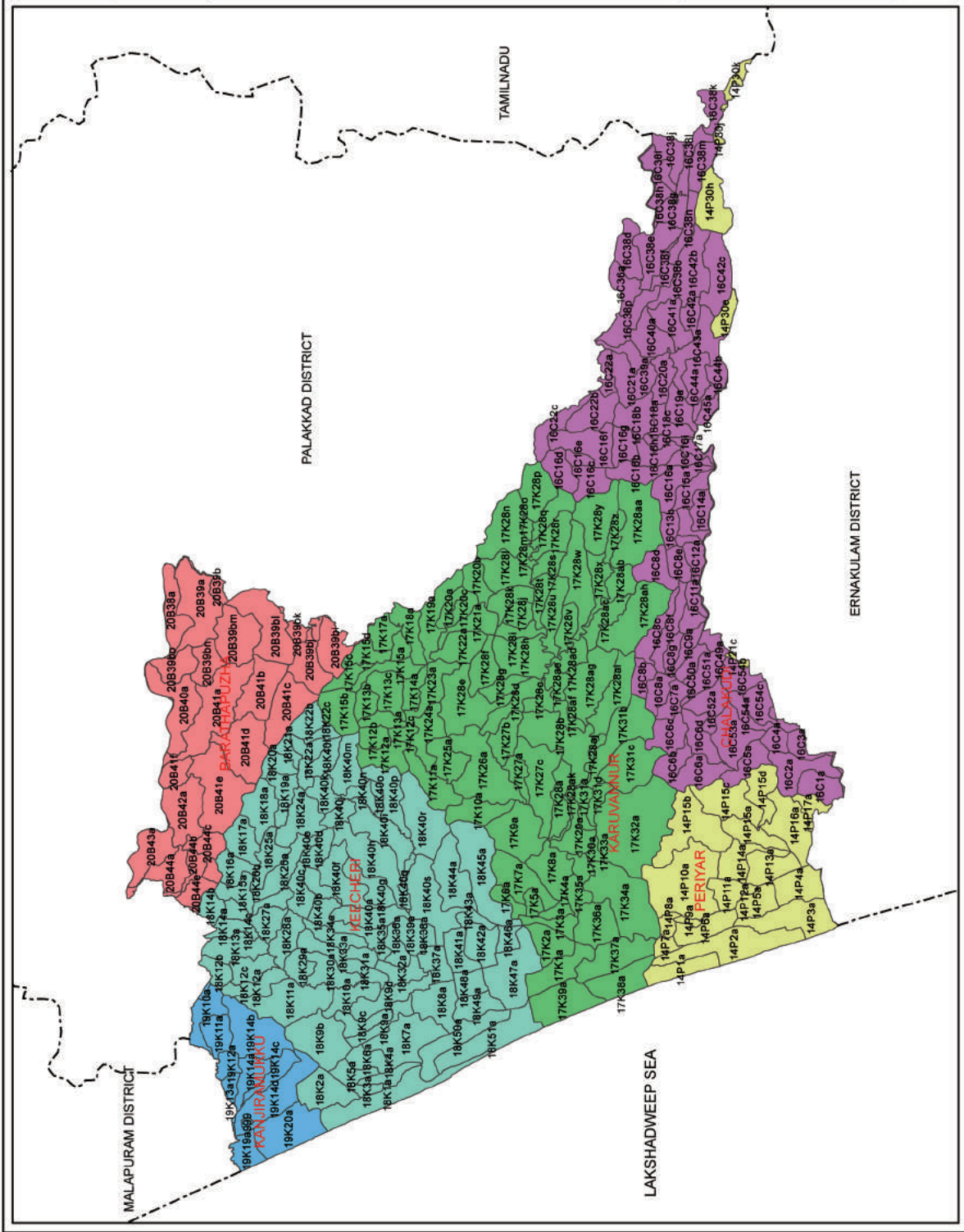


**WATERSHED
THRISSUR DISTRICT**

- Legend**
- BARATHAPUZHA
 - CHALAKUDI
 - KANJIRAMUKKU
 - KARUVANNUR
 - KEECHERI
 - PERIYAR



Kerala State Land Use Board
Vikas Bhavan, Thiruvananthapuram-33



IRRIGATION

Development patterns, increasing population pressure and the demand for better livelihoods across the globe are contributing to a looming global water crisis. Addressing this crisis will require maintaining a sustainable relationship between water and development, one that balances current needs against the prospects for future generations. Only 3% of world's water supply is fresh water and two-thirds of that is locked in glacier ice or buried in deep underground aquifers, leaving only 1% readily available for human use.

In most developing countries, agriculture is the dominant user of water, accounting for more than 85% of all water use. Agriculture water use rise significant issues for water resource management like issues dealing with water scarcity, competing demands from other sectors, irrigation service delivery and system management, water use efficiencies are so forth. The primary objectives in coming years will be to balance water supply and demand among users to ensure adequate water for agriculture and sustainable irrigation system management while satisfying other needs.

MAJOR IRRIGATION

PEECHI IRRIGATION PROJECT

The Peechi Dam is located across the Manali River, one of the major tributaries of Karuvannur River. The Manali River which rises in the Vaniampara Hills of the Western Ghat flows for 48 km. before its join the Kurumali River at a point called Palakkadavu near Arattupuzha in Thrissur District and they together form the Karuvannur River which drives into the back waters. The Peechi project consists of a masonry dam and storage reservoir at Peechi. The dam is situates at Peechi above 20 Km away from Thrissur town and 8 Km. away from the National Highway 47, latitude $10^{\circ} 30' N$ and longitude $76^{\circ} 15' E$, at Peechi village in Thrissur Taluk, Thrissur District. Two canals start from right bank and left bank of dam for irrigation.

BASIC INFORMATION

| | | |
|-----------------------|---|------------------------------|
| District | : | Thrissur |
| River | : | Karuvannur |
| Ayacut Area | | |
| Potential (Ha) | : | 17555 (net) 28080 (gross) |
| Achieved (Ha) | : | 14830(net) 23170(gross) |
| Benefited District | : | Thrissur |
| Year of Starting | : | 1947 |
| Year of Commissioning | : | 1953 |
| Year of Completion | : | 1959 |

SALIENT FEATURES

Type: - Straight gravity rubble masonry dam

| | | |
|-------------------------|---|---------|
| 1. Total length of dam | : | 213.36m |
| 2. Top width of the dam | : | 4.27 m |

RESERVOIR

| | | |
|-------------------------|---|---|
| 1. Full reservoir level | : | 79.25 m |
| 2. Storage capacity | : | 110.435mm ³ . (79.611mm ³ based on sedimentation second study) |
| 3. Dead storage | : | 3.470 mm ³ |
| 4. Live storage | : | 109.800 mm ³ |
| 5. Top level of dam | : | 80.46 m |
| 6. Water spread area | : | 12.95 Sq.Km. |

SPILL WAY

| | | |
|---|---|---------------------------|
| 1. Type | : | Gravity Type |
| 2. Height of masonry structure above river bed | : | 40.84 m |
| 3. Top level of crest of spillway | : | 76.20 m |
| 4. No. of vents –1 st set | : | 4 Nos. |
| 5. Size of vents – 1 st set | : | 10.05 x 3.05 m |
| 6. Type of shutter | : | Ogee overflows mild steel |

HYDROLOGY

| | | |
|---|---|---------------|
| 1. Catchment area | : | 107.09 sq.km. |
| 2. Mean annual rainfall in the Catchment | : | 237.20 cm. |
| 3. Maximum annual rainfall | : | 328.40 cm. |

4. Expected maximum flood discharge : 368.118 m³/sec

CANAL SYSTEM

| | <u>LB</u> | <u>RB</u> |
|----------------------------|------------------|------------------|
| 1. Length of main canal | 44.900 km. | 37.300km |
| 2. Length of branch canals | 37.41km. | 100.860km. |

STRUCTURE

| | | |
|--|-------------------------------------|--------------------------|
| 1. Depth of flow at full supply | 108 cm. | 150 cm. |
| 2. Normal full supply | 3.54m ³ /sec | 7.079m ³ /sec |
| 3. Command area | 2828 ha. | 7664 ha (Kole land) |
| 4. Cumulative achievement till the end of 3/2002 | Net 7183 ha | Gross 14366 ha |
| 5. Crops | : Paddy, Coconut, Arecanut, Banana. | |

CHALAKKUDY IRRIGATION PROJECT

Chalakkudy project was taken up in two stages. The first stage consists of a diversion weir across Chalakkudy river at Thumburmuzhy. The second stage is an extension of canal systems executed during the first stage. There is no independent storage for Chalakkudy Irrigation system, but there are hydel reservoirs in the upper reaches. The source of water is the tailrace and surplus water from Peringalkuthu hydro electric scheme and the drainage water from the catchment of Chalakkudy river below the Peringalkuthu scheme. The Power houses of Kerala Sholayar and Peringalkuthu are operated at a pattern to suit the irrigation need of the basin. The weir is situated nearly 16 Km. east of Chalakkudy town.

BASIC INFORMATION

| | | |
|--------------------|---|------------------------------|
| District | - | Thrissur |
| Ayacut Area | | |
| Achieved (Ha) | - | 18530 (Net) 37260 (Gross) |
| Potential (Ha) | - | 19690 (Net) 39380 (Gross) |
| River | - | Chalakkudy |
| Benefited District | - | Thrissur |

| | | | |
|-----------------------|---|------|--------------|
| Year of Starting | - | 1949 | First stage |
| | - | 1958 | Second stage |
| Year of Commissioning | - | 1952 | First stage |
| | - | 1961 | Second stage |
| Year of Completion | - | 1957 | First stage |
| | - | 1966 | Second stage |

SALIENT FEATURES

Ist Stage

(a) Weir

Site Across the river Chalakkudy
11 miles east of Chalakkudy town.
Latitude 10° 10' N Longitude 76° 26' 30" E
Nearest Railway Station – Chalakkudy
(In Cochin Shornur Broad gauge line)

Type Gravity type in mass concrete with
coarse rubble casing.

Length - 185 m
Maximum height of weir - 3.66 m

Level
Average bed level - 106.5 R.L.
Deepest foundation - 101.50
Top of weir - 113.50

Discharge in river

Maximum - 115,000 cusecs.
Minimum during crop - 613 cusecs.
Dry weather flow - 450 cusecs.

Nature of weir Weir is of gravity type constructed mass
concrete with coarsed rubble casing

(b) Head Work Regulators:

Vents 14' X 5' with radial shutters, operated from
platform above M.F.L. Water diverted
through the regulator - 570 cusecs.

Nature of work Foundation 1½" metal concrete in cement
mortar.

Super structure Rubble in cement mortar
Platform R.C.C. docking on R.S.J

(c) Canal Systems:

| | | |
|--|---|--------------|
| New conversion from dry land | - | 15,600 acres |
| Single crop land converted to Double crop land | - | 7,600 acres |
| Existing double crop land | - | 5,200 acres |
| | | ----- |
| Total | = | 28,400 acres |
| | | ===== |
| Length | | |
| Main canals | - | 56 Km |
| Branch Canals | - | 162 Km |
| Discharge at head of main canal | - | 285 cusecs |

IInd Stage

The 2nd Stage contemplates only extension of the Channel System.

Length of Canal

| | | |
|--|---|--------------------------------------|
| Main Canal | - | 27 km |
| Branch Canal | - | 98 Km |
| Crops | - | Paddy, Arecanut, Coconut, Vegetables |
| Ayacut Served | | |
| New Conversion | - | 4050 acres |
| Single crop converted into Double crop lands | - | 9450 acres |
| Existing double crop | - | 6750 acres |
| | | ----- |
| Total | - | 20250 acres |
| | | ===== |

VAZHANI IRRIGATION PROJECT

The Vazhani Irrigation Project consists of an earthen dam across the Wadakkanchery River, a tributary of Keechery River. This project is envisaged to irrigate 3560 ha. of land in Thalappilly and Thrissur taluks in Thrissur district. The head works situated at Vazhani is 10 Km east of Wadakkanchery railway station. The distribution system consists of a left bank main canal, which is 39.2 km in length, three branch

canals viz, Parlikkad, Kurancherry and Mundur totalling 18.600 km and a network of distributaries and field bothies. A view of the lake and the vast stretch of paddy fields as seen from the top of dam is panoramic sight to any visitor. A garden is formed at the foot of the dam with a small play ground for children. A rest house has been provided for the stay of visitors and a canteen adds to their convenience.

BASIC INFORMATION

| | | |
|--|---|----------------------------|
| District | - | Thrissur |
| Expected Area to be Irrigated (Potential in Ha) | - | 3565 (Net) 7130 (Gross) |
| Ayacut Area(Ha) (Achievement till the end of 3/2002) | - | 2113(Net) 4226 (Gross) |
| River | - | Wadakkanchery (Keechery) |
| Benefited District | - | Thrissur |
| Year of Starting | - | 1951 |
| Year of first Commissioning | - | 1959 |
| Year of Completion | - | 1962 |

SALIENT FEATURES

Location

Flanked by Machad hills in the village of Viruppakkala Vazhani Dam is situated across Wadakkanchery river, 10 Km. East of Wadakkanchery Railway Station, at 76⁰ 19' E longitude and 10⁰ 38' N latitude, falling within Thekkumkara Panchayat in Thalappilly Taluk.

Type

| | | |
|--------------------------|---|---------------|
| Length of dam | - | 792.48 m |
| Top width | - | 4.55 m |
| Top level | - | 65.53 m |
| U/S slope | - | 2 ½: 1 to 4:1 |
| D/S slope | - | 2:1 to 3:1 |
| Deepest foundation level | - | 28.950 m. |

RESERVOIR

| | | |
|----------------------|---|------------------------|
| Full reservoir level | - | 62.48 m |
| Storage capacity | - | 18.121 Mm ³ |
| Dead Storage | - | 1.471 Mm ³ |
| Live Storage | - | 16.65 Mm ³ |
| Top level of dam | - | 65.53 m |
| Water spread area | - | 1.82 Sq.Km |
| Catchment area | - | 20.48 Sq.Km |
| Design flood | - | 249.04 cumecs |

| | | |
|-------------------------|---|---|
| Original Estimate cost | - | 107.57 lakhs (1959 schedule of rates) |
| Project Cost | - | 107.57 lakhs |
| Type of spillway | - | Vertical lift type |
| Type of crest gates | - | Vertical lift type (6.62m x2.60 size) |
| No. of crest gates | - | 4 |
| Purpose | - | Irrigation |
| Classification | - | Medium |
| Gross command area | - | 4313 Ha |
| Cultivable command area | - | 4313 ha |
| Important crops | - | Paddy (80%), Pulses, Coconut, Arecanut |

CHEERAKUZHI IRRIGATION PROJECT

Cheerakuzhi Project is a river diversion scheme and has no independent reservoir. It consists of a regulator across Gayathri River, a major tributary of Bharathapuzha River. The weir is situated at Vadakkethara village of Thalapally taluk in Trichur district. This scheme covers 11 villages viz. Pazhayannoor, Vadakkethara, Kondazhy, Mayannur, Thozhupadam, Panjal, Pynkulam, Cheruthuruthi, Nedumpura, Desamangalam and Kodayur.

BASIC INFORMATION

| | | |
|-------------------------------|---|--|
| District | : | Thrissur |
| Ayacut Area (Achieved 3/2002) | : | 952 (Net) 1846 (Gross) |
| Potential | : | 1620 (Net) 3240 (Gross) |
| River | : | Cheerakuzhy (Bharathapuzha) |
| Benefited District | : | Thrissur |
| Year of Starting | : | 1957 |
| Year of first Completion | : | 1968 |
| Year of Completion | : | 1973 |
| Total Expenditure (3/2002) | : | Rs.119 lakhs |
| Officer in Charge | : | Executive Engineer, Irrigation Division, Thrissur |
| Original Estimated Cost | : | Rs 91 lakhs |
| Crops | : | Paddy, Banana, Coconut, Pulses, Arecanut. |

SALIENT FEATURES

RIVER REGULATOR (OPEN WEIR)

Location

Across the River Cheerakuzhy at Kuzhupillipara, about 1.60 Km. upstream of the Cheerakuzhy Bridge. Nearest Railway Station is Vallathol Nagar in the Cochin Shornur Broad Gauge line.

Type

This is a masonry Regulator having a length of 61.00 m for the Regulator and 30.50 m. for solid masonry section.

Level

| | | |
|----------------------------|---|---------|
| Average Bed level of River | = | + 32.35 |
| Sill Level of Gates | = | + 35.20 |
| Top of Gates and the Crest | | |
| Level of the Solid Section | = | + 37.34 |
| The Improved Level | = | + 37.34 |
| Ordinary | = | + 37.34 |
| M.F.L. | = | + 38.40 |

Discharge

| | | |
|------------------|---|--------------|
| Maximum | = | 34500 cusecs |
| Dry Weather Flow | = | 75 cusecs |

Head works Regulator

Consists of two sluice gates of size 1.20 m. x 0.90 m each Sill level of sluice + 36

Water diverted through the Regulator = 75 cusecs

Nature of work

Foundation 40 mm metal concrete in Cement Mortar.

Super structure rubble in Cement Mortar.

Platform R.C.C. decking

Length

| | | |
|-------------------------------------|---|------------|
| Main Canal in the left bank | = | 40.900 KM. |
| Branch Canals | = | 9.700 KM. |
| Discharge at the Head of Main Canal | = | 75 Cusecs. |
| Classification | = | Medium |

RESERVOIR

Full Reservoir level : + 37.34 m

SPILLWAY

| | | | |
|----|---------------------------|---|-------------------------|
| 1. | Type | : | Masonry Regulator |
| 2. | Sill level | : | + 35.20 m |
| 3. | No. of Spill Ways | : | 8 Spill ways |
| 4. | No. of Vents | : | 8 Nos. of 8.23 x 2.44 m |
| 5. | Size of Shutters | : | 8.23 x 2.44 m |
| 6. | Top level of shutter | : | 37.65 m |
| 7. | Type of Shutter | : | Mild Steel |
| 8. | Total Length of Spill Way | : | 96.01 m |
| 9. | No. of overflow Section | : | 3 Nos. of 7.62 m |

HYDROLOGY

| | | | |
|----|---------------------------------------|---|------------|
| 1. | Mean Annual Rainfall in the Catchment | : | 2083.39 mm |
| 2. | Maximum Rainfall in catchment | : | 2763.60 mm |

CANAL SYSTEM

| | | | |
|----|-----------------------------|---|-----------|
| 1. | Sill of Canal | : | 36.12 |
| 2. | Left Bank main canal length | : | 40.90 Km. |
| 3. | Branch Canal Distributary | : | 9.80 Km. |

STRUCTURE

| | | | |
|----|------------------------------|---|---------------------------|
| 1. | Depth of flow at full supply | : | 90 cm |
| 2. | Normal full supply | : | 2.12. m ³ /Sec |
| 3. | Gross Command Area | : | 1200 Ha |
| 4. | Cultivable command Area | : | 1200 Ha |
| 5. | Total Cost | : | 102.30 lakhs |

CHIMONI DAM PROJECT

Under the RID This is an integrated project for irrigating 13000 ha (11000 ha. kole land) of land in Thrissur District. The Chimoni Dam site is 28Km.east of Amballoor in Thrissur. Storage dam at Chimoni, across the Chimoni Puzha – tributary of the Karumali River, which is one of the major tributaries of the Karuvannur River. The regulated supply of water let in to the river down stream is diverted by the existing regulators across the river at Manjamkuzhy Illikkal and Kottankottuvalavu to the Thrissur Kole lands to irrigate Mundakan and Punja crops. In addition it is proposed to generate 2500 K/Watts of power and to supply drinking water to the peripheral villages. This Project was assisted Fund of NABARD.

BASIC INFORMATION

| | | |
|------------------------|---|----------------------------|
| District | : | Thrissur |
| Area in Ha (Potential) | : | 1300 (Net) 2600(Gross) |
| Area in Ha (Achieved) | : | 6626 (Net) 7126 (Gross) |
| River | : | Karuvannur |
| Classification | : | Major |
| Benefited District | : | Thrissur |
| Year of Starting | : | 1975 |
| Year of Completion | : | 1996 |

SALIENT FEATURES

| | | |
|----------------|---|---------------|
| Hydrology | | |
| Catchment Area | : | 72.13 Sq. Km. |

Dam Masonry

| | | |
|------------------------------|---|-------------|
| 1. Length of Dam | | |
| Masonry | : | 495 m |
| Earth | : | 686.50m |
| 2. Maximum height of dam | : | 52.82m |
| 3. Top level of Dam | : | 81.2m |
| 4. Full reservoir level | : | + 97.70m |
| 5. Net capacity of reservoir | : | 173.39M.cum |

Benefits

| | | |
|-------------------------|---|----------|
| 1. Net area irrigated | : | 13000 Ha |
| 2. Gross area irrigated | : | 26000 Ha |

Water Utilisation

| | | |
|---|---|----------------------|
| Average Annual Utilisation of water for irrigation | : | 56.64mm ³ |
|---|---|----------------------|

MINOR IRRIGATION CENSUS (2006-07)

MINOR IRRIGATION SCHEMES AT A GLANCE

Table:21.1

| Sl.No. | Name of Block/Mun./Cor. | No. of Villages | Total Number of Schemes | | | | | | | | | | Grand Total (7+10) | No. of Village Schedules |
|----------|-------------------------|-----------------|-------------------------|------------------|---------------|---------------|----------------|----------------|-------------|--------------|-----------|--|--------------------|--------------------------|
| | | | Ground Water | | | | | Surface Water | | | | | | |
| | | | Dugwell | Shallow Tubewell | Deep Tubewell | Total (4+5+6) | S. Flow Scheme | S. Lift Scheme | Total (8+9) | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | | | |
| 1 | Anthikkad | 4 | 2290 | 5 | 0 | 2295 | 4 | 120 | 124 | 2419 | 4 | | | |
| 2 | Chalakkudy | 6 | 3319 | 11 | 0 | 3330 | 5 | 168 | 173 | 3503 | 6 | | | |
| 3 | Chalakkudy (M) | 1 | 555 | 4 | 0 | 559 | 2 | 31 | 33 | 592 | 1 | | | |
| 4 | Chavakkad | 7 | 2298 | 0 | 0 | 2298 | 126 | 24 | 150 | 2448 | 7 | | | |
| 5 | Chavakkad (M) | 1 | 477 | 48 | 0 | 525 | 120 | 0 | 120 | 645 | 1 | | | |
| 6 | Cherpu | 4 | 2560 | 8 | 4 | 2572 | 22 | 119 | 141 | 2713 | 4 | | | |
| 7 | Chowannoor | 6 | 2569 | 41 | 46 | 2656 | 46 | 8 | 54 | 2710 | 6 | | | |
| 8 | Guruvayoor (M) | 1 | 134 | 0 | 0 | 134 | 0 | 0 | 0 | 134 | 1 | | | |
| 9 | Iringalakkuda | 5 | 2091 | 6 | 0 | 2097 | 29 | 108 | 137 | 2234 | 5 | | | |
| 10 | Iringalakkuda (M) | 1 | 355 | 1 | 0 | 356 | 0 | 0 | 0 | 356 | 1 | | | |
| 11 | Kodakara | 7 | 4400 | 7 | 0 | 4407 | 51 | 139 | 190 | 4597 | 7 | | | |
| 12 | Kodungalloor | 3 | 736 | 486 | 1 | 1223 | 0 | 199 | 199 | 1422 | 3 | | | |
| 13 | Kodungalloor (M) | 1 | 293 | 58 | 0 | 351 | 0 | 97 | 97 | 448 | 1 | | | |
| 14 | Kunnamkulam (M) | 1 | 490 | 0 | 0 | 490 | 23 | 1 | 24 | 514 | 1 | | | |
| 15 | Mala | 5 | 6035 | 19 | 35 | 6089 | 25 | 64 | 89 | 6178 | 5 | | | |
| 16 | Mathiakom | 5 | 1198 | 723 | 1 | 1922 | 3 | 242 | 245 | 2167 | 5 | | | |
| 17 | Mullassery | 4 | 1345 | 7 | 2 | 1354 | 0 | 53 | 53 | 1407 | 4 | | | |
| 18 | Ollukkara | 5 | 2551 | 9 | 0 | 2560 | 36 | 425 | 461 | 3021 | 5 | | | |
| 19 | Pazhayannoor | 6 | 2335 | 138 | 26 | 2499 | 148 | 95 | 243 | 2742 | 6 | | | |
| 20 | Puzhakkal | 6 | 2884 | 29 | 3 | 2916 | 54 | 37 | 91 | 3007 | 6 | | | |
| 21 | Thalikulam | 5 | 1572 | 148 | 0 | 1720 | 0 | 771 | 771 | 2491 | 5 | | | |
| 22 | Thrissur (C) | 1 | 711 | 0 | 0 | 711 | 11 | 54 | 65 | 776 | 1 | | | |
| 23 | Wadakkanchery | 9 | 3051 | 33 | 14 | 3098 | 105 | 48 | 153 | 3251 | 9 | | | |
| 24 | Vellangalloor | 5 | 1872 | 15 | 8 | 1895 | 20 | 40 | 60 | 1955 | 5 | | | |
| | District Total | 99 | 46121 | 1796 | 140 | 48057 | 830 | 2843 | 3673 | 51730 | 99 | | | |

Table:21.2

NUMBER OF GROUND WATER SCHEMES AND IRRIGATION POTENTIAL CREATED AND POTENTIAL UTILISED

| Sl. No. | Name of Block/Mun./Cor. | Dugwell | | | Shallow Tubewell | | | Deep Tubewell | | | Total Ground Water | | |
|---------|-------------------------|--------------|-------------------|--------------------|------------------|-------------------|--------------------|---------------|-------------------|--------------------|--------------------|-------------------|--------------------|
| | | Nos. | Potential Created | Potential Utilised | Nos. | Potential Created | Potential Utilised | Nos. | Potential Created | Potential Utilised | Nos. | Potential Created | Potential Utilised |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| 1 | Anthikkad | 2290 | 686 | 686 | 5 | 3 | 3 | 0 | 0 | 0 | 2295 | 689 | 689 |
| 2 | Chalakkudy | 3319 | 1576 | 1543 | 11 | 6 | 6 | 0 | 0 | 0 | 3330 | 1582 | 1549 |
| 3 | Chalakkudy (M) | 555 | 180 | 180 | 4 | 1 | 1 | 0 | 0 | 0 | 559 | 181 | 181 |
| 4 | Chavakkad | 2298 | 756 | 756 | 0 | 0 | 0 | 0 | 0 | 0 | 2298 | 756 | 756 |
| 5 | Chavakkad (M) | 477 | 128 | 128 | 48 | 14 | 14 | 0 | 0 | 1 | 525 | 142 | 142 |
| 6 | Cherpu | 2560 | 911 | 876 | 8 | 3 | 3 | 4 | 1 | 20 | 2572 | 915 | 880 |
| 7 | Chowannoor | 2569 | 840 | 835 | 41 | 16 | 15 | 46 | 22 | 0 | 2656 | 877 | 870 |
| 8 | Guruvayoor (M) | 134 | 42 | 42 | 0 | 0 | 0 | 0 | 0 | 0 | 134 | 42 | 42 |
| 9 | Iringalakkuda | 2091 | 787 | 786 | 6 | 3 | 3 | 0 | 0 | 0 | 2097 | 790 | 789 |
| 10 | Iringalakkuda(M) | 355 | 111 | 111 | 1 | 0 | 0 | 0 | 0 | 0 | 356 | 112 | 112 |
| 11 | Kodakara | 4400 | 2019 | 2019 | 7 | 3 | 3 | 0 | 0 | 0 | 4407 | 2022 | 2022 |
| 12 | Kodungalloor | 736 | 241 | 240 | 486 | 130 | 130 | 1 | 0 | 0 | 1223 | 371 | 371 |
| 13 | Kodungalloor (M) | 293 | 70 | 70 | 58 | 7 | 7 | 0 | 0 | 0 | 351 | 77 | 77 |
| 14 | Kunnamkulam (M) | 490 | 155 | 155 | 0 | 0 | 0 | 0 | 0 | 0 | 490 | 155 | 155 |
| 15 | Mala | 6035 | 2381 | 2273 | 19 | 19 | 19 | 35 | 31 | 30 | 6089 | 2430 | 2322 |
| 16 | Mathilakom | 1198 | 302 | 299 | 723 | 183 | 183 | 1 | 0 | 0 | 1922 | 485 | 482 |
| 17 | Mullassery | 1345 | 404 | 404 | 7 | 3 | 3 | 2 | 0 | 0 | 1354 | 408 | 408 |
| 18 | Ollukkara | 2551 | 1006 | 1004 | 9 | 7 | 7 | 0 | 0 | 0 | 2560 | 1014 | 1011 |
| 19 | Pazhayannoor | 2335 | 1128 | 1104 | 138 | 81 | 81 | 26 | 51 | 51 | 2499 | 1261 | 1236 |
| 20 | Puzhakkal | 2884 | 1040 | 1040 | 29 | 28 | 28 | 3 | 2 | 2 | 2916 | 1070 | 1070 |
| 21 | Thalikulam | 1572 | 376 | 376 | 148 | 47 | 47 | 0 | 0 | 0 | 1720 | 423 | 423 |
| 22 | Thrissur (C) | 711 | 250 | 248 | 0 | 0 | 0 | 0 | 0 | 0 | 711 | 250 | 248 |
| 23 | Wadakkanchery | 3051 | 1337 | 1336 | 33 | 18 | 18 | 14 | 4 | 4 | 3098 | 1359 | 1357 |
| 24 | Vellangalloor | 1872 | 621 | 621 | 15 | 6 | 6 | 8 | 7 | 7 | 1895 | 634 | 634 |
| | District Total | 46121 | 17347 | 17132 | 1796 | 578 | 577 | 140 | 118 | 115 | 48057 | 18045 | 17826 |

Table:21.3

NUMBER OF SURFACE WATER SCHEMES AND IRRIGATION POTENTIAL CREATED AND POTENTIAL UTILISED

| Sl.No. | Name of Block/Mun./Cor. | Surface Flow Schemes | | | Surface Lift Schemes | | | Total Surface Water | | |
|----------|-------------------------|----------------------|-------------------|--------------------|----------------------|-------------------|--------------------|---------------------|-------------------|--------------------|
| | | Nos. | Potential Created | Potential Utilised | Nos. | Potential Created | Potential Utilised | Nos. | Potential Created | Potential Utilised |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| 1 | Anthikkad | 4 | 32 | 32 | 120 | 1715 | 1715 | 124 | 1747 | 1747 |
| 2 | Chalakkudy | 5 | 1496 | 1376 | 168 | 2265 | 2262 | 173 | 3761 | 3638 |
| 3 | Chalakkudy (M) | 2 | 898 | 898 | 31 | 37 | 37 | 33 | 935 | 935 |
| 4 | Chavakkad | 126 | 57 | 57 | 24 | 11 | 11 | 150 | 68 | 68 |
| 5 | Chavakkad(M) | 120 | 87 | 87 | 0 | 0 | 0 | 120 | 87 | 87 |
| 6 | Cherpu | 22 | 906 | 871 | 119 | 1047 | 1040 | 141 | 1953 | 1911 |
| 7 | Chowannoor | 46 | 1270 | 1264 | 8 | 244 | 244 | 54 | 1513 | 1508 |
| 8 | Guruvayoor (M) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | Iringalakkuda | 29 | 470 | 467 | 108 | 1860 | 1860 | 137 | 2330 | 2327 |
| 10 | Iringalakkuda (M) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11 | Kodakara | 51 | 265 | 265 | 139 | 2021 | 2021 | 190 | 2286 | 2286 |
| 12 | Kodungalloor | 0 | 0 | 0 | 199 | 122 | 122 | 199 | 122 | 122 |
| 13 | Kodungalloor (M) | 0 | 0 | 0 | 97 | 37 | 37 | 97 | 37 | 37 |
| 14 | Kunnamkulam (M) | 23 | 7 | 7 | 1 | 0 | 0 | 24 | 8 | 8 |
| 15 | Mala | 25 | 5164 | 5164 | 64 | 3570 | 3570 | 89 | 8734 | 8734 |
| 16 | Mathilakom | 3 | 10 | 10 | 242 | 93 | 93 | 245 | 103 | 103 |
| 17 | Mullassery | 0 | 0 | 0 | 53 | 2585 | 1996 | 53 | 2585 | 1996 |
| 18 | Ollukkara | 36 | 1126 | 1126 | 425 | 567 | 547 | 461 | 1693 | 1673 |
| 19 | Pazhayannoor | 148 | 1153 | 1035 | 95 | 1256 | 1253 | 243 | 2408 | 2287 |
| 20 | Puzhakkal | 54 | 805 | 805 | 37 | 3115 | 3115 | 91 | 3920 | 3920 |
| 21 | Thalikulam | 0 | 0 | 0 | 771 | 270 | 270 | 771 | 270 | 270 |
| 22 | Thrissur (C) | 11 | 217 | 217 | 54 | 35 | 35 | 65 | 251 | 251 |
| 23 | Wadakkanchery | 105 | 3568 | 3326 | 48 | 327 | 284 | 153 | 3895 | 3611 |
| 24 | Vellangalloor | 20 | 330 | 330 | 40 | 117 | 117 | 60 | 447 | 447 |
| | District Total | 830 | 17861 | 17337 | 2843 | 21294 | 20629 | 3673 | 39153 | 37966 |

Table:21.4

MINOR IRRIGATION SCHEMES ACCORDING TO SOURCE OF ENERGY

| Sl. No. | Name of Block/Mun./Cor. | Ground Water Schemes | | | | | | Surface Water Schemes (Surface Lift Scheme Only) | | | | | | | |
|---------|-------------------------|----------------------|-------------|------------|-------------|---------------|-----------|--|---------------|-------------|------------|-------------|---------------|-----------|---------------|
| | | Electric Pump | Diesel Pump | Wind Mills | Solar Pumps | Manual/Annual | Others | Total (3-8) | Electric Pump | Diesel Pump | Wind Mills | Solar Pumps | Manual/Annual | Others | Total (10-15) |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| 1 | Anthikkad | 2292 | 3 | 0 | 0 | 0 | 0 | 2295 | 117 | 3 | 0 | 0 | 0 | 0 | 120 |
| 2 | Chalakkudy | 3280 | 30 | 4 | 1 | 0 | 15 | 3330 | 158 | 5 | 1 | 0 | 0 | 4 | 168 |
| 3 | Chalakkudy (M) | 556 | 3 | 0 | 0 | 0 | 0 | 559 | 31 | 0 | 0 | 0 | 0 | 0 | 31 |
| 4 | Chavakkad | 2291 | 7 | 0 | 0 | 0 | 0 | 2298 | 23 | 0 | 0 | 0 | 0 | 1 | 24 |
| 5 | Chavakkad (M) | 523 | 2 | 0 | 0 | 0 | 0 | 525 | | | | | | | |
| 6 | Cherpu | 2546 | 3 | 0 | 0 | 0 | 23 | 2572 | 118 | 1 | 0 | 0 | 0 | 0 | 119 |
| 7 | Chowannoor | 2631 | 23 | 1 | 0 | 0 | 1 | 2656 | 2 | 6 | 0 | 0 | 0 | 0 | 8 |
| 8 | Guruvayoor (M) | 134 | 0 | 0 | 0 | 0 | 0 | 134 | | | | | | | |
| 9 | Iringalakkuda | 2085 | 6 | 2 | 0 | 0 | 4 | 2097 | 102 | 6 | 0 | 0 | 0 | 0 | 108 |
| 10 | Iringalakkuda (M) | 355 | 1 | 0 | 0 | 0 | 0 | 356 | | | | | | | |
| 11 | Kodakara | 4380 | 22 | 4 | 1 | 0 | 0 | 4407 | 138 | 1 | 0 | 0 | 0 | 0 | 139 |
| 12 | Kodungalloor | 1218 | 5 | 0 | 0 | 0 | 0 | 1223 | 198 | 1 | 0 | 0 | 0 | 0 | 199 |
| 13 | Kodungalloor (M) | 348 | 1 | 2 | 0 | 0 | 0 | 351 | 96 | 1 | 0 | 0 | 0 | 0 | 97 |
| 14 | Kunnamkulam (M) | 487 | 3 | 0 | 0 | 0 | 0 | 490 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| 15 | Mala | 6023 | 51 | 12 | 0 | 1 | 2 | 6089 | 63 | 1 | 0 | 0 | 0 | 0 | 64 |
| 16 | Mathilakom | 1908 | 13 | 1 | 0 | 10 | 0 | 1922 | 239 | 2 | 1 | 0 | 0 | 0 | 242 |
| 17 | Mullassery | 1294 | 46 | 1 | 0 | 0 | 3 | 1354 | 51 | 0 | 0 | 0 | 0 | 2 | 53 |
| 18 | Ollukkara | 2559 | 1 | 0 | 0 | 0 | 0 | 2560 | 423 | 0 | 1 | 0 | 0 | 1 | 425 |
| 19 | Pazhayannoor | 2485 | 14 | 0 | 0 | 0 | 0 | 2499 | 86 | 8 | 0 | 0 | 0 | 1 | 95 |
| 20 | Puzhakkal | 2884 | 29 | 2 | 1 | 0 | 0 | 2916 | 35 | 1 | 0 | 0 | 0 | 1 | 37 |
| 21 | Thalikulam | 1713 | 7 | 0 | 0 | 0 | 0 | 1720 | 760 | 11 | 0 | 0 | 0 | 0 | 771 |
| 22 | Thrissur (C) | 708 | 3 | 0 | 0 | 0 | 0 | 711 | 34 | 16 | 0 | 0 | 0 | 4 | 54 |
| 23 | Wadakkanchery | 3053 | 24 | 11 | 0 | 10 | 0 | 3098 | 48 | 0 | 0 | 0 | 0 | 0 | 48 |
| 24 | Vellangalloor | 1895 | 0 | 0 | 0 | 0 | 0 | 1895 | 39 | 0 | 0 | 0 | 0 | 1 | 40 |
| | District Total | 47648 | 297 | 40 | 3 | 21 | 48 | 48057 | 2762 | 63 | 3 | 0 | 0 | 15 | 2843 |

Table:21.5

NUMBER OF MINOR IRRIGATION SCHEMES AND IRRIGATION POTENTIAL CREATED AND POTENTIAL UTILISED

| Sl.No. | Name of Block/Mun./Cor. | Ground Water Schemes | | | Surface Water Schemes | | | Total | | |
|--------|-------------------------|----------------------|-------------------|--------------------|-----------------------|-------------------|--------------------|--------------|-------------------|--------------------|
| | | Nos. | Potential Created | Potential Utilised | Nos. | Potential Created | Potential Utilised | Nos. | Potential Created | Potential Utilised |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| 1 | Anthikkad | 2295 | 689 | 689 | 124 | 1747 | 1747 | 2419 | 2436 | 2436 |
| 2 | Chalakkudy | 3330 | 1582 | 1549 | 173 | 3761 | 3638 | 3503 | 5343 | 5187 |
| 3 | Chalakkudy (M) | 559 | 181 | 181 | 33 | 935 | 935 | 592 | 1115 | 1115 |
| 4 | Chavakkad | 2298 | 756 | 756 | 150 | 68 | 68 | 2448 | 824 | 824 |
| 5 | Chavakkad (M) | 525 | 142 | 142 | 120 | 87 | 87 | 645 | 229 | 229 |
| 6 | Cherpu | 2572 | 915 | 880 | 141 | 1953 | 1911 | 2713 | 2867 | 2791 |
| 7 | Chowannoor | 2656 | 877 | 870 | 54 | 1513 | 1508 | 2710 | 2391 | 2377 |
| 8 | Guruvayoor (M) | 134 | 42 | 42 | 0 | 0 | 0 | 134 | 42 | 42 |
| 9 | Iringalakkuda | 2097 | 790 | 789 | 137 | 2330 | 2327 | 2234 | 3120 | 3115 |
| 10 | Iringalakkuda (M) | 356 | 112 | 112 | 0 | 0 | 0 | 356 | 112 | 112 |
| 11 | Kodakara | 4407 | 2022 | 2022 | 190 | 2286 | 2286 | 4597 | 4308 | 4308 |
| 12 | Kodungalloor | 1223 | 371 | 371 | 199 | 122 | 122 | 1422 | 493 | 493 |
| 13 | Kodungalloor (M) | 351 | 77 | 77 | 97 | 37 | 37 | 448 | 114 | 114 |
| 14 | Kunnamkulam (M) | 490 | 155 | 155 | 24 | 8 | 8 | 514 | 163 | 163 |
| 15 | Mala | 6089 | 2430 | 2322 | 89 | 8734 | 8734 | 6178 | 11164 | 11055 |
| 16 | Mathilakom | 1922 | 485 | 482 | 245 | 103 | 103 | 2167 | 588 | 585 |
| 17 | Mullassery | 1354 | 408 | 408 | 53 | 2585 | 1996 | 1407 | 2993 | 2404 |
| 18 | Ollukkara | 2560 | 1014 | 1011 | 461 | 1693 | 1673 | 3021 | 2707 | 2684 |
| 19 | Pazhayannoor | 2499 | 1261 | 1236 | 243 | 2408 | 2287 | 2742 | 3669 | 3524 |
| 20 | Puzhakkal | 2916 | 1070 | 1070 | 91 | 3920 | 3920 | 3007 | 4990 | 4990 |
| 21 | Thalikulam | 1720 | 423 | 423 | 771 | 270 | 270 | 2491 | 693 | 693 |
| 22 | Thrissur (C) | 711 | 250 | 248 | 65 | 251 | 251 | 776 | 501 | 499 |
| 23 | Wadakkanchery | 3098 | 1359 | 1357 | 153 | 3895 | 3611 | 3251 | 5254 | 4968 |
| 24 | Vellangalloor | 1895 | 634 | 634 | 60 | 447 | 447 | 1955 | 1081 | 1081 |
| | District Total | 48057 | 18045 | 17826 | 3673 | 39153 | 37966 | 51730 | 57197 | 55789 |

Table:21.6

MINOR IRRIGATION SCHEMES IN TRIBAL & NON TRIBAL VILLAGES

| Sl. No. | Name of Block/ Mun./Cor. | Dugwell | | | Shallow Tubewell | | | Deep Tubewell | | | Surface Flow Schemes | | | Surface Lift Schemes | | | Total Minor Irrigation Schemes | | |
|---------|-----------------------------|-------------|--------------|--------------|------------------|-------------|-------------|---------------|------------|------------|----------------------|------------|------------|----------------------|-------------|-------------|--------------------------------|--------------|--------------|
| | | Tribal | Non Tribal | Total | Tribal | Non Tribal | Total | Tribal | Non Tribal | Total | Tribal | Non Tribal | Total | Tribal | Non Tribal | Total | Tribal | Non Tribal | Total |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| 1 | Anthikkad | 0 | 2290 | 2290 | 0 | 5 | 5 | 0 | 0 | 0 | 0 | 4 | 4 | 0 | 120 | 120 | 0 | 2419 | 2419 |
| 2 | Chalakkudy | 979 | 2340 | 3319 | 0 | 11 | 11 | 0 | 0 | 0 | 0 | 5 | 5 | 7 | 161 | 168 | 986 | 2517 | 3503 |
| 3 | Chalakkudy (M) | 0 | 555 | 555 | 0 | 4 | 4 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 31 | 31 | 0 | 592 | 592 |
| 4 | Chavakkad | 0 | 2298 | 2298 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 126 | 126 | 0 | 24 | 24 | 0 | 2448 | 2448 |
| 5 | Chavakkad (M) | 0 | 477 | 477 | 0 | 48 | 48 | 0 | 0 | 0 | 0 | 120 | 120 | 0 | 0 | 0 | 0 | 645 | 645 |
| 6 | Cherpu | 0 | 2560 | 2560 | 0 | 8 | 8 | 0 | 4 | 4 | 0 | 22 | 22 | 0 | 119 | 119 | 0 | 2713 | 2713 |
| 7 | Chowannoor | 0 | 2569 | 2569 | 0 | 41 | 41 | 0 | 46 | 46 | 0 | 46 | 46 | 0 | 8 | 8 | 0 | 2710 | 2710 |
| 8 | Guruvayoor (M) | 0 | 134 | 134 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 134 | 134 |
| 9 | Iringalakkuda | 0 | 2091 | 2091 | 0 | 6 | 6 | 0 | 0 | 0 | 0 | 29 | 29 | 0 | 108 | 108 | 0 | 2234 | 2234 |
| 10 | Iringalakkuda (M) | 0 | 355 | 355 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 356 | 356 |
| 11 | Kodakara | 0 | 4400 | 4400 | 0 | 7 | 7 | 0 | 0 | 0 | 0 | 51 | 51 | 0 | 139 | 139 | 0 | 4597 | 4597 |
| 12 | Kodungalloor | 0 | 736 | 736 | 0 | 486 | 486 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 199 | 199 | 0 | 1422 | 1422 |
| 13 | Kodungalloor (M) | 0 | 293 | 293 | 0 | 58 | 58 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 97 | 97 | 0 | 448 | 448 |
| 14 | Kunnamkulam (M) | 0 | 490 | 490 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 23 | 23 | 0 | 1 | 1 | 0 | 514 | 514 |
| 15 | Mala | 4220 | 1815 | 6035 | 16 | 3 | 19 | 19 | 16 | 35 | 25 | 0 | 25 | 37 | 27 | 64 | 4317 | 1861 | 6178 |
| 16 | Mathilakom | 0 | 1198 | 1198 | 0 | 723 | 723 | 0 | 1 | 1 | 0 | 3 | 3 | 0 | 242 | 242 | 0 | 2167 | 2167 |
| 17 | Mullassery | 0 | 1345 | 1345 | 0 | 7 | 7 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 53 | 53 | 0 | 1407 | 1407 |
| 18 | Ollukkara | 0 | 2551 | 2551 | 0 | 9 | 9 | 0 | 0 | 0 | 0 | 36 | 36 | 0 | 425 | 425 | 0 | 3021 | 3021 |
| 19 | Pazhayannoor | 0 | 2335 | 2335 | 0 | 138 | 138 | 0 | 26 | 26 | 0 | 148 | 148 | 0 | 95 | 95 | 0 | 2742 | 2742 |
| 20 | Puzhakkal | 0 | 2884 | 2884 | 0 | 29 | 29 | 0 | 3 | 3 | 0 | 54 | 54 | 0 | 37 | 37 | 0 | 3007 | 3007 |
| 21 | Thaikulam | 0 | 1572 | 1572 | 0 | 148 | 148 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 771 | 771 | 0 | 2491 | 2491 |
| 22 | Thrissur (C) | 0 | 711 | 711 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 11 | 0 | 54 | 54 | 0 | 776 | 776 |
| 23 | Wadakkanchery | 0 | 3051 | 3051 | 0 | 33 | 33 | 0 | 14 | 14 | 0 | 105 | 105 | 0 | 48 | 48 | 0 | 3251 | 3251 |
| 24 | Vellangalloor | 0 | 1872 | 1872 | 0 | 15 | 15 | 0 | 8 | 8 | 0 | 20 | 20 | 0 | 40 | 40 | 0 | 1955 | 1955 |
| | District Total | 5199 | 40922 | 46121 | 16 | 1780 | 1796 | 19 | 121 | 140 | 25 | 805 | 830 | 44 | 2799 | 2843 | 5303 | 46427 | 51730 |

Table:21.7

SEASON WISE AREA IRRIGATED BY MINOR IRRIGATION SCHEMES

| Sl. No. | Name of Block/ Mun./Cor. | Area irrigated by Ground water schemes | | | | Area irrigated by Surface water schemes | | | | Area irrigated by Total minor irrigation schemes | | | | | | |
|---------|-----------------------------|--|-------------|--------------|-------------|---|--------------|--------------|-------------|--|-----------------|--------------|--------------|--------------|-------------|------------------|
| | | Khafif | Rabi | Perennial | Others | Total (3 to 7) | Khafif | Rabi | Perennial | Others | Total (8 to 11) | Khafif | Rabi | Perennial | Others | Total (13 to 16) |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 |
| 1 | Anthikkad | 77 | 116 | 432 | 64 | 689 | 84 | 786 | 855 | 21 | 1747 | 161 | 902 | 1288 | 85 | 2436 |
| 2 | Chalakkudy | 112 | 88 | 982 | 368 | 1549 | 883 | 961 | 1336 | 459 | 3638 | 994 | 1048 | 2317 | 827 | 5186 |
| 3 | Chalakkudy (M) | 6 | 5 | 95 | 75 | 181 | 142 | 143 | 403 | 247 | 935 | 148 | 148 | 498 | 322 | 1116 |
| 4 | Chavakkad | 231 | 108 | 378 | 39 | 756 | 58 | 1 | 6 | 3 | 68 | 289 | 109 | 384 | 42 | 824 |
| 5 | Chavakkad (M) | 0 | 0 | 126 | 16 | 142 | 0 | 86 | 1 | 0 | 87 | 0 | 86 | 127 | 16 | 229 |
| 6 | Cherpu | 41 | 44 | 613 | 182 | 880 | 1148 | 240 | 397 | 126 | 1911 | 1189 | 284 | 1010 | 308 | 2791 |
| 7 | Chowannoor | 57 | 163 | 604 | 46 | 870 | 667 | 767 | 74 | 0 | 1508 | 724 | 929 | 678 | 46 | 2377 |
| 8 | Guruvayoor (M) | 2 | 1 | 33 | 6 | 42 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 33 | 6 | 42 |
| 9 | Iringalakkuda | 48 | 99 | 553 | 88 | 789 | 416 | 131 | 1542 | 238 | 2327 | 464 | 230 | 2095 | 326 | 3115 |
| 10 | Iringalakkuda (M) | 0 | 1 | 110 | 0 | 112 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 110 | 0 | 111 |
| 11 | Kodakara | 281 | 335 | 1157 | 249 | 2022 | 510 | 866 | 672 | 237 | 2286 | 790 | 1201 | 1830 | 487 | 4308 |
| 12 | Kodungalloor | 8 | 23 | 324 | 17 | 371 | 4 | 1 | 112 | 6 | 122 | 11 | 23 | 435 | 23 | 492 |
| 13 | Kodungalloor (M) | 2 | 1 | 72 | 2 | 77 | 1 | 0 | 35 | 1 | 37 | 3 | 1 | 107 | 3 | 114 |
| 14 | Kunnamkulam (M) | 0 | 85 | 41 | 29 | 155 | 3 | 3 | 1 | 1 | 8 | 3 | 88 | 43 | 29 | 163 |
| 15 | Mala | 516 | 477 | 827 | 502 | 2322 | 3821 | 2565 | 1443 | 904 | 8734 | 4337 | 3042 | 2270 | 1406 | 11055 |
| 16 | Mathilakom | 31 | 151 | 247 | 53 | 482 | 12 | 23 | 53 | 14 | 103 | 44 | 174 | 300 | 67 | 585 |
| 17 | Mullassery | 13 | 11 | 348 | 36 | 408 | 1626 | 341 | 20 | 10 | 1996 | 1639 | 352 | 367 | 45 | 2403 |
| 18 | Ollukkara | 41 | 91 | 824 | 55 | 1011 | 764 | 420 | 221 | 267 | 1673 | 806 | 511 | 1045 | 322 | 2684 |
| 19 | Pazhayannoor | 202 | 285 | 607 | 142 | 1236 | 954 | 847 | 375 | 111 | 2287 | 1155 | 1132 | 983 | 254 | 3524 |
| 20 | Puzhakkal | 88 | 146 | 687 | 150 | 1070 | 1770 | 1839 | 221 | 90 | 3920 | 1858 | 1984 | 907 | 240 | 4989 |
| 21 | Thalikulam | 17 | 3 | 172 | 231 | 423 | 2 | 87 | 103 | 79 | 270 | 19 | 89 | 275 | 309 | 692 |
| 22 | Thrissur (C) | 14 | 20 | 147 | 66 | 248 | 199 | 26 | 15 | 12 | 251 | 212 | 46 | 162 | 78 | 498 |
| 23 | Wadakkanchery | 278 | 361 | 498 | 220 | 1357 | 844 | 2557 | 201 | 9 | 3611 | 1122 | 2918 | 699 | 229 | 4968 |
| 24 | Vellangalloor | 9 | 100 | 503 | 22 | 634 | 329 | 100 | 16 | 2 | 447 | 338 | 200 | 519 | 25 | 1082 |
| | District Total | 2074 | 2714 | 10380 | 2658 | 17826 | 14237 | 12790 | 8102 | 2837 | 37966 | 16308 | 15499 | 18482 | 5495 | 55784 |

Table:21.8

MINOR IRRIGATION SCHEMES ACCORDING TO WATER LIFTING DEVICES

| Sl. No. | Name of Block/Mun./Cor. | Ground Water Schemes | | | | | | Surface Water Schemes (Surface Lift Schemes only) | | | | | |
|---------|-------------------------|----------------------|------------------|-----------|---------------|-----------|----------------|---|-------------------|----------|---------------|-----------|-----------------|
| | | Submersible Pump | Centrifugal Pump | Turbine | Manual/Annual | Others | Total (3 to 7) | submersible Pump | Centrifuga l Pump | Turbine | Manual/Annual | Others | Total (9 to 13) |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| 1 | Anthikkad | 2 | 2292 | 1 | 0 | 0 | 2295 | 2 | 118 | 0 | 0 | 0 | 120 |
| 2 | Chalakkudy | 20 | 3292 | 2 | 0 | 16 | 3330 | 3 | 159 | 1 | 0 | 5 | 168 |
| 3 | Chalakkudy(M) | 4 | 554 | 1 | 0 | 0 | 559 | 0 | 31 | 0 | 0 | 0 | 31 |
| 4 | Chavakkad | 3 | 2292 | 3 | 0 | 0 | 2298 | 0 | 23 | 0 | 0 | 1 | 24 |
| 5 | Chavakkad (M) | 28 | 489 | 8 | 0 | 0 | 525 | | | | | | |
| 6 | Cherpu | 7 | 2539 | 3 | 0 | 23 | 2572 | 0 | 118 | 0 | 0 | 1 | 119 |
| 7 | Chowannoor | 104 | 2548 | 3 | 0 | 1 | 2656 | 2 | 6 | 0 | 0 | 0 | 8 |
| 8 | Guruvayoor (M) | 0 | 134 | 0 | 0 | 0 | 134 | | | | | | 0 |
| 9 | Iringalakkuda | 10 | 2079 | 3 | 0 | 5 | 2097 | 0 | 108 | 0 | 0 | 0 | 108 |
| 10 | Iringalakkuda (M) | 0 | 354 | 2 | 0 | 0 | 356 | | | | | | 0 |
| 11 | Kodakara | 18 | 4388 | 1 | 0 | 0 | 4407 | 0 | 139 | 0 | 0 | 0 | 139 |
| 12 | Kodungalloor | 3 | 1215 | 3 | 0 | 2 | 1223 | 1 | 198 | 0 | 0 | 0 | 199 |
| 13 | Kodungalloor (M) | 1 | 350 | 0 | 0 | 0 | 351 | 0 | 97 | 0 | 0 | 0 | 97 |
| 14 | Kunnankulam (M) | 1 | 489 | 0 | 0 | 0 | 490 | 0 | 1 | 0 | 0 | 0 | 1 |
| 15 | Mala | 47 | 6034 | 3 | 1 | 4 | 6089 | 1 | 63 | 0 | 0 | 0 | 64 |
| 16 | Mathiakom | 5 | 1917 | 0 | 0 | 0 | 1922 | 0 | 240 | 2 | 0 | 0 | 242 |
| 17 | Mullassery | 53 | 1287 | 1 | 10 | 3 | 1354 | 0 | 50 | 0 | 0 | 3 | 53 |
| 18 | Ollukkara | 7 | 2548 | 0 | 0 | 5 | 2560 | 1 | 423 | 0 | 0 | 1 | 425 |
| 19 | Pazhayannoor | 134 | 2335 | 30 | 0 | 0 | 2499 | 0 | 94 | 0 | 0 | 1 | 95 |
| 20 | Puzhakkal | 32 | 2881 | 3 | 0 | 0 | 2916 | 0 | 36 | 0 | 0 | 1 | 37 |
| 21 | Thalikulam | 27 | 1690 | 1 | 0 | 2 | 1720 | 7 | 759 | 5 | 0 | 0 | 771 |
| 22 | Thrissur (C) | 90 | 620 | 1 | 0 | 0 | 711 | 0 | 50 | 0 | 0 | 4 | 54 |
| 23 | Wadakkanchery | 299 | 2781 | 3 | 10 | 5 | 3098 | 0 | 48 | 0 | 0 | 0 | 48 |
| 24 | Vellangalloor | 15 | 1872 | 0 | 0 | 8 | 1895 | 0 | 39 | 0 | 0 | 1 | 40 |
| | District Total | 910 | 46980 | 72 | 21 | 74 | 48057 | 17 | 2800 | 8 | 0 | 18 | 2843 |

Table:21.9

NUMBER OF GROUND WATER SCHEMES AND POTENTIAL UTILISED BY WATER DISTRIBUTION DEVICE

| Sl. No. | Name of Block/ Mun./Cor. | Ground Water Schemes According to Water Distribution System | | | | | | | | | | | | | | | | |
|---------|-----------------------------|---|-------------|----------------|--------------|------------------|------------|--------------|-------------|-----------|-----------|-----------|-----------|-----------|-----------|--------------|--------------|--|
| | | Open Water Channel | | | | Underground pipe | | Surface pipe | | Drip | | Sprinkler | | Others | | Total | | |
| | | Lined/Pucca | | Unlined/Kuchha | | No. | PU | No. | PU | No. | PU | No. | PU | No. | PU | No. | PU | |
| | | No. | PU | No. | PU | | | | | | | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | |
| 1 | Anthikkad | 587 | 190 | 534 | 180 | 61 | 16 | 1113 | 303 | 0 | 0 | 0 | 0 | 0 | 0 | 2295 | 689 | |
| 2 | Chalakkudy | 132 | 69 | 2908 | 1299 | 100 | 83 | 167 | 89 | 4 | 4 | 1 | 0 | 3 | 5 | 3315 | 1549 | |
| 3 | Chalakkudy (M) | 58 | 25 | 470 | 140 | 15 | 11 | 4 | 2 | 0 | 0 | 0 | 0 | 12 | 4 | 559 | 182 | |
| 4 | Chavakkad | 162 | 51 | 655 | 162 | 636 | 271 | 842 | 270 | 3 | 1 | 0 | 0 | 0 | 0 | 2298 | 755 | |
| 5 | Chavakkad (M) | 0 | 0 | 1 | 1 | 0 | 0 | 524 | 141 | 0 | 0 | 0 | 0 | 0 | 0 | 525 | 142 | |
| 6 | Cherpu | 1 | 0 | 2066 | 695 | 15 | 5 | 465 | 179 | 2 | 0 | 0 | 0 | 0 | 0 | 2549 | 879 | |
| 7 | Chowannur | 390 | 165 | 2243 | 696 | 0 | 0 | 8 | 2 | 2 | 1 | 12 | 5 | 0 | 0 | 2655 | 869 | |
| 8 | Guruvayoor (M) | 134 | 42 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 134 | 42 | |
| 9 | Iringalakkuda | 1 | 0 | 989 | 356 | 73 | 33 | 1030 | 400 | 0 | 0 | 0 | 0 | 0 | 0 | 2093 | 789 | |
| 10 | Iringalakkuda (M) | 0 | 0 | 1 | 0 | 0 | 0 | 355 | 111 | 0 | 0 | 0 | 0 | 0 | 0 | 356 | 111 | |
| 11 | Kodakara | 13 | 6 | 3893 | 1812 | 3 | 2 | 494 | 200 | 1 | 0 | 3 | 1 | 0 | 0 | 4407 | 2021 | |
| 12 | Kodungalloor | 0 | 0 | 765 | 283 | 1 | 1 | 454 | 86 | 3 | 0 | 0 | 0 | 0 | 0 | 1223 | 370 | |
| 13 | Kodungalloor (M) | 0 | 0 | 3 | 0 | 317 | 73 | 31 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 351 | 76 | |
| 14 | Kunnamkulam (M) | 0 | 0 | 490 | 155 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 490 | 155 | |
| 15 | Mala | 143 | 93 | 3597 | 1445 | 219 | 197 | 2126 | 586 | 3 | 0 | 0 | 0 | 0 | 0 | 6088 | 2321 | |
| 16 | Mathiakom | 218 | 58 | 385 | 73 | 0 | 0 | 1291 | 344 | 1 | 0 | 27 | 7 | 0 | 0 | 1922 | 482 | |
| 17 | Mullassery | 328 | 138 | 470 | 138 | 107 | 37 | 433 | 91 | 0 | 0 | 4 | 4 | 9 | 1 | 1351 | 409 | |
| 18 | Ollukkara | 307 | 103 | 2233 | 898 | 4 | 2 | 9 | 2 | 4 | 5 | 2 | 1 | 1 | 0 | 2560 | 1011 | |
| 19 | Pazhavannoor | 696 | 306 | 1475 | 770 | 2 | 1 | 318 | 152 | 2 | 1 | 6 | 6 | 0 | 0 | 2499 | 1236 | |
| 20 | Puzhakkal | 639 | 177 | 1786 | 664 | 145 | 48 | 345 | 180 | 1 | 0 | 0 | 0 | 0 | 0 | 2916 | 1069 | |
| 21 | Thaikulam | 1 | 0 | 706 | 194 | 35 | 7 | 964 | 219 | 8 | 2 | 5 | 1 | 1 | 0 | 1720 | 423 | |
| 22 | Thrissur (C) | 79 | 31 | 629 | 214 | 0 | 0 | 3 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 711 | 247 | |
| 23 | Wadakkanchery | 616 | 269 | 2150 | 873 | 8 | 2 | 317 | 205 | 3 | 3 | 3 | 5 | 1 | 0 | 3098 | 1357 | |
| 24 | Vellangalloor | 141 | 29 | 361 | 95 | 58 | 13 | 1327 | 488 | 0 | 0 | 8 | 7 | 0 | 0 | 1895 | 632 | |
| | District Total | 4646 | 1752 | 28810 | 11143 | 1799 | 802 | 12620 | 4055 | 37 | 17 | 71 | 37 | 27 | 10 | 48010 | 17816 | |

Table:21.10

NUMBER OF SURFACE WATER SCHEMES AND POTENTIAL UTILISED BY WATER DISTRIBUTION DEVICE

| Sl. No. | Name of Block/ Mun./Cor. | Surface Water Schemes According to Water Distribution System | | | | | | | | | | | | | | | | |
|---------|-----------------------------|--|--------------|----------------|--------------|------------------|-------------|--------------|-------------|----------|------------|-----------|-----------|-----------|-------------|-------------|--------------|--|
| | | Open Water Channel | | | | Underground pipe | | Surface pipe | | Drip | | Sprinkler | | Others | | Total | | |
| | | Lined/Pucca | | Unlined/Kuchha | | No. | PU | No. | PU | No. | PU | No. | PU | No. | PU | No. | PU | |
| | | No. | PU | No. | PU | | | | | | | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | |
| 1 | Anthikkad | 8 | 888 | 116 | 859 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 124 | 1747 | |
| 2 | Chalakkudy | 28 | 868 | 121 | 2622 | 14 | 121 | 3 | 8 | 1 | 7 | 0 | 0 | 1 | 12 | 168 | 3638 | |
| 3 | Chalakkudy (M) | 4 | 650 | 24 | 32 | 4 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 250 | 33 | 935 | |
| 4 | Chavakkad | 2 | 1 | 116 | 54 | 28 | 12 | 0 | 0 | 2 | 1 | 1 | 0 | 0 | 0 | 149 | 68 | |
| 5 | Chavakkad (M) | 20 | 6 | 98 | 81 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 120 | 87 | |
| 6 | Cherpu | 4 | 479 | 114 | 1220 | 12 | 208 | 9 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 139 | 1911 | |
| 7 | Chowannoor | 17 | 444 | 35 | 1064 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 52 | 1508 | |
| 8 | Guruvayoor (M) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 9 | Iringalakkuda | 2 | 132 | 67 | 529 | 13 | 221 | 36 | 1045 | 0 | 0 | 0 | 0 | 12 | 399 | 130 | 2326 | |
| 10 | Iringalakkuda (M) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 11 | Kodakara | 21 | 1142 | 156 | 1023 | 4 | 81 | 7 | 4 | 0 | 0 | 2 | 36 | 0 | 0 | 190 | 2286 | |
| 12 | Kodungalloor | 0 | 0 | 119 | 90 | 80 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 199 | 122 | |
| 13 | Kodungalloor (M) | 0 | 0 | 1 | 0 | 96 | 37 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 97 | 37 | |
| 14 | Kunnamkulam (M) | 0 | 0 | 23 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 24 | 7 | |
| 15 | Mala | 19 | 939 | 59 | 7591 | 8 | 199 | 2 | 3 | 0 | 0 | 0 | 0 | 1 | 1 | 89 | 8733 | |
| 16 | Mathilakom | 1 | 6 | 64 | 29 | 43 | 21 | 137 | 46 | 0 | 0 | 0 | 0 | 0 | 0 | 245 | 102 | |
| 17 | Mullassery | 8 | 770 | 29 | 1211 | 1 | 1 | 12 | 13 | 0 | 0 | 1 | 1 | 0 | 0 | 51 | 1996 | |
| 18 | Ollukkara | 232 | 1024 | 204 | 285 | 14 | 57 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 307 | 460 | 1673 | |
| 19 | Pazhayannoor | 113 | 1995 | 68 | 172 | 0 | 0 | 53 | 69 | 0 | 0 | 1 | 0 | 3 | 51 | 238 | 2287 | |
| 20 | Puzhakkal | 40 | 2066 | 46 | 1135 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 719 | 91 | 3920 | |
| 21 | Thalikulam | 3 | 1 | 258 | 99 | 11 | 2 | 496 | 167 | 0 | 0 | 0 | 0 | 3 | 1 | 771 | 270 | |
| 22 | Thrissur (C) | 14 | 6 | 27 | 21 | 0 | 0 | 13 | 8 | 0 | 0 | 0 | 0 | 11 | 217 | 65 | 252 | |
| 23 | Wadakkanchery | 67 | 2422 | 71 | 1066 | 0 | 0 | 5 | 3 | 3 | 120 | 0 | 0 | 0 | 0 | 146 | 3611 | |
| 24 | Vellangalloor | 6 | 4 | 21 | 360 | 30 | 83 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 60 | 448 | |
| | District Total | 609 | 13843 | 1837 | 19550 | 358 | 1078 | 776 | 1371 | 7 | 128 | 5 | 37 | 49 | 1957 | 3641 | 37964 | |

Table:21.11

NUMBER OF GROUND WATER SCHEMES AND POTENTIAL UTILISED BY WATER DISTRIBUTION DEVICE

| Sl. No. | Name of Block/ Mun./Cor. | Minor Irrigation Schemes According to Water Distribution System | | | | | | | | | | | | | | | | | |
|----------|-----------------------------|---|--------------|----------------|--------------|-------------|-------------|------------------|-------------|--------------|------------|-----------|-----------|-----------|-------------|--------------|--------------|-------|----|
| | | Open Water Channel | | | | | | Underground pipe | | Surface pipe | | Drip | | Sprinkler | | Others | | Total | |
| | | Lined/Pucca | | Unlined/Kuchha | | No. | PU | No. | PU | No. | PU | No. | PU | No. | PU | No. | PU | No. | PU |
| | | No. | PU | No. | PU | | | | | | | | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | | |
| 1 | Anthikkad | 595 | 1077 | 650 | 1039 | 61 | 16 | 1113 | 303 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2419 | 2435 | |
| 2 | Chalakkudy | 160 | 937 | 3029 | 3921 | 114 | 203 | 170 | 97 | 5 | 11 | 1 | 0 | 4 | 17 | 3483 | 5186 | | |
| 3 | Chalakkudy (M) | 62 | 675 | 494 | 172 | 19 | 14 | 4 | 2 | 0 | 0 | 0 | 0 | 13 | 254 | 592 | 1117 | | |
| 4 | Chavakkad | 164 | 52 | 771 | 217 | 664 | 283 | 842 | 270 | 5 | 3 | 1 | 0 | 0 | 0 | 2447 | 825 | | |
| 5 | Chavakkad (M) | 20 | 6 | 99 | 82 | 0 | 0 | 524 | 141 | 1 | 0 | 0 | 0 | 1 | 0 | 645 | 229 | | |
| 6 | Cherpu | 5 | 479 | 2180 | 1915 | 27 | 214 | 474 | 183 | 2 | 0 | 0 | 0 | 0 | 0 | 2688 | 2791 | | |
| 7 | Chowannoor | 407 | 609 | 2278 | 1760 | 0 | 0 | 8 | 2 | 2 | 1 | 12 | 5 | 0 | 0 | 2707 | 2377 | | |
| 8 | Guruvayoor (M) | 134 | 42 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 134 | 42 | | |
| 9 | Iringalakkuda | 3 | 132 | 1056 | 885 | 86 | 254 | 1066 | 1445 | 0 | 0 | 0 | 0 | 12 | 399 | 2223 | 3115 | | |
| 10 | Iringalakkuda (M) | 0 | 0 | 1 | 0 | 0 | 0 | 355 | 111 | 0 | 0 | 0 | 0 | 0 | 0 | 356 | 111 | | |
| 11 | Kodakara | 34 | 1148 | 4049 | 2834 | 7 | 83 | 501 | 205 | 1 | 0 | 5 | 38 | 0 | 0 | 4597 | 4308 | | |
| 12 | Kodungalloor | 0 | 0 | 884 | 374 | 81 | 32 | 454 | 86 | 3 | 0 | 0 | 0 | 0 | 0 | 1422 | 492 | | |
| 13 | Kodungalloor (M) | 0 | 0 | 4 | 1 | 413 | 110 | 31 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 448 | 114 | | |
| 14 | Kunnamkulam (M) | 0 | 0 | 513 | 162 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 514 | 162 | | |
| 15 | Mala | 162 | 1033 | 3656 | 9037 | 227 | 396 | 2128 | 588 | 3 | 0 | 0 | 0 | 1 | 1 | 6177 | 11055 | | |
| 16 | Mathilakom | 219 | 64 | 449 | 102 | 43 | 21 | 1428 | 390 | 1 | 0 | 27 | 7 | 0 | 0 | 2167 | 584 | | |
| 17 | Mullassery | 336 | 908 | 499 | 1349 | 108 | 38 | 445 | 103 | 0 | 0 | 5 | 5 | 9 | 1 | 1402 | 2404 | | |
| 18 | Ollukkara | 539 | 1127 | 2437 | 1183 | 18 | 59 | 9 | 2 | 4 | 5 | 2 | 1 | 11 | 307 | 3020 | 2684 | | |
| 19 | Pazhayannoor | 809 | 2301 | 1543 | 942 | 2 | 1 | 371 | 221 | 2 | 1 | 7 | 7 | 3 | 51 | 2737 | 3524 | | |
| 20 | Puzhakkal | 679 | 2243 | 1832 | 1799 | 145 | 48 | 345 | 180 | 1 | 0 | 0 | 0 | 5 | 719 | 3007 | 4989 | | |
| 21 | Thalikulam | 4 | 1 | 964 | 293 | 46 | 9 | 1460 | 386 | 8 | 2 | 5 | 1 | 4 | 1 | 2491 | 693 | | |
| 22 | Thrissur (C) | 93 | 37 | 656 | 234 | 0 | 0 | 16 | 10 | 0 | 0 | 0 | 0 | 11 | 217 | 776 | 498 | | |
| 23 | Wadakkanchery | 683 | 2691 | 2221 | 1939 | 8 | 2 | 322 | 208 | 6 | 123 | 3 | 5 | 1 | 0 | 3244 | 4968 | | |
| 24 | Vellangalloor | 147 | 33 | 382 | 455 | 88 | 96 | 1330 | 489 | 0 | 0 | 8 | 7 | 0 | 0 | 1955 | 1080 | | |
| | District Total | 5255 | 15595 | 30647 | 30695 | 2157 | 1879 | 13396 | 5425 | 44 | 146 | 76 | 76 | 76 | 1967 | 51651 | 55783 | | |

Source: Irrigation Department

Table: 21.12

DISTRIBUTION OF DISTRICT WISE HOLDINGS RECEIVING IRRIGATION BY DIFFERENT SOURCES 2005-06

| District | Canal | | Tank | | Well | | Tube wells | | Other sources | | Total | |
|----------|-------|-------|-------|-------|--------|------|------------|------|---------------|-----|--------|-------|
| | No | % | No | % | No | % | No | % | No | % | No | % |
| Thrissur | 21754 | 13.21 | 16419 | 13.88 | 314081 | 16.5 | 10055 | 4.57 | 65866 | 9.2 | 428175 | 13.71 |

Table: 21.13

4th MINOR IRRIGATION CENSUS 2006-07

| District | Ground Water | | | Surface Water | | Total Schemes | Cultivable Area (In Ha) | Net Area Sown (In Ha) | Net Area Irrigated (In Ha) |
|----------|--------------|--------------|----------------|---------------|--------------|---------------|-------------------------|-----------------------|----------------------------|
| | Dug well | Shallow well | Deep tube well | Surface flow | Surface lift | | | | |
| Thrissur | 46121 | 1796 | 140 | 830 | 2843 | 51730 | 163943 | 110296 | 90404 |

Table: 21.14

REPORT OF MINOR IRRIGATION SCHEMES 2010-11

| Sl. No. | Name of Department/ Organisation | No of schemes completed | | Expenditure incurred in 000's | | Potential created (In Ha) | | Potential utilized (In Ha) | |
|---------|----------------------------------|-------------------------|-------------|-------------------------------|---------------|---------------------------|--------------|----------------------------|----------------|
| | | GW | SW | GW | SW | GW | SW | GW | SW |
| 1 | Irrigation | 7 | 183 | 7512 | 372398 | 203 | 4519 | 203 | 4115.89 |
| 2 | District Panchayath LSGD | 1 | 1 | 500 | 844 | 15 | 21 | 15 | 21 |
| 3 | Ground Water Department | 567 | 0 | | | 613 | 0 | 613 | 0 |
| 4 | Agriculture Department | 820 | 969 | 7282 | 4028 | 404 | 372 | 349 | 372 |
| 5 | Institutional Finance | 34907 | 3208 | 1250493 | 172039 | 22882.64 | 34373.81 | 21591.5 | 32494.31 |
| | Total | 36302 | 4361 | 1265787 | 549309 | 24117.64 | 39286 | 22771.5 | 37003.2 |

Source: Infrastructure Statistics of Kerala

POWER

Power Sector in Kerala plays a vital role in all developmental activities in Kerala. Obviously power crisis is the prime obstacle to start new initiatives in the industrial field. The need for power is increasing and the production of power should also be increased accordingly. Monsoon is essential to sustain the hydropower base in the State and the shortage in rainfall usually creates power crisis. Kerala received abundant monsoon during the current year and increased the inflow into KSEB reservoirs; the KSEB could manage the power supply situation with higher quantum of cheaper hydel power. Kerala is one among the very few states in the country where there was no load shedding and power out during 2010-11. KSEB has been responsible for the generation, transmission and supply of electricity in the State, with particular emphasis to provide electricity at affordable cost to the domestic as well as for agricultural purposes. The Board has been passing through a transitional phase of reforms in the electricity sector. The Electricity Act 2003 envisages separate organizations for Transmission and Distribution. Hydel and Thermal Projects, which form the backbone of the power sector of Kerala State, cater to needs of the various industries, which are augmented by the supply from National grids. High rainfall and terrain conditions have endowed the State with a vast potential of hydro-electricity, which is about 6% of India's total hydroelectric potential. The Small Hydro Power (SHP) units have spurred the momentum of development of wind, solar and biomass energy systems, paving the way for integrated renewable energy systems in all potential development blocks/taluks.

Kerala's power sector projections

In the past, the energy demand was presumed to be basis with load factor being used to convert the projected energy demand to peak MW demand. The projected energy demand was worked out by a combination of end use and time series analysis. This was the methodology used in the Electric Power Surveys (EPS) conducted by CEA in conjunction with the State Electricity Boards.

One of the problems with the above approach has been consistent over projection of peak demand. The annual growth of peak power demand has been assumed to be the order of 7-8% and this has resulted in projections well beyond actual demand realized.

Some of these anomalies have been corrected in the current Electric Power Surveys conducted and the projections for Kerala as continued in the 17th Survey. The figures for Kerala in terms of demand projection in the Draft 17th EPS are given below.

Table: 22.1

17th EPS ESTIMATES FOR 11th PLAN PERIOD

| Year | Energy Consumption | Peak Demanded | Annual Load Factor (%) |
|---------|--------------------|---------------|------------------------|
| 2006-07 | 11147 | 2699 | 60.75 |
| 2007-08 | 12037 | 2823 | 61.54 |
| 2008-09 | 12973 | 2947 | 62.34 |
| 2009-10 | 13977 | 3078 | 63.14 |
| 2010-11 | 15112 | 3227 | 63.94 |
| 2011-12 | 16345 | 3391 | 64.74 |

It is evident from the 17th EPS Draft Report that a number of assumptions made for projections which may result in the actual demand being more than what is projected in the EPS or less. KSEB's own projections taking into account a higher growth rate and a slightly lower load factor projects the following demands for the 11th plan period.

Table: 22.2

| Year | Energy Consumption | Peak Demand | Annual Load Factor (%) |
|---------|--------------------|-------------|------------------------|
| 2007-08 | 15217 | 2856 | 60.82 |
| 2008-09 | 16096 | 3004 | 61.17 |
| 2009-10 | 17025 | 3159 | 61.52 |
| 2010-11 | 18077 | 3335 | 61.87 |
| 2011-12 | 19230 | 3528 | 62.22 |

Source: EPA Draft Report

Table: 22.3

PLAN-WISE ACHIEVEMENTS

| Sl. No. | Particulars | 11 th Plan | | | |
|---------|--|-----------------------|----------------------|----------------------|----------------------|
| | | 1 st Year | 2 nd Year | 3 rd Year | 4 th Year |
| | | 2007-08 | 2008-09 | 2009-10 | 2010-11 |
| 1 | Installed Capacity (MW) | 13.68 | 68.1 | 7 | 116.6 |
| 2 | 220 KV line (km) | 1.01 | 0 | 18.26 | 0 |
| 3 | 110 KV line (km) | 56.38 | 17.5 | 48.30 | 34.22 |
| 4 | 66 KV line (km) | 11.13 | 0 | 0 | 0 |
| 5 | 33 KV line (km) | 105.44 | 169.57 | 199.22 | 63.6 |
| 6 | 11 KV line (km) | 1816.45 | 3048.00 | 3398.27 | 36659 |
| 7 | LT Lines (km) | 8158.18 | 7563.00 | 7837.95 | 6761 |
| 8 | Step up transformer capacity (MVA) | 0 | 39.8 | 1.6 | 235.11 |
| 9 | No. of EHT substations including upgradation | 6 | 2 | 11 | 6 |
| 10 | No. of 33 KV substations | 13 | 16 | 18 | 7 |
| 11 | Step down transformer capacity (MVA) | 469 | 385 | 1095 | 934 |
| 12 | Distribution transformer | | | | |
| | a. Nos. | 2553 | 4109 | 5790 | 5804 |
| | b. Capacity (MVA) | 265.17 | 514.67 | 770.99 | 611.22 |
| 13 | Consumer Nos. | 482766 | 442895 | 380015 | 384470 |
| 14 | Connected Load (MW) | 912 | 2889.44 | 599.11 | 815.3 |
| 15 | Street light installed (No) | 49448 | 37641 | 61532 | 54768 |
| 16 | Pump set connected (No) | 15553 | 11231 | 10715 | 12467 |

Table: 22.4

**ANNUAL GENERATION FROM RENEWABLE ENERGY SOURCES
(Small hydel up to 25 mw, wind, etc)**

| Sl. No. | Stations | Installed capacity (mw) | GENERATION (MU) | | | | |
|---------------------------|-------------------------|-------------------------|-----------------|---------------|---------------|---------------|---------------|
| | | | 2006-07 | 2007-08 | 2008-09 | 2009-10 | 2010-11 |
| HYDEL (KSEB) | | | | | | | |
| 1 | Kallada | 15 | 76.16 | 73.03 | 46.34 | 60.42 | 72.09 |
| 2 | Peppara | 3 | 7.48 | 8.18 | 5.52 | 6.05 | 9.75 |
| 3 | Mattupetty | 2 | 5.68 | 6.91 | 5.74 | 1.91 | 2.28 |
| 4 | Poringalkuthu LBE | 16 | 107.81 | 59.94 | 109.62 | 108.82 | 120.67 |
| 5 | Malampuzha | 2.5 | 2.06 | 0 | 0 | 0 | 0 |
| 6 | Lower Meenmutty | 3.5 | 5.62 | 4.92 | 4.11 | 3.43 | 7.19 |
| 7 | Urumi | 6.15 | 14.52 | 13.77 | 11.79 | 11.58 | 15.94 |
| 8 | Chembukkadavu | 6.45 | 12.17 | 9.28 | 10.03 | 8.46 | 13.54 |
| 9 | Malankara | 10.5 | 32.22 | 43.7 | 33.49 | 32.46 | 36.93 |
| 10 | Neriamangalam Extention | 25 | - | - | 47.41 | 92.6 | 95.48 |
| 11 | Kuttiyadi Tailrace | 3.75 | - | - | 5.76 | 4.62 | 4.34 |
| HYDEL(CPP) | | | | | | | |
| 1 | Maniyar | 12 | 43.02 | 38.52 | 25.3 | 33.79 | 41.24 |
| 2 | Kuthungal | 21 | 37.52 | 62.88 | 38.42 | 34.25 | 47.05 |
| HYDEL(IPP) | | | | | | | |
| 1 | Ullungal | 7 | - | - | 3.12 | 19.82 | 24.29 |
| 2 | Iruttukkanam | 3 | - | - | - | - | 5.96 |
| WIND (KSEB) | | | | | | | |
| 1 | Kanjikode | 2.02 | 2.14 | 1.96 | 1.68 | 1.84 | 1.51 |
| WIND (IPP) | | | | | | | |
| 1 | Ramakkalmedu | 14.25 | - | - | 21.72 | 32.54 | 29.38 |
| 2 | Agali | 13.8 | - | - | 10.28 | 35.07 | 33.66 |
| Cogeneration (IPP) | | | | | | | |
| 1 | MPS Steel Casting | 10 | - | - | 10.26 | 49.02 | 34.07 |
| Total | | | 346.4 | 323.09 | 390.59 | 536.68 | 595.37 |

Table: 22.5

**ALL INDIA GENERATING INSTALLED ELECTRICITY GENERATION
CAPACITY AS ON 31-03-11**

| Name of State/U.Ts | Hydro | Coal | Diesel | Gas |
|---------------------------|----------------|-----------------|----------------|-----------------|
| 1 | 2 | 3 | 4 | 5 |
| Northern Region | 13822.75 | 24232.5 | 12.99 | 4134.76 |
| Western Region | 7447.5 | 30995.5 | 17.48 | 7903.81 |
| Southern Region | 11299.03 | 19882.5 | 939.32 | 4690.78 |
| Eastern Region | 3882.12 | 18747.88 | 17.2 | 190 |
| North Eastern Region | 1116 | 60 | 142.74 | 787 |
| Islands | 0 | 0 | 70.02 | 0 |
| Total (All India) | 37567.4 | 93918.38 | 1199.75 | 17706.35 |

| Name of State/U.Ts | Nuclear | RES | Total |
|---------------------------|----------------|-----------------|-----------------|
| 1 | 6 | 7 | 8 |
| Northern Region | 1620 | 3165.55 | 46988.55 |
| Western Region | 1840 | 5357.96 | 53562.25 |
| Southern Region | 1320 | 9341.67 | 47473.3 |
| Eastern Region | 0 | 359.64 | 23196.84 |
| North Eastern Region | 0 | 223.6 | 2329.34 |
| Islands | 0 | 6.1 | 76.12 |
| Total (All India) | 4780 | 18454.52 | 173626.4 |

Source: Kerala State Electricity Board

MISCELLANEOUS

Table: 23.1

NEWLY REGISTERED VEHICLES FOR THE YEAR 2010-11

| SI.No. | Classification of Vehicles | Number |
|--------|---|--------------|
| 1 | Multiaxied Articulated Vehicles | 2 |
| 2 | Trucks and Lorries | 300 |
| 3 | Four Wheelers | 1878 |
| 4 | Three Wheelers | 607 |
| | Total | 2787 |
| 5 | Stage Carriage | 93 |
| 6 | Contract Carriage | 223 |
| 7 | Private Service Vehicles | 71 |
| 8 | Other Buses | 174 |
| | Total | 561 |
| 9 | Motor Cabs | 696 |
| 10 | Maxi Cabs/Taxi | 0 |
| 11 | Other Taxis | 116 |
| | Total | 812 |
| 12 | LMV 3 Seater | 3270 |
| 13 | LMV 4 to 6 Seater | 0 |
| 14 | Motor Cycle Hire | 0 |
| | Total | 3270 |
| | Other TVs | 99 |
| | Total Transport | 7529 |
| 15 | Scooters | 0 |
| 16 | Mopads | 0 |
| 17 | Motor Cycles including above & below 95cc | 41188 |
| | Total | 41188 |
| 18 | Cars | 17612 |
| 19 | Jeeps | 0 |
| 20 | Omni Buses | 1 |
| 21 | Tractors | 33 |
| 22 | Trailors | 1 |
| 23 | Others | 789 |
| | Total | 18436 |
| | Total Non Transport | 59624 |
| | Grand Total | 67153 |

Source: Economic Review 2011

Table: 23.2

Category-wise Length of Roads Maintained by PWD (R&B) as on 31-03-2011

| (In Kms) | | | | | |
|------------------|-----------------|----------------------|----------------------|---------------|----------|
| District & State | State High ways | Major district Roads | Other district Roads | Village Roads | Total |
| Thrissur | 374.03 | 1291.58 | 0 | 0 | 1665.61 |
| Kerala | 4341.65 | 18900.05 | 0 | 0 | 23241.70 |

Table: 23.3

NUMBER OF MOTOR VEHICLE HAVING VALID REGISTRATION AS ON 2011

| | | |
|--------------------------|---------------------------------|---------------|
| Goods Vehicles | Four Wheelers and above | 27858 |
| | Three Wheelers including tempos | 12938 |
| Buses | Stage carriages | 4789 |
| | Contract Carriages/Omni Buses | 16828 |
| Four Wheelers | Cars | 93756 |
| | Taxis | 15852 |
| | Jeeps | 4432 |
| Three Wheelers | Autorickshaws | 46412 |
| | Motorized Cycle Rickshaws | 0 |
| Two Wheelers | Motorized Cycles | 0 |
| | Scooter/Motor Cycles | 409140 |
| Tractors/Trailors | Tractors/Trailors | 1032 |
| | Tillers | 467 |
| | Trailors | 612 |
| | Others | 2638 |
| Grand Total | | 636754 |

Source: Infrastructure Statistics of Kerala

Table: 23.4

STANDARDISED LIST OF INSTITUTIONS IN THRISSUR DISTRICT

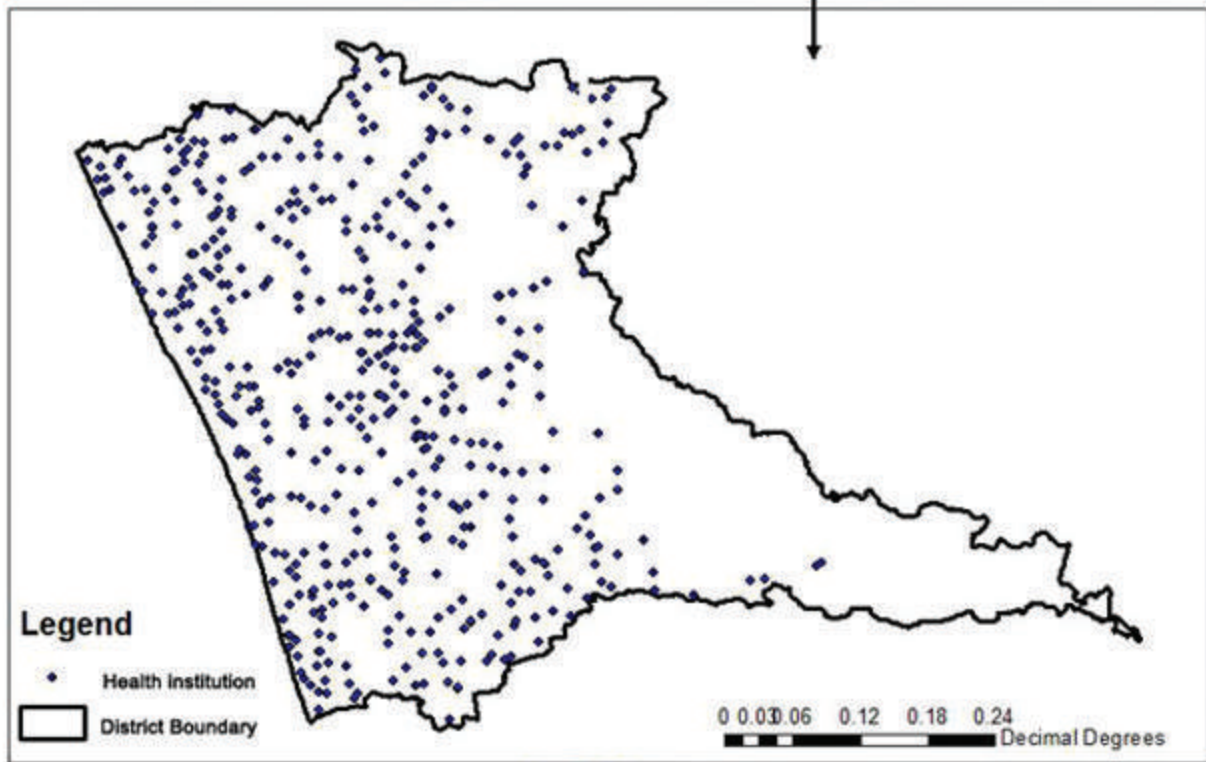
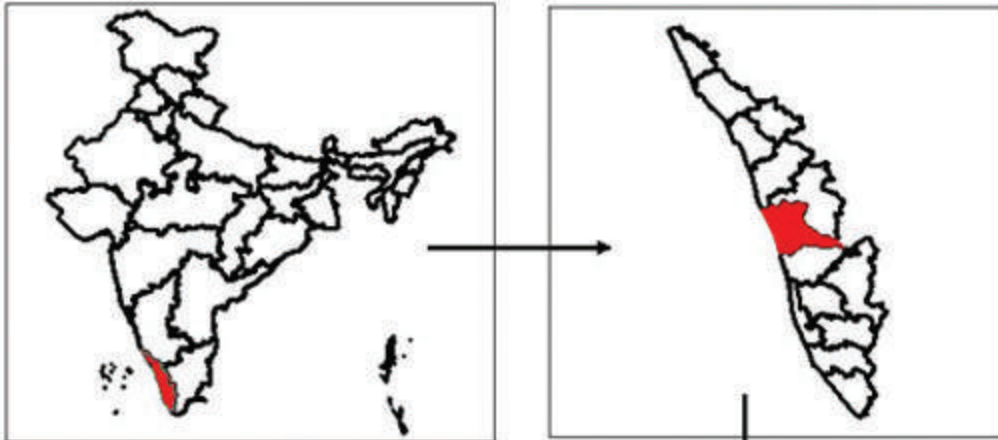
| Sl. No. | Institutions | Location | No. of Beds | Health Block |
|----------------|---------------------|-----------------|--------------------|---------------------|
| 1 | CHC | Mala | 66 | CHC Aloor |
| 2 | CHC | Kattoor | 56 | CHC Anandapuram |
| 3 | CHC | Pazhayannoor | 58 | CHC Thiruvilwamala |
| 4 | CHC | Valappad | 65 | CHC Vadanappally |
| 5 | CHC | Thripprayar | 40 | CHC Alappad |
| 6 | CHC | Anthikkad | 32 | CHC Alappad |
| 7 | CHC | Kadappuram | 30 | CHC Kadappuram |
| 8 | CHC | Vadakkekad | 48 | CHC Vadakkekad |
| 9 | CHC | Anandapuram | 12 | CHC Anandapuram |
| 10 | CHC | Pazhanji | 12 | CHC Pazhanji |
| 11 | CHC | Perinjanam | 36 | CHC Perinjanam |
| 12 | CHC | Madavanna | 12 | CHC Madavanna |
| 13 | CHC | Elinjpra | 18 | CHC Elinjpra |
| 14 | CHC | Vellanikkara | 6 | CHC Vellanikkara |
| 15 | CHC | Tholloor | 12 | CHC Tholur |
| 16 | CHC | Oloor | 18 | CHC Ollur |
| 17 | CHC | Cherpu | 80 | CHC Cherpu |
| 18 | CHC | Erumapetty | 10 | CHC Erumapetty |
| 19 | CHC | Thiruvilwamala | 30 | CHC Thiruvilwamala |
| 20 | CHC | Alappad | 31 | CHC Alappad |
| 21 | CHC | Vadanappilly | 24 | CHC Vadanappally |
| 22 | CHC | Mullassery | 36 | CHC Mullassery |
| 23 | CHC | Mattathoor | 34 | CHC Mattathur |
| 24 | CHC | Puthenchira | 40 | CHC Puthenchira |
| 25 | 24X7 PHC | Aloor | 12 | 24x7 PHC Aloor |
| 26 | 24X7 PHC | Mambara | 0 | 24x7 PHC Mambara |
| 27 | 24X7 PHC | Kakkad | 24 | 24x7 PHC Mambara |
| 28 | 24X7 PHC | Pamboor | 4 | 24x7 PHC Pamboor |
| 29 | 24X7 PHC | Arimboor | 24 | CHC Tholur |
| 30 | 24X7 PHC | Varavoor | 24 | CHC Erumapetty |
| 31 | 24X7 PHC | Desamangalam | 24 | CHC Erumapetty |
| 32 | 24X7 PHC | Kondazhy | 24 | CHC Thiruvilwamala |
| 33 | 24X7 PHC | Panjai | 0 | CHC Thiruvilwamala |

| Sl. No. | Institutions | Location | No. of Beds | Health Block |
|----------------|---------------------|----------------------|--------------------|-----------------------|
| 34 | 24X7 PHC | Kodakara | 30 | CHC Mattathur |
| 35 | 24X7 PHC | Vellangalloor | 0 | 24x7 PHC Vellangallur |
| 36 | PHC | Patikkad | 0 | CHC Vellanikkara |
| 37 | PHC | R.V.Puram | 0 | PHC Vilvattom |
| 38 | PHC | Thaikkad | 0 | CHC Kadappuram |
| 39 | PHC | Orumanayoor | 0 | CHC Kadappuram |
| 40 | PHC | Pookkode | 0 | CHC Kadappuram |
| 41 | PHC | Andathathodu | 0 | CHC Vadakkekad |
| 42 | PHC | Punnayoor | 0 | CHC Vadakkekad |
| 43 | PHC | Parappukkara | 0 | CHC Anandapuram |
| 44 | PHC | Porthusseri | 0 | CHC Anandapuram |
| 45 | PHC | Karalam | 0 | CHC Anandapuram |
| 46 | PHC | Poyya | 24 | 24x7PHC Aloor |
| 47 | PHC | Kuzhoor | 24 | 24x7PHC Aloor |
| 48 | PHC | Nalukettu | 0 | 24x7PHC Mambra |
| 49 | PHC | Chowanoor | 0 | CHC Pazhanji |
| 50 | PHC | Porkulam | 0 | CHC Pazhanji |
| 51 | PHC | Choondal | 0 | CHC Pazhanji |
| 52 | PHC | Kundanassery | 0 | CHC Pazhanji |
| 53 | PHC | Perumbilavu | 0 | CHC Pazhanji |
| 54 | PHC | Arthat | 0 | CHC Pazhanji |
| 55 | PHC | Kaipamangalam | 24 | CHC Perinjanam |
| 56 | PHC | Koolimuttam | 0 | CHC Perinjanam |
| 57 | PHC | Chamakala | 0 | CHC Perinjanam |
| 58 | PHC | Mathilakom | 0 | CHC Perinjanam |
| 59 | PHC | Padinjare Vemballoor | 10 | CHC Perinjanam |
| 60 | PHC | Methala | 6 | CHC Madavanna |
| 61 | PHC | Edavilangu | 0 | CHC Madavanna |
| 62 | PHC | Meloor | 4 | CHC Elinjpra |
| 63 | PHC | Pariyaram | 0 | CHC Elinjpra |
| 64 | PHC | Vettillappara | 0 | CHC Elinjpra |
| 65 | PHC | Nadathara | 0 | CHC Vellanikkara |
| 66 | PHC | Puthoor | 0 | CHC Vellanikkara |
| 67 | PHC | Ollukkara | 0 | CHC Vellanikkara |
| 68 | PHC | Vaniyampara | 0 | CHC Vellanikkara |
| 69 | PHC | Mulankunnathukavu | 0 | 24x7 PHC Pamboor |
| 70 | PHC | Poomala | 0 | 24x7 PHC Pamboor |

| Sl. No. | Institutions | Location | No. of Beds | Health Block |
|---------|--------------|-----------------|-------------|-----------------------|
| 71 | PHC | Madakkathara | 0 | PHC Vilvattom |
| 72 | PHC | Vilavatom | 0 | PHC Vilvattom |
| 73 | PHC | Adat | 0 | CHC Tholur |
| 74 | PHC | Mundoor | 0 | CHC Tholur |
| 75 | PHC | Ayyanthole | 0 | CHC Tholur |
| 76 | PHC | Paralam | 10 | CHC Ollur |
| 77 | PHC | Vallachira | 24 | CHC Ollur |
| 78 | PHC | Koorkanchaerry | 0 | CHC Ollur |
| 79 | PHC | Avinissery | 0 | CHC Ollur |
| 80 | PHC | Kandangodu | 0 | CHC Erumapetty |
| 81 | PHC | Veloor | 24 | CHC Erumapetty |
| 82 | PHC | Mundathikodu | 0 | CHC Erumapetty |
| 83 | PHC | Thekkumkara | 0 | CHC Erumapetty |
| 84 | PHC | Mullurkkara | 0 | CHC Erumapetty |
| 85 | PHC | Kuthampully | 0 | CHC Thiruvilwamala |
| 86 | PHC | Elanadu | 0 | CHC Thiruvilwamala |
| 87 | PHC | Thonoorkara | 0 | CHC Thiruvilwamala |
| 88 | PHC | Vallathol nagar | 0 | CHC Thiruvilwamala |
| 89 | PHC | Manaloor | 20 | CHC Alappad |
| 90 | PHC | Nattika | 24 | CHC Vadanappally |
| 91 | PHC | Thalikulam | 0 | CHC Vadanappally |
| 92 | PHC | Engandiyoor | 0 | CHC Vadanappally |
| 93 | PHC | Venkitengu | 24 | CHC Mullassery |
| 94 | PHC | Elavally | 0 | CHC Mullassery |
| 95 | PHC | Pavaratty | 24 | CHC Mullassery |
| 96 | PHC | Thrikkoor | 0 | CHC Mattathur |
| 97 | PHC | Nenmanikkara | 0 | CHC Mattathur |
| 98 | PHC | Mupliyam | 0 | CHC Mattathur |
| 99 | PHC | Varandarapilly | 0 | CHC Mattathur |
| 100 | PHC | Alagappa nagar | 0 | CHC Mattathur |
| 101 | PHC | Poomangalam | 20 | 24x7 PHC Vellangallur |
| 102 | PHC | Padiyoor | 0 | 24x7 PHC Vellangallur |
| 103 | PHC | Velookara | 0 | CHC Puthenchira |

Source: DHS

Thrissur Health Institutions - Location Map



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