



GOVERNMENT OF KERALA

DISTRICT SURVEY REPORT OF MINOR MINERALS (EXCEPT RIVER SAND)

KANNUR DISTRICT

Prepared as per
Environment Impact Assessment (EIA) Notification, 2006 issued
under Environment (Protection) Act 1986
by

DEPARTMENT OF MINING AND GEOLOGY
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DISTRICT SURVEY REPORT OF MINOR MINERALS

KANNUR DISTRICT

(This report is to be submitted along with application for Environmental Clearance (EC) for mining of all minor minerals except river sand)

1 Introduction

Kannur (Cannanore) district is one of the northern maritime districts of Kerala. It covers an area of 2966 sq km bounded by the North latitudes $11^{\circ} 40'$ and $12^{\circ} 48'$ and East longitudes $74^{\circ} 52'$ and $75^{\circ} 56'$. It is bounded by Kasaragod district in the north, Kozhikode district in the south, Coorg district of Karnataka and Wayanad district in the east and the Lakshadweep Sea in the west. The Census data for the year 2011 reveals that the district has total population of 2525637 persons with 1184012 males and 1341625 female's population with a literacy rate of 95.41%.

Kannur district has an area of 2997 sq. kms. It is bounded by Lakshadweep sea to the west and Karnataka state to the east. To the north of it lies Kasargod district, while to the south is Kozhikode district and also Mahe which comes under the Pondicherry administration. The terrain is rugged and slopes west from Western Ghats to the coast.

2 Administration

Kannur district is divided into 3 taluks (Taliparambu, Kannur and Thalassery), 5 municipalities (Payyanur, Taliparambu, Kannur, Azhikode and Koothuparambu), 9 blocks (Payyanur, Kannur, Thalassery, Taliparambu, Edakkad, Irikkur, Iritty, Peravur and Koothuparambu), 81 panchayats and 129 villages.

3 Drainage and Irrigation

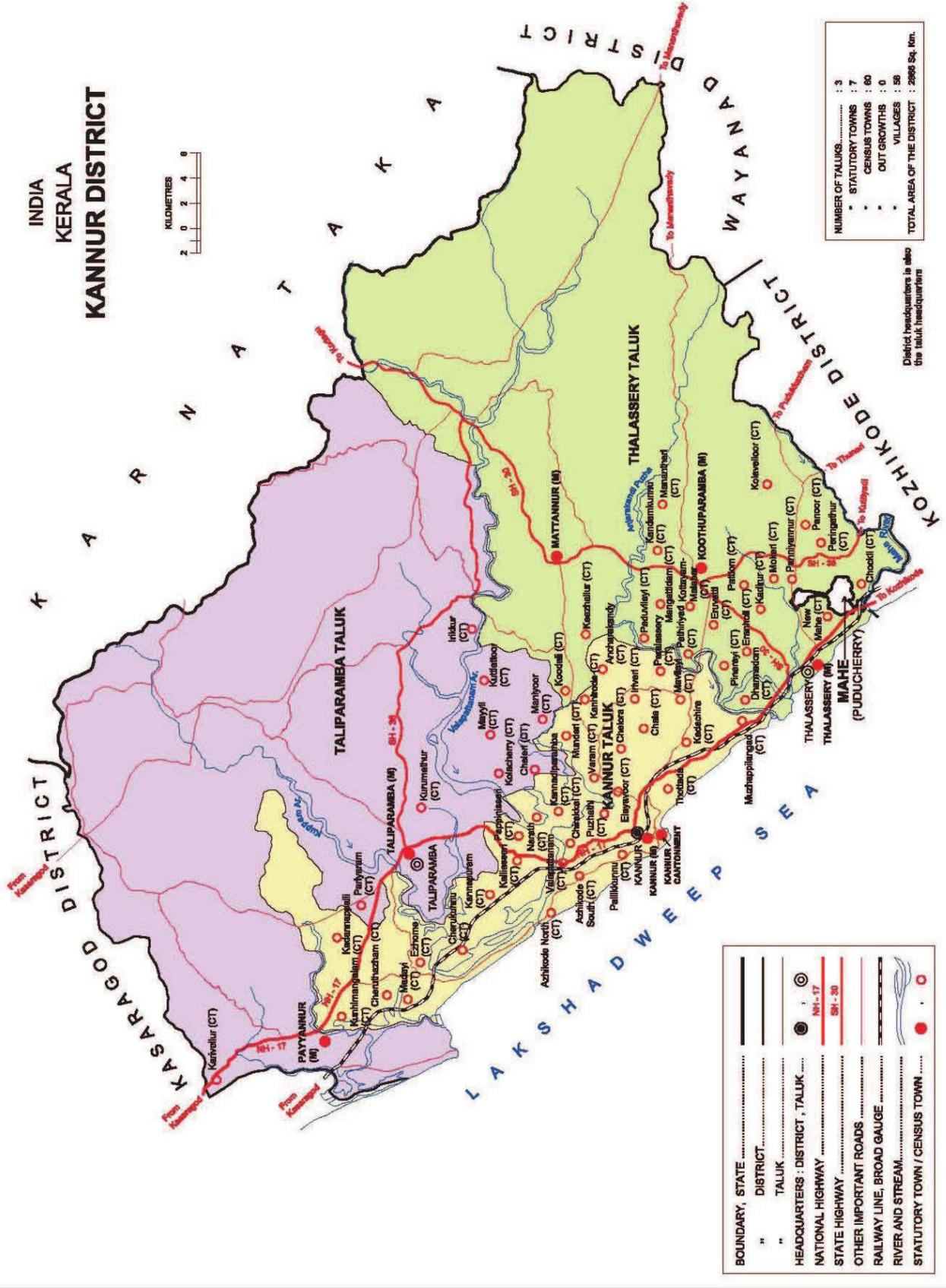
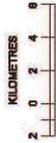
Kannur district is mainly drained by the *Valapattanam* and *Anjarakandy* rivers. The other rivers are *Kuppam*, *Mahe*, *Thalasserry* etc. Dendritic is the common drainage pattern. The *Valapattanam* river, which is the longest in the district originates from Brahmagiri Reserve forest in Coorg district of Karnataka. The drainage area of the river in Kerala is 1321 sq.km. The *Anjarakandy* river originates from the Kannothe Reserve forest. The drainage area of the river is 412 sq.km.

Kannur district has 23,312 ha. area under irrigation, which accounts about 8.01% of the gross irrigated area of the state. Kannur district is provided with one major irrigation project along with some minor irrigation projects. The major irrigation scheme of the district is Pazhassi project. The command area fixed for Pazhassi project was 11525 ha of land. However only 8125 ha of land has been benefited through this project as on date. Ground water is also used for irrigation purposes. In addition to this, there are private tanks to facilitate the irrigation sector.

4 Rainfall and climate

Kannur district receives a total annual rainfall of around 3438 mm. District experiences heavy rainfall during the South West monsoon season followed by North East monsoon. South West monsoon during June to September contributes 70 % of

INDIA
KERALA
KANNUR DISTRICT



NUMBER OF TALUKS	: 3
STATUTORY TOWNS	: 7
CENSUS TOWNS	: 60
OUT GROWTHS	: 0
VILLAGES	: 56
TOTAL AREA OF THE DISTRICT	: 2666 Sq. Km.

District headquarters is also the taluk headquarters

BOUNDARY, STATE	.....
" DISTRICT	.....
" TALUK	.....
HEADQUARTERS : DISTRICT , TALUK	.....
NATIONAL HIGHWAY	.....
STATE HIGHWAY	.....
OTHER IMPORTANT ROADS	.....
RAILWAY LINE, BROAD GAUGE	.....
RIVER AND STREAM	.....
STATUTORY TOWN / CENSUS TOWN	.....

the total rainfall of the year. The northeast monsoon contributes only about 30%. The year to year variability of annual rainfall is around 28.2%. In general, the rainfall increases from the coast to the eastern hilly regions. Kannur district falls under wet type of climate based on Thornthwaite's climatic classification.

5 Other meteorological parameters

Apart from the rainfall, the meteorological parameters play an important role in groundwater balance estimation and other types of relevant studies.

5.1 Temperature

The temperature is more during the months of April to May and is less during December and January. The average mean monthly maximum temperature ranges from 28.4 to 36.9⁰C and minimum temperature ranges from 19.7 to 23.9⁰C.

5.2 Relative Humidity

Relative humidity is more during south west monsoon season (ie June to September). It is more during morning hours and is less during evening hours. Humidity ranges from 77 to 88 % in the district.

5.3 Evaporation

Evaporation is more during summer months of March to May and low during the months of June to November. The mean evaporation ranges from 2.6 to 5.7 mm/day.

5.4 Sunshine Hours

Generally good sunshine hours are recorded in the month of November to May. January to March records the maximum sunshine hours of more than 9.1 hours/day. The months of June to August records the minimum sunshine due to cloudy sky.

5.5 Wind

Wind speed ranges from 2.1 to 3.3 km per hour with mean speed of 2.6 km/hr. The wind speed is high during the period from March to June and low during the period from September to December.

5.6 Potential Evapotranspiration (PET)

The monthly PET ranges from 124.5 to 170.6 mm. PET values are lower than the monthly rainfall during the months of May to October indicating water surplus for possible recharge into groundwater regime during these months.

6 Geology

The district can be broadly divided into seven geological belts trending NW-SE viz., (i) northern belt of Charnockite group extending further north and east to the adjacent districts, (ii) north central belt of Wayanad schist complex, (iii) Central belt of Peninsular Gneissic Complex extending to the southeast, (iv) south central belt of Vengad Group, equivalent to Dharwars, (v) southernmost belt of Migmatite Complex which extends further south to the adjacent district, (vi) Sedimentary (Warkalli Beds) in the western part near the coast and (vii) Quaternary sediments along the coast.

The lithology of Kannur district is grouped under Precambrian, late Tertiary and Quaternary periods and the Precambrian rocks dominate over the other two. Charnockite Group, includes pyroxene granulite, charnockite (hypersthene granulite) and hornblende-diopside granulite. While hornblende granite and charnockite occupy large areas, pyroxene granulite occurs as linear bodies in the southeast. Hornblende-biotite gneiss constitutes the litho unit of Migmatite Complex. It has a large areal extent along the coast, south of Kannur. Towards east and southeast, discrete metasedimentary and ultramafic sequences which have been designaed as Wayanad Schist Complex and are considered equivalent of Sargur Group of Karnataka. They occur as isolated bands within charnockite and gneiss. Their contacts are generally discordant due to later folding, metamorphism and migmatisation. The group comprises quartzite, magnetite quartzite, garnet-kyanite-sillimanite gneiss, quart-mica-kyanite schist, quartz-sericite schist, amphibolite, kyanite-sillimanite-sericite quartzite, metaultramafites. Garnet-kyanite-sillimanite gneiss/schist is widespread in the east, whereas the other members of Wayanad Complex occur as linear bands, lensoidal bodies and vestiges to the West Peninsular Gneissic Complex, represented by hornblende-biotite gneiss comprise of a complex suite of gneisses and granites, representing the anatectic phase of migmatisation of schist complex. East of Kannur extending upto Tellichery in the south, a large body of quartz-mica schist is separated from the other schistose rocks by a conglomerate horizon extending over 8km. This lithounit known as Vengad Formation, characterised by lack of migmatisation, presence of primary structres and absence of high grade minerals, is correlatable with rocks of Dharwar Super Group. Large bodies of anortjosite, gabbro, granite and granophyre from the post Vengad basic and acid intrusives. Dolerite dykes trending NW-SE represent the younger basic intrusives. Late Tertiary sedimentary rocks (Warkalli beds) occur as isolated patches along the coast near Kannur, Pazhayangadi and east of Payyannur. They comprise variegated clays and friable sandstone. At Kannur and Pazhayangadi, carbonaceous clay with thin seams of lignite is reported towards bottom of the sedimentary sequence. The Tertiaries as well as the basement rocks are extensively lateritised. The pebble bed, reported near Valapatnam along the bank of Valapatnam river, is considered to be of Quaternary age. Quaternary alluvial deposit occur along the coast and in the valleys. They constitute palaeo-marine deposit (Guruvayur Formation), fluvial deposit (Periyar Formation) of Valapatnam and Dharmadom rivers, fluvio-marine deposits (Viyyam Formation) and

beach deposits (Kadappuram Formation) (*Figure 1*). The geology of the district given above may be read with the “Geology of Kerala” which is given as Annexure 1 for better understanding of geological succession and stratigraphic sequence.

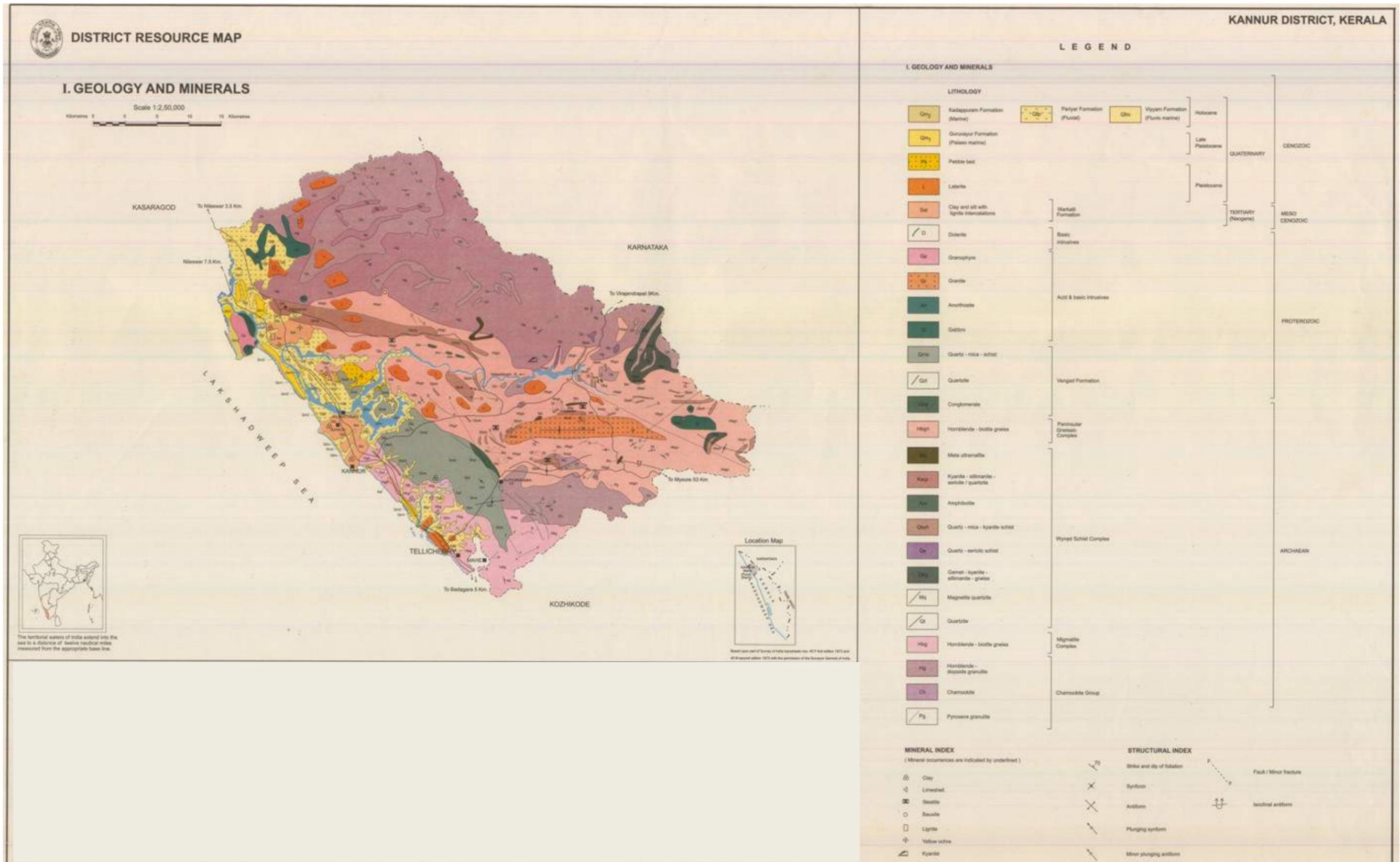


Figure 1: Geology and mineral resources of Kannur. (Source: District Resource map, Kannur district, Geological Survey of India)

7 Geomorphology

Based on physiography, the district can be divided into three distinct geomorphologic units viz i) the coastal plains and lowlands in the western part, (ii) the central undulatory terrain comprising the midland region and (iii) eastern highland region. The coastal plains occurs as a narrow belt of alluvial depositional landforms running parallel to the coast with a maximum width of about 15 km. It comprises narrow beaches interrupted by cliffs, promontories and rocky beaches. Estuaries, lagoons, tidal flats, floodplain and palaeo-beach ridges are the other landforms of the area. The region has a maximum height of 7m in the east. The midland region, a relatively wide zone represents denudational landforms exhibiting laterite capped flats, mesasm ridges, spurs, laterite interfluves and narrow alleviated valleys. Midland region forms a plateau land at certain places covered by a thick cover of laterite. Elevation of this region displays remnants of planation surfaces as well. Two former planation surfaces with fairly extensive remnants are characterised by laterite cappings. Vestiges of still older surfaces are identifiable at higher altitudes. The hilly region in the east is a structural cum denudational landform, Here the elevation is generally above 500m. Hills have very steep slopes. Landforms of intrusive origin are also noticed near Peralimala and Ezhimala. The hilly tract in the eastern part consists of highly rugged terrains. The Ezhimala peak with the characteristic N-S alignment is a distinct physiographic unit in the coastal plains. Minor cliffs of laterite generally rising to an elevation of 50 to 60 m above mean sea level are found at Mahe, Thalasserry and Bekal coast. The midland region presents a plateau land covered by a thick cover of laterite. This is immediately to the east of the coastal strip, rising from 40 to 100 m above msl. The valleys in the plateau are gorge like and V shaped cut by youthful streams. The hilly tract along the eastern part of the district constitutes the highland region and is highly rugged. Development of bad land topography along the margins of the valley is a common feature observed in the district (*Figure 2*).

8 Soil types

There are mainly four types of soil observed in the district.

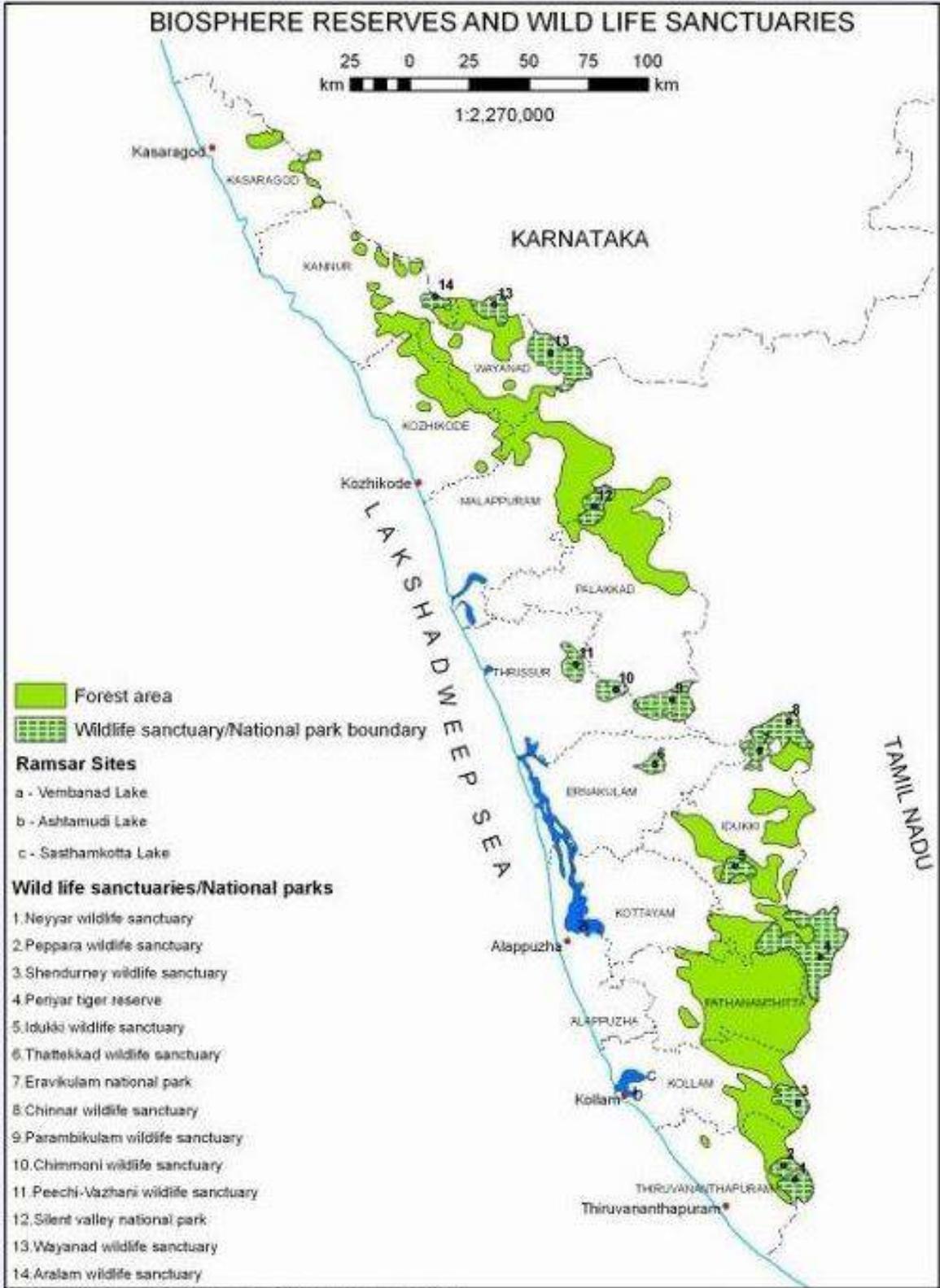
- (1) Lateritic soil

- (2) Brown hydromorphic soil
- (3) Coastal and river alluvium
- (4) Forest Loamy soil
- (5) Lateritic soil – The predominant soil in the district is lateritic soil, which is the weathered product derived under humid tropical conditions. It occurs mainly in the midland and hilly areas characterized by rugged topography. They range from sandy loam to red loam.
- (6) Brown hydromorphic soil – These are confined to the valleys between undulating topography in the midlands and in the low lying areas of the coastal strip in the district. These soils are brown in colour and the surface texture varies from sandy loam to clay. They have been formed as a result of transportation and deposition of materials from adjoining hill slopes and also through deposition by rivers.
- (3) Coastal and river alluvium – The coastal alluvium is seen in the western coastal tract of the district. The coastal plain is characterized by secondary soils, which are sandy and sterile with poor water holding capacity. The width of the zone is more in the central part i.e., in the Kannur area and it is almost narrow in both north and southern areas of the district. The marshy soil in the coastal plain supports mangrove vegetation and is found at the estuaries and backwater extending inland along their courses. The soil is composed of recent deposits predominantly marine with some fluvial sediments along the coastline. These soils are immature with high sand content. River alluvium is found along river valleys cutting across the extensive lateritic soils. The soil is very deep with surface texture ranging from sandy loam to clay. It is fertile, having water holding capacity and plant nutrients which are regularly replenished during floods.
- (7) Forest Loamy soil – These soils are found in the eastern hilly areas of the district and are characterised by a surface layer rich in organic matter. They are generally acidic and are dark reddish brown to black in colour with loam to silty loam texture (*Figure 5*).

9 Land use

On the basis of land use the district is divided into three units – arable, forest land and waste land. Major part of the district is arable land which includes irrigated and

unirrigated land. Forest is mostly in the east, within which some areas are developed as rubber and cashew plantations. Extensive waste land formed of hard laterite, unsuitable for cultivation lies in the midland region. Most of the area is covered by lateritic soil. Forest loam soil occurs in the east and the alluvial soil is along the coast (*Figure 3*). The area under forest is given in the forest map given below.



Source : Department of Forests, Govt. of Kerala, 2010

10 Groundwater scenario

The area lies in the high rainfall area of the western coast. The district is divisible into four geohydrological provinces from coast to the east based on the yield of groundwater. The coastal alluvium in the west has fairly good yield with depth to water table from 0.5 to 3m. In the laterite capped midland region, open dug wells are suitable where depth to groundwater is between 5 and 20m. Further east, the area is covered by weathered rock and lateritic soil. Here the valleys and lowlands have good yield of water from dug wells while in other areas bore wells are suitable. In the hills further east, fracture planes are potential zones of groundwater and can sustain bore wells. Groundwater occurs under phreatic conditions in weathered mantle of the crystalline rocks, laterites and unconsolidated coastal sediments. It occurs under semi confined to confined conditions in the deep-seated fractured aquifers of the crystalline rocks and Tertiary sediments (*Figure 4*).

Kannur district is underlain by charnockites, pyroxene granulites, garnetiferous gneisses, hornblende biotite gneisses and schistose rocks overlain by Tertiaries and coastal alluvium along the coast ranging in age from Archaean to Recent. These rocks have undergone weathering and lateritisation. The hydrogeological units encountered in the district are (i) consolidated formations (weathered and fractured crystallines) (ii) Semi consolidated sediments equivalent to Warkalies of Southern Kerala and Laterite formations and (iii) unconsolidated formations (Recent alluvium occurring along the coast).

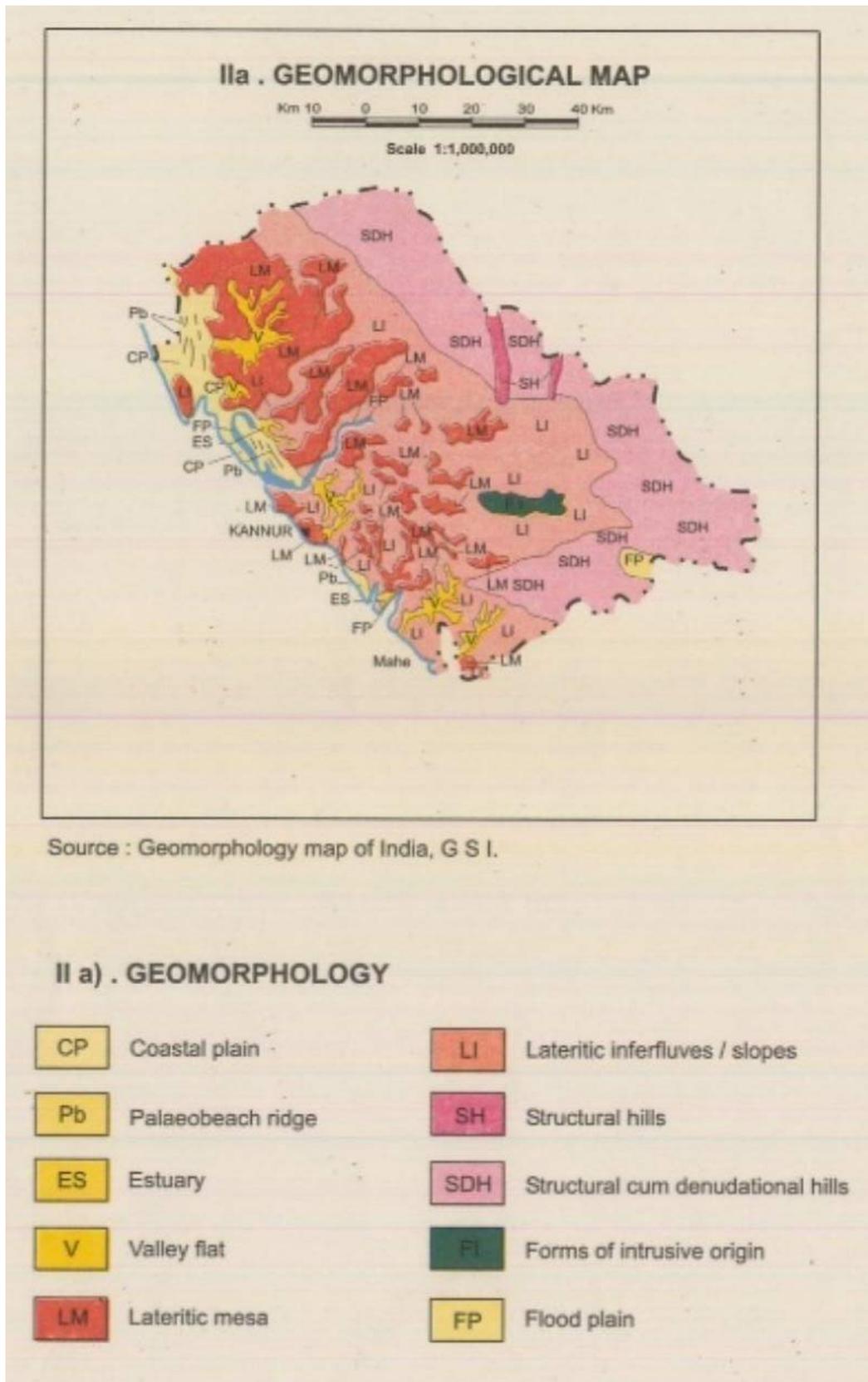


Figure 2: Geomorphology Kannur District (Source: District Resource map, Kannur district, Geological Survey of India)

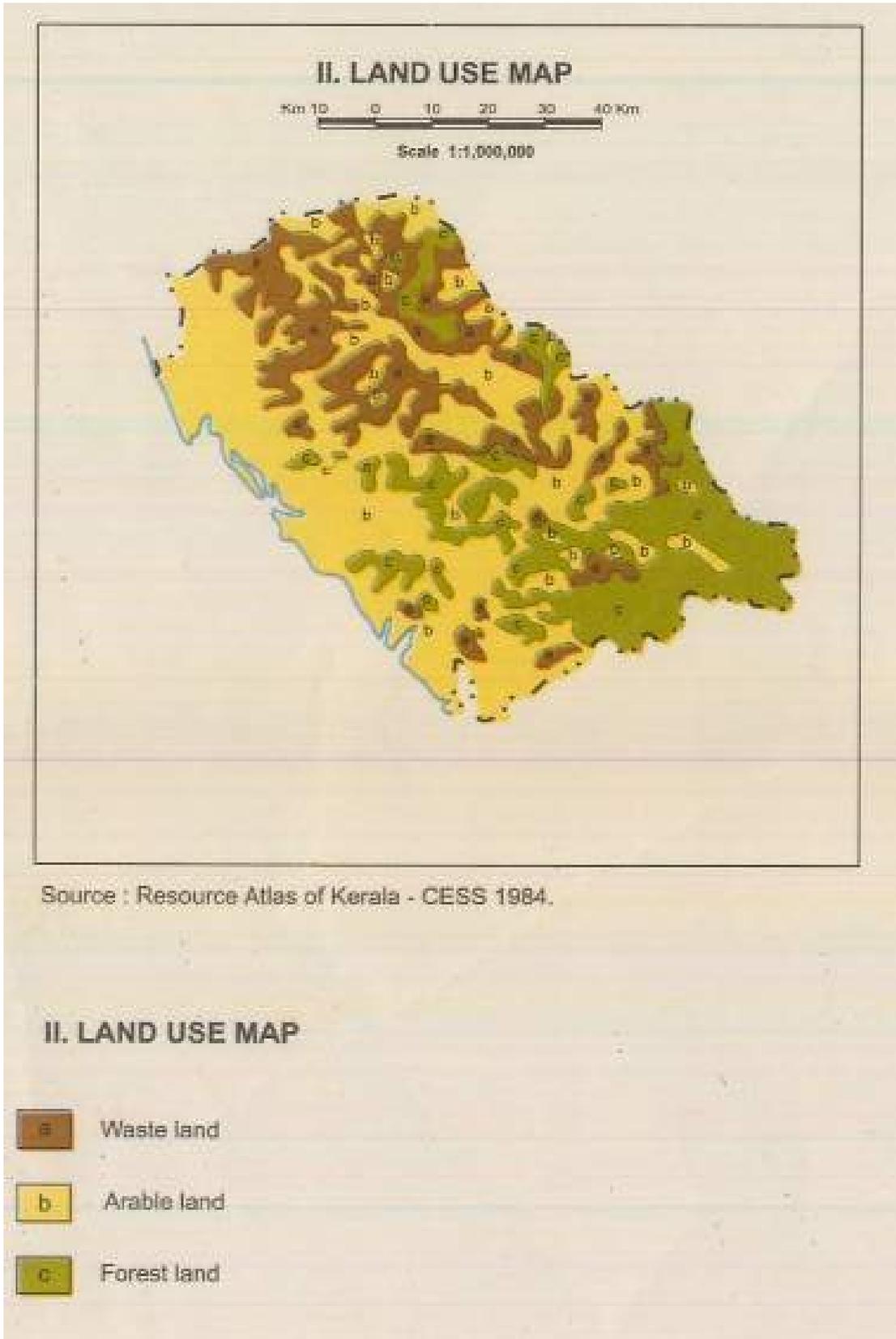
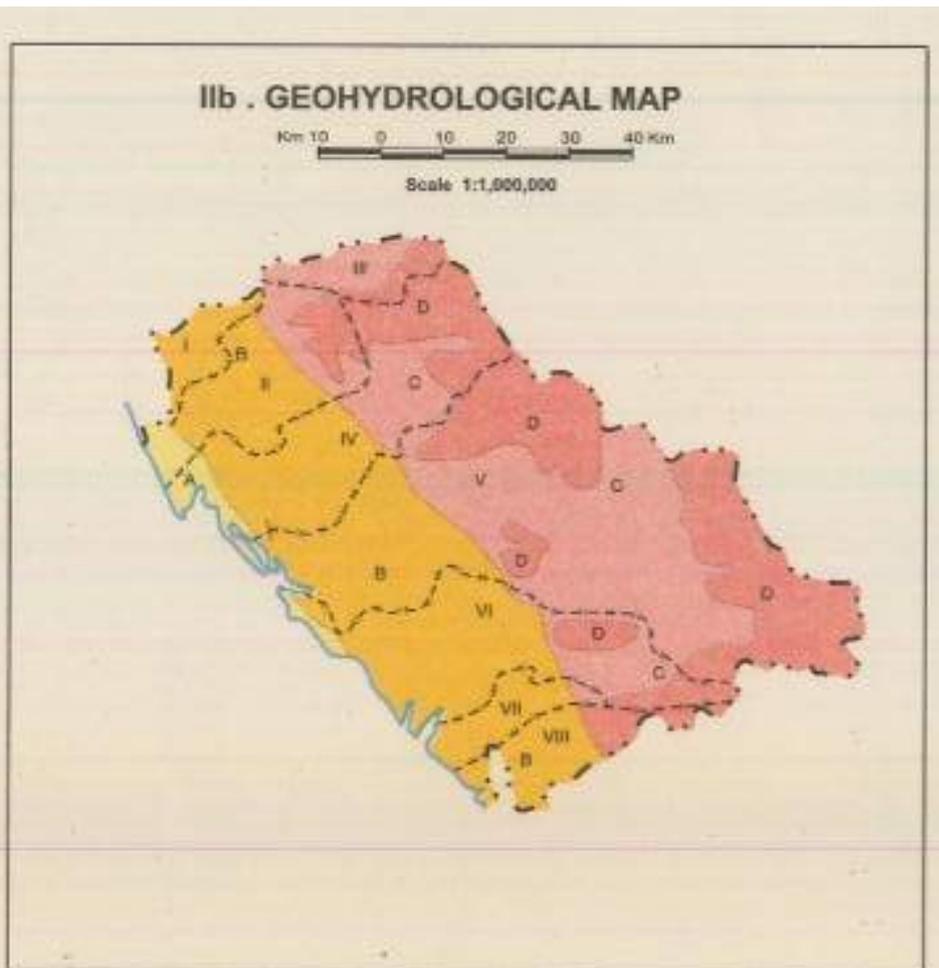


Figure 3: Land use of Kannur. (Source: District Resource map, Kannur district, Geological Survey of India)



Source : Geohydrological Atlas CGWB

IIb) .GEOHYDROLOGICAL MAP

- A** Coastal alluvium suitable for filter point wells and dug wells. Highly potential aquifer yield goes up to 50 lps. Depth to water varies from 0.5 to 3 m. b.g.l.
- B** Midland area underlain by thick laterite. Suitable for open wells. Depth to water varies from 5 to 20 m. b.g.l. Valleys are highly potential. Bore wells are feasible along fracture planes, the yield of which goes upto 30 lps.
- C** Area underlain by thin laterite / weathered zone. Valleys and lowlands are good for open dug wells. Bore wells are feasible only along fractures and are site specific.
- D** Foot hills and highly undulating area. Can sustain domestic wells. Fracture plains are potential. Bore wells are site specific.

Figure 4: Geohydrology of Kannur. (Source: District Resource map, Kannur district, Geological Survey of India)

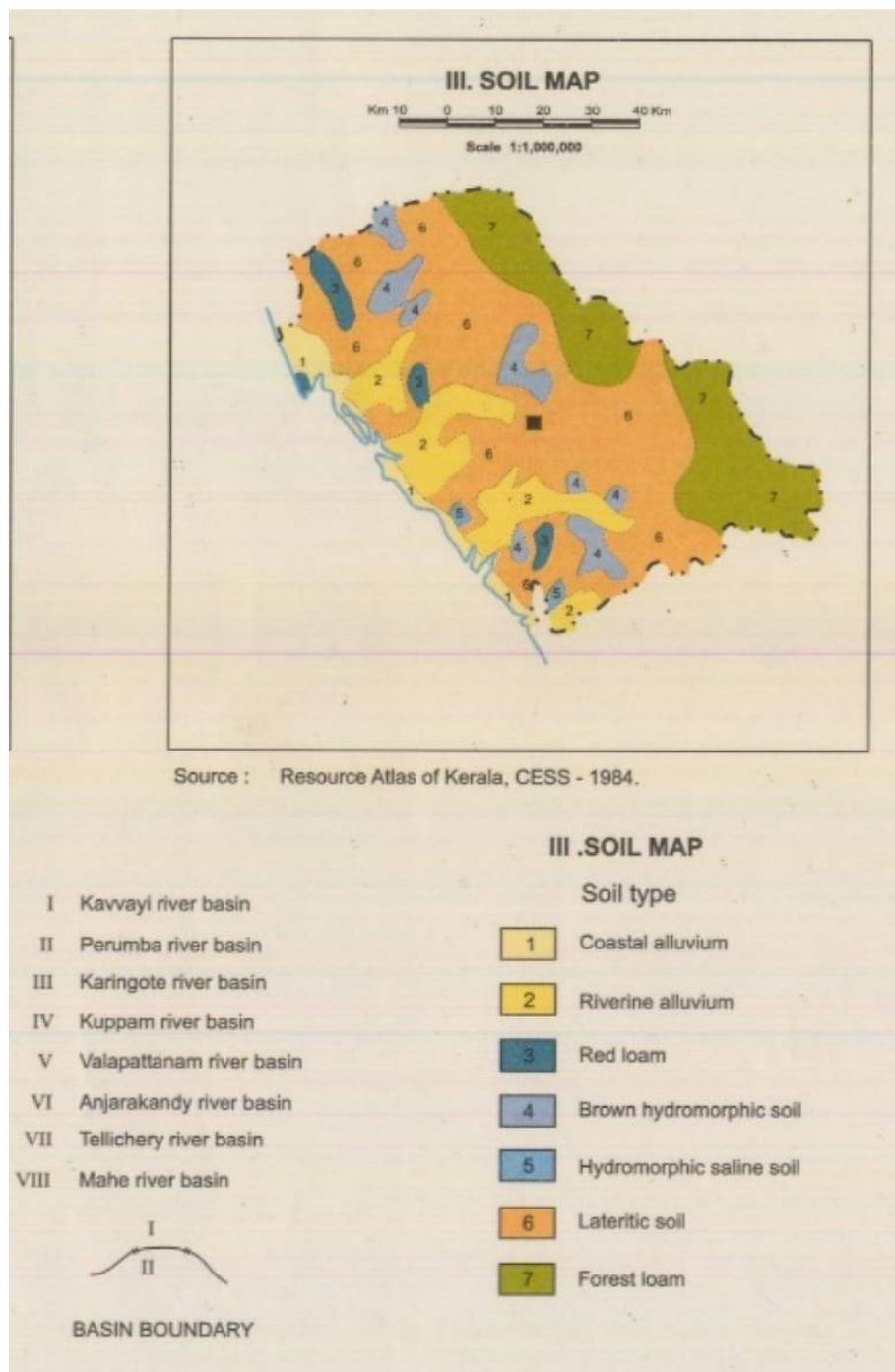


Figure 5: Soil types of Kannur. (Source: District Resource map, Kannur district, Geological Survey of India)

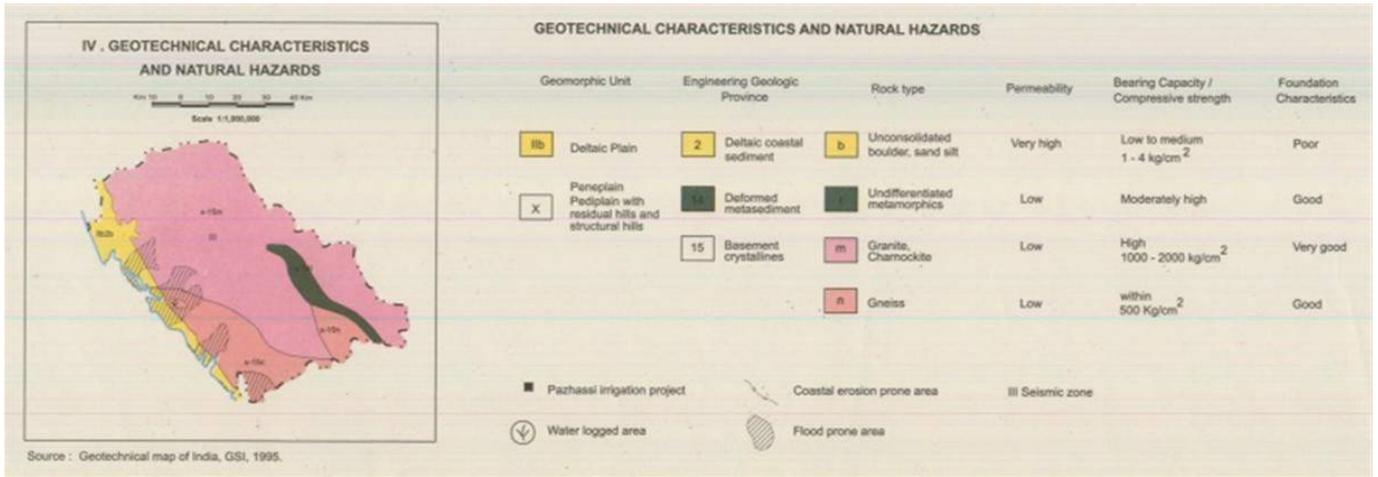


Figure 6: Geotechnical characteristics and natural hazards map of Kannur. (Source: District Resource map, Kannur district, Geological Survey of India)

11 Natural hazards

Several places along the coast are prone to beach erosion. The district falls under seismic zone III of ISI Classification (*Figure 6*).

12 Mineral Resources

12.1 Major minerals

China clay, bauxite, limeshell, lignite and laterite are the major economic minerals of the district. The district has large resources of good quality china clay used for a variety of industries. Good deposits are seen at Pazhayangadi and Kannapuram. Apart from china clay, district has resource of ball clay, fire clay and tile clay. Low-grade bauxite is associated with laterite. Bauxite occurs at Madayi, Pattuvamkunnu and east of Payyannur. The sedimentary sequences of madayi has thin seams of lignite with a cumulative thickness of 5m. Lignite is also reported from Kannur, Meenkunnu and Azhikod. Talc and steatite bands are reported from Thalassery and Kuthuparamba.

12.2 Minor minerals

12.2.1 Ordinary Earth

Ordinary earth is the common name used for the soils. Soil is made up of three main components – minerals that come from rocks below or nearby, organic matter which is the remains of plants and animals that use the soil, and the living organisms that reside in the soil. The proportion of each of these is important in determining the type of soil that is present. But other factors such as climate, vegetation, time, the surrounding terrain, and even human activities (eg. farming, grazing, gardening, landscaping, etc.), are also important in influencing how soil is formed and the types of soil that occur in a particular landscape. The formation of soils can be seen as a combination of the products of weathering, structural development of the soil, differentiation of that structure into horizons or layers, and lastly, of its movement or translocation. In fact, there are many ways in which soil may be transported away from the location where it was first formed. Soils represent one of the most complex and dynamic natural systems and are one of the three major natural resources, other than air and water. Knowledge of their chemical, physical and biological properties is a prerequisite both for sustaining the productivity of the land, e.g. agriculture, and for conservation purposes. Soil is an integral part of a terrestrial ecosystem and fulfills numerous functions including the capacity to generate biomass and the filtering or buffering activities

between the atmosphere and the groundwater in the biosphere. Soils have many important functions. Perhaps the best appreciated is the function to support the growth of agricultural and horticultural crops. Soil is the mainstay of agriculture and horticulture, forming as it does the medium in which growth and ultimately the yield of food producing crops occurs. Farmers and gardeners have worked with their soils over many centuries to produce increasing amounts of food to keep pace with the needs of a burgeoning world population. The soil's natural cycles go a long way in ensuring that the soil can provide an adequate physical, chemical and biological medium for crop growth. As well as being essential to agriculture, horticulture, forestry and natural and semi-natural systems, soil also plays an important role for our fauna. The soil itself contains millions of organisms, the exact nature and role of which we are still trying to determine. Undoubtedly, the soil flora and fauna play a vital role in cycles which are fundamental to the ability of the soil to support natural and semi-natural vegetation without additions of fertilizer and other support mechanisms. They breakdown plant debris, take in components from the atmosphere; aerate the soil together with many other functions that make the soil such an important medium.

Classification of soils (ordinary earth) commonly found in the district

The topo-lithosequence along with variation in rainfall, temperature and alternate wet and dry conditions particularly from the western coast to high ranges in the east and swift flowing rivers lead to the development of different types of natural vegetation and soil. The soils can be broadly grouped into coastal alluvium, mixed alluvium, acid saline, kari, laterite, red, hill, black cotton and forest soils. Soil map given below may be referred to find out its occurrences.

Coastal Alluvium

These soils of marine origin are identified along the coastal plains and basin lands as a narrow strip. The elevation of the coastal area is generally below 5m MSL. The area has high water table and in some areas it reaches above the surface during rainy season. The soils of the coastal plains are very deep with sandy texture. The texture generally ranges from sand to loamy sand with greyish brown to reddish brown and yellowish red colour. Sand content ranges from 80% and clay up to 15%. Even though these soils have high water table, the water holding capacity is poor due to the predominance of sand. Coconut is the major crop in the area. Cashew and other fruit trees are also grown.

Mixed Alluvium

These soils are developed from fluvial sediments of marine, lacustrine and riverine sediments or its combinations. They occur below 20m MSL in the lowland plains, basins,

valleys and along the banks of major rivers. The mixed alluvium is mainly noticed close to coastal alluvium, Kuttanad and adjacent area and kole lands of Thrissur district. The soils are frequently flooded and submerged. The soils of depressions and broad valleys are subject to occasional flooding and stagnation. The ground water table of these soils is generally high and it reaches above the surface during rainy season. A wide variation in texture is noticed in these soils. Sandy clay loam to clay is the predominant texture. Sandy loam soils are also met with. Light grey to very dark brown is the common colour of the soil. Paddy, other annuals and seasonal crops like banana, tapioca and vegetables are grown here.

Acid Saline Soil

Acid saline soils are present throughout the coastal area in patches with very little extent. Major area of this soil is identified in the coastal tract of Ernakulam, Thrissur and Kannur districts. The area under these soils comprise of low-lying marshes, waterlogged and ill drained areas near the rivers and streams, which are subject to tidal waves. Sea and backwater tides make these soils saline. During monsoon season, when rainwater and fresh water from rivers enter the fields, salinity is partially washed off. The area under these soils occur mostly on plains at or below sea level. A wide variation in texture from sandy loam to clay is noticed with dark grey to black colour. Paddy is the only crop that can be cultivated.

Laterite soil

Laterite and laterite soil are the weathering products of rock in which several course of weathering and mineral transformations take place. This involves removal of bases and substantial loss of combined silica of primary minerals. In laterite and laterite soils, over acidic rocks, induration and zonation are more pronounced. This induration is greater if the iron content is higher. These soils mainly occur in the midlands and part of lowlands at an elevation of 10 to 100m above MSL as a strip between the coastal belt and hilly midupland. The area comprises of mounds and low hills with gentle to steep slopes. Laterite soils are generally suitable for most of the dryland crops. It is mainly cultivated with coconut, arecanut, banana, tapioca, vegetables, yams, pepper, pineapple, fruit trees etc. The percentage of gravel content in the soil and reduced soil depth limits the choice of crops. In laterite outcropped area with shallow soils, only cashew can be grown with vegetables.

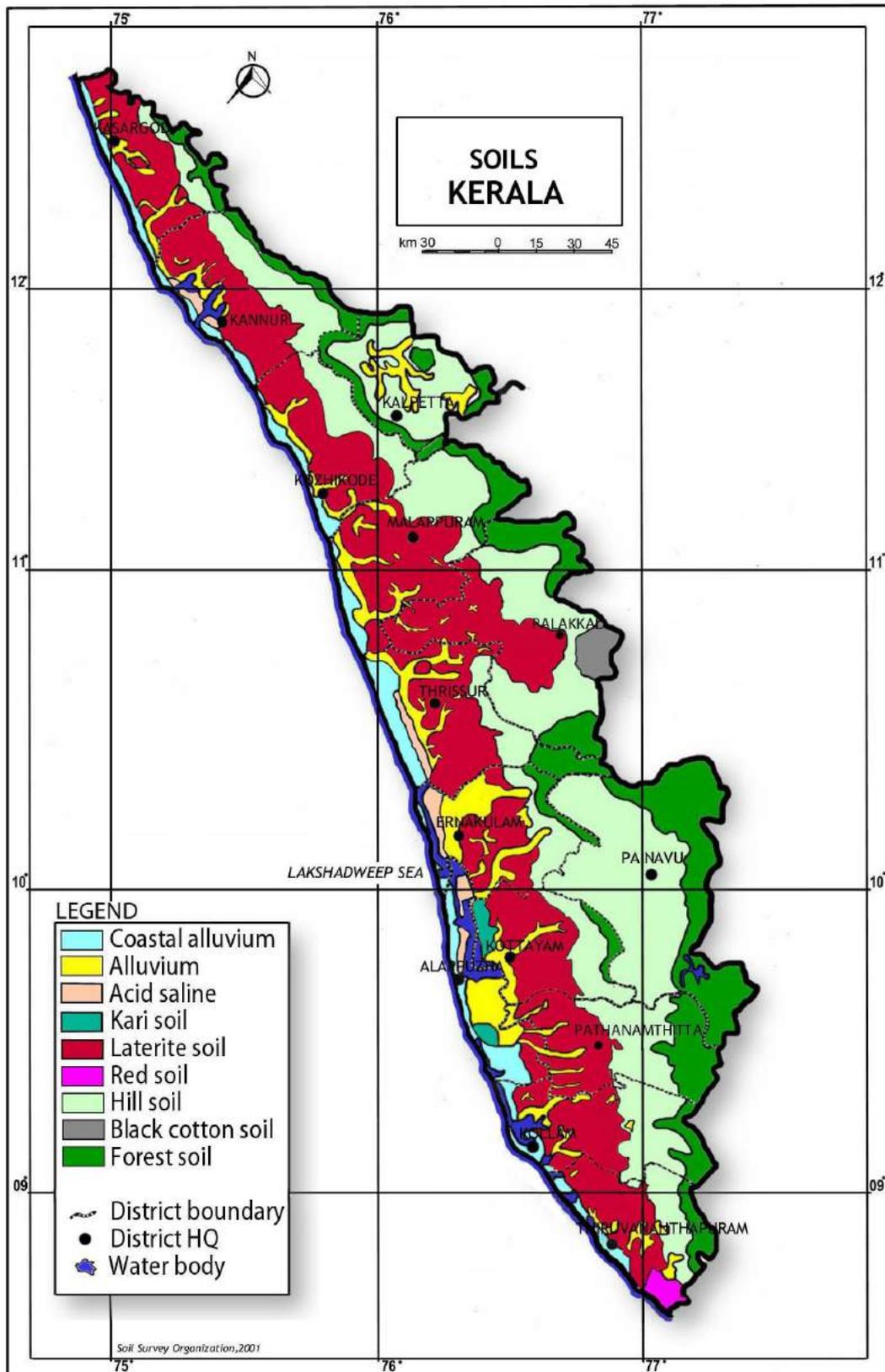
Hill Soil

The hill soils mostly occur above an elevation of 80m MSL. The area is hilly and has highly dissected denudational hills, elongated ridges, rocky cliffs and narrow valleys. The general slope range is above 10%. The texture of these soils generally range from loam to clay loam with average gravel content of 10 to 50%. In addition, stones and boulders are noticed in the

subsoil. These soils have reddish brown to yellowish red/strong brown colour. Generally, increase in clay content is noticed down the profile. The depth of the soil varies considerably from 60 to 200 cm depending on the lie of the land, erodibility of soil and past erosion. These soils are mostly friable and subject to heavy soil erosion. The area is suitable for all dryland crops like rubber, coconut, arecanut and fruit trees based on the topography. Crops such as banana, pepper, pineapple, vegetables can be grown in foot slopes.

Forest Soil

These soils are developed from crystalline rocks of archaean age under forest cover. They occur along the eastern part of the State, generally above an elevation of 300m above MSL. The area is hilly and mountainous with steep slopes, escarpments, elongated rocky summits and narrow 'V' shaped valleys. The depth of the soil varies considerably depending on erosion and vegetative cover. The soils are generally immature due to slow weathering process. Rock outcrops and stones are noticed on the surface. Gneissic boulders under different stages of weathering are noticed in the subsoil. The texture of the soil ranges from sandy clay loam to clay with reddish brown to very dark brown colour. Forest trees, shrubs and grasses are grown here.



Mining of ordinary earth

Usually ordinary earth is mined for leveling of ground for construction of buildings. Since ordinary earth is very important to mankind, it is not wise to mine ordinary earth for filling purposes alone. However, for the construction of roads and other infrastructure, ordinary earth as mined after obtaining quarrying permit from the Department of Mining and Geology. Mining and transporting ordinary earth/soil without the permission of Department of Mining and Geology is an offence. Department issues pass for transport of ordinary earth. Dealer's license is not issued for ordinary earth as it is not considered as a mineral mined for commercial purposes.

12.2.2 Ordinary Clay (tile/brick clay)

Clays and clay minerals occur under a fairly limited range of geological conditions and are produced by weathering of silicate minerals containing calcium, magnesium, sodium, or potassium reacting with carbonic acid, carbonates, and bicarbonates. These soluble products are removed by ground water, while the remaining elements, aluminum, silicon, and oxygen combine with water to produce stable clay minerals. The environment of formation include soil horizons, continental and marine sediments, geothermal fields, volcanic deposits, and weathering rock formations. Extensive alteration of rocks to clay minerals can produce relatively pure clay deposits that are of economic interest. Clay formed at the site of the parent rock is known as primary or residual clay; the one carried away or transported and deposited elsewhere is known as secondary clay. For obvious reasons, the former is purer with less impurity (5%–15%), while the latter may contain mica, quartz, and iron oxide as impurities. Geological factors such as conditions at the time of deposition and post-depositional changes have an important influence on the properties of sediment.

Buildings and utensils made of clay date back to the earliest periods of man's civilized development, and the use of clay is intimately associated with his history. Tile and brick kilns are closely associated with Kerala's culture and traditional architecture, which is continued in modern buildings as well.

In Kerala, tile/brick clay occurs in the wetlands/paddy fields in the lowlands and midlands. The clay extracted is used for a variety of purposes such as manufacture of roofing, flooring, and decorative tiles, wire cut (mechanically made) and ordinary bricks (manually made), and pottery wares. Studies carried out in clay mining areas of Kerala have proved that unprecedented increase in the development needs of the state and the subsequent increase in the resource extraction scenarios, especially that of clay mining, have led to rapid

degradation of the wetlands (paddy fields), which is significantly reflected in the declining agricultural productivity of the state. Mining of clays several meters below the prescribed levels, water draining from the unaffected paddy lands into the adjacent mine pits, and subsequent pumping of water for further mining impose severe problems on the hydrological regime, lowering the water table and creating severe water shortage problems in the mining areas. The additional expenditure incurred to meet the freshwater requirements of the people living in areas adjacent to mining sites is increasing year after year, which undermines the short-term economic benefits of resource extraction.

Tile and brick clay mining and its processing provide employment opportunities to a considerable section of the people in the midland and lowland areas of Kerala. Adding to this, thousands of laborers in the construction industry also indirectly depend on the products manufactured from these clays. Under these circumstances and also with respect to the demand incurred, complete restriction of extraction activities does not prove to be viable.

In the study report published by National Center for Earth Science Studies on the impact of clay mining, following recommendations were given with respect to tile/brick clay mining: “It is of imminent importance to regulate random mining from the paddy fields/wetlands of Kerala by allowing only location-specific resource extraction under well-conceived guidelines. It is also crucial to limit the extraction of tile and brick clays to meet indigenous and local demand only. This is to save the prime agricultural land and also to increase the rice production in the area. The depth of mining should be demarcated so as to regulate mining with respect to the water table condition in the summer season. Also, adequate measures are to be taken to regenerate the natural ground water table using the stored water in the clay mine pits for irrigating the agricultural crops of the hinterland areas. This will enhance the net agricultural productivity of the area in addition to saturating the aquifer systems in the hinterlands. Awareness creation among the public about the adversities of clay mining and as well as the economic benefits of using clay bricks for construction purposes will serve in the protection of our wetlands/paddy fields. Recycling of building materials should also be considered in order to reduce mining of tile and brick clays. The abandoned clay mine areas left behind as fallow lands or water logged areas can be used for productive purposes such as fish farm ponds or irrigation ponds that promise some utility to the society. Also, suitable guidelines should be framed to streamline the tile and brick clay mining activities of the state on an ecofriendly basis.”

The Kerala Conservation of Paddy Land and Wetland Act, 2008 and Rules made thereunder which was enacted for conservation of paddy land and wetlands of Kerala imposes

restrictions in mining of tile/brick clays in such areas. The said Act and Rules are implemented by Revenue Department. In addition, Government have setup District Expert Committee to monitor and control the mining activities of ordinary clay. In Kerala Minor Mineral Concession Rules 2015, it is mandated that No Objection Certificate from the District Collector concerned, based on the recommendation of the District Expert Committee constituted by the Government in this regard, is to be produced by the applicant in the case of application for extraction of ordinary clay. In addition, Bank guarantee from any Nationalized or Scheduled Bank at the rate of Rs. 300 (Rupees three hundred only) per cubic metre for the purpose of reclamation of pits that will be formed after quarrying in the area permitted, in respect of application for extraction of ordinary clay. Based on the request of the entrepreneurs working in tile/brick clay based industry, Government have instructed the Department of Mining and Geology to carry out survey to identify the mineable tile/brick clay deposits of Kerala and the work in this respect is progressing.

12.2.3 Ordinary Sand

In Kerala Minor Mineral Concession Rules, 2015, the ordinary sand is defined as sand used for non-industrial purpose. This includes both river sand and sand excavated from inland areas like palaeo-channels. Since a separate Act has been enacted by Government of Kerala namely, The Kerala Protection of River Banks and Regulation of Removal of Sand Act, 2001 (hereafter referred to as Sand Act, 2001) and since the mining of river sand is controlled by Revenue Department by virtue of the powers conferred by the said Act and the Rules made thereunder, the Department of Mining and Geology now regulates the mining of sand which do not comes under the purview of Sand Act, 2001.

The ordinary sand (other than river sand) occurs in the palaeo-channels. The word paleo-channel is formed from the words “paleo” or “old,” and channel; i.e., a paleo-channel is an old channel. Paleo-channels are deposits of unconsolidated sediments or semi-consolidated sedimentary rocks deposited in ancient, currently inactive river and stream channel systems. These are typical riverine geomorphic features in a location representing drainage streams, rivers, rivulets which were flowing either ephemeral or perennial during the past time and now stands either buried or lost or shifted due to tectonic, geomorphologic, anthropogenic process/activities, as well as climatic changes. When a channel ceases to be part of an active river system, it becomes a paleo-channel. In order to tap the ordinary sand occurring in palaeo-channels, the Department entrusted the study of identification of palaeo-channels in major river basins of Kerala to Geological Survey of India (GSI). GSI resorted to remote

sensing studies using satellite imageries and delineated some of the palaeo-channels. However, since such deposits falls in paddy land/wetlands of Kerala, it is difficult to extract such sand on account of restrictions imposed by various Acts and Rules.

The Kerala Conservation of Paddy Land and Wetland Act, 2008 and Rules made thereunder which was enacted for conservation of paddy land and wetlands of Kerala imposes restrictions in mining of ordinary sands occurring in wetlands and paddy fields. The said Act and Rules are implemented by Revenue Department. In addition, Government have setup District Expert Committee to monitor and control the mining activities of ordinary sand. In Kerala Minor Mineral Concession Rules 2015, it is mandated that No Objection Certificate from the District Collector concerned, based on the recommendation of the District Expert Committee constituted by the Government in this regard, is to be produced by the applicant in the case of application for extraction of ordinary sand. In addition, Bank guarantee from any Nationalized or Scheduled Bank at the rate of Rs. 300 (Rupees three hundred only) per cubic metre for the purpose of reclamation of pits that will be formed after quarrying in the area permitted, in respect of application for extraction of ordinary sand.

The mining of ordinary sand from palaeo-channels also case some environmental concerns. Since sand is a good aquifer, the mining of aquifer system poses threat to ground water availability in surrounding areas. However in certain cases, the mining of such sand from paddy lands increase the productivity of paddy as excess sand in the paddy lands are not good for paddy.

In Kerala, due to shortage of river sand and ordinary sand occurring in palaeo-channels, the construction industry now uses manufactured sand obtained by crushing of crystalline rocks. **It may be noted that since the Revenue Department is taking care of all types of mining activities related to river sand and since sand auditing and other studies are carried out under the aegis of the Revenue Department, this report shall not be used for the purpose of obtaining prior environmental clearance for mining of river sand.**

12.2.4 Laterite

Laterite is a soil and rock type rich in iron and aluminium, and is commonly considered to have formed in hot and wet tropical areas. Nearly all laterites are of rusty-red coloration, because of high iron oxide content. They develop by intensive and long-lasting weathering of the underlying parent rock. Tropical weathering is a prolonged process of chemical weathering which produces a wide variety in the thickness, grade, chemistry and ore

mineralogy of the resulting soils. The majority of the land area containing laterites is between the tropics of Cancer and Capricorn.

Angadipuram Laterite is a National Geological Monument identified in Angadipuram town in Malappuram district. The special significance of Angadipuram to laterites is that it was here that Dr. Francis Buchanan-Hamilton, a professional surgeon, gave the first account of this rock type, in his report of 1807, as "indurated clay", ideally suited for building construction. This formation falls outside the general classification of rocks namely, the igneous, metamorphic, or sedimentary rocks but is an exclusively "sedimentary residual product". It has a generally pitted and porous appearance. The name laterite was first coined in India, by Buchanan and its etymology is traced to the Latin word "letritis" that means bricks. This exceptional formation is found above parent rock types of various composition namely, charnockite, leptynite, anorthosite and gabbro in Kerala. The laterite profiles in different types of rocks varies depending on the composition of parent rock. For example in Charnockites, the thickness of the profile ranges from 2 m to 10 m with humus zone on the top with thin pebbly zone (with ferruginous pellets in clayey matrix), underlain by vermicular laterite with tubular cavities of various shapes and size filled with kaolinitic clay. This is followed by thin layer of lithomarge. Further below completely weathered, partly weathered or fresh parent rock occur. In some places one can see hard duricrust at the top. The mineralogical study of laterites reveals that all the silicate minerals have been transformed to a mixture of goethite, hematite and kaolinite in laterite samples developed over charnockite. Further studies revealed that pyroxenes have been altered to goethite while feldspars gave rise to kaolinite. Quartz is cracked, eroded and disintegrated. Monazite and Zircons are found as accessory minerals.

Laterite and bauxite show a tendency to occur together. Aluminous laterites and ferruginous bauxites are quite common. The most common impurity in both is silica. Laterite gradually passes into bauxite with decrease in iron oxide and increase in aluminium oxide. The laterite deposits may be described on the basis of the dominant extractable minerals in it: (i) aluminous laterite (bauxite), (ii) ferruginous laterite (iron ore), (iii) manganiferous laterite (manganese ore), (iv) nickeliferous laterite (nickel ore) and (v) chromiferous laterite (chrome ore). Laterite with $Fe_2O_3:Al_2O_3$ ratio more than one, and $SiO_2:Fe_2O_3$ ratio less than 1.33 is termed as ferruginous laterite, while that having $Fe_2O_3:Al_2O_3$ ratio less than one and $SiO_2:Al_2O_3$ ratio less than 1.33 is termed as aluminous laterite. Laterite can be considered as polymetallic ore as it is not only the essential repository for aluminium, but also a source of iron, manganese, nickel and chromium. Furthermore, it is the home for several trace

elements like gallium and vanadium which can be extracted as by-products. In Kerala laterites are extracted as building stones which are used for construction of building. Laterite as a building stone possesses one advantage that it is soft when quarried and can be easily cut and dressed into blocks and bricks which on exposure to air become hard. In addition, laterite (aluminous laterite) is extracted for industrial purposes (for eg. Cement industry). In addition to aluminous laterite, bauxites are also mined in Kerala. Hence, while granting mineral concession for laterite it is necessary to carry out the chemical analysis to establish whether the mineral is bauxite or aluminous laterite.

Laterite, the main construction material of the area, has a very wide distribution. It is quarried in the form of large bricks and is used in building construction. The basement rocks are also good source of construction material.

12.2.5 Granite Dimension Stone and Granite (building stone)

For administrative purpose the hard crystalline rocks which do not have any economic minerals are classified as granite dimension stones and granite (building stones). The definition given in the Kerala Minor Mineral Concession Rules 2015 is as follows:-

‘Granite dimension stones include all types of granites, dolerite, charnockite, leptynite and other crystalline rocks of Acid, Intermediate, basic and ultra basic groups of igneous and metamorphic origin which are suitable for cutting to pre-determined sizes, polishing, carving and amenable for making value-added products in decorative monumental and ornamental fields of industry as a high-value item. Granite (building stone) include all those group of rocks specified above which are not suitable for using as dimension stones as specified therein, but can be used as ordinary building stones, road metal, rubble and ballasts after breaking into irregular pieces by blasting or otherwise as low value item. The Rules insists that the rocks having the quality of granite dimension stone shall not be quarried for granite building stone as these two types of rocks have different values/royalties’.

The granite dimension stones, on the basis of geologic setting falls under

- True intrusive or anatectic granites and associated migmatites of Proterozoic age from (colour: Pink, light pink, Gray, yellowish white and bluish pink with wavy patterns) and
- Dolerite-Gabbro dykes, Proterozoic intrusive hypabasal dyke swarms from (colour: dark greenish blue, black and dark gray with black spots).

All Archean and Proterozoic rocks of Kerala (refer section on Geology of Kerala) which are not listed above as granite dimension stone falls under the category of granite (building stone) and are found below ordinary earth/laterites/and other sedimentary rocks. In some cases such rocks are exposed as hillocks without any overburden.

12.2.6 Limeshell

In Kerala, the lime shell occurs in the backwaters/estuaries, river mouths and lagoons along the coastal tract.

The lime shell resources next in importance to Vembanad lake are those in Kannur district (Payyannur, Cheruvanthur, Thrikkarippur) in north Kerala. The backwaters along the coast have good resources of lime shell. The alluvial deposit of Kandankali, south of Payyannur is also rich in lime shell. Since all these areas falls in Coastal Regulation Zones, mechanized mining is not permitted.

13 Details of minor mineral concessions and revenue collection

Permission for mining will be granted on case to case basis on ascertaining the availability at the site and only if conditions stipulated in the KMMC Rules 2015 are satisfied (The reader may refer the KMMC Rules 2015 available in the website www.dmg.kerala.gov.in for more details in this regard) The concession will be granted only if other statutory licenses like Environmental Clearance, Explosive Licence, consent to operate issued by State Pollution Control Board, NOC issued by Revenue Department (as the case may be), Dangerous and Offensive Trade Licence issued by Local Self Government Institutions, NOC related to Coastal Regulation Zone (as the case may be), NOC issued by Forest (as the case may be) etc. The mineral concession will not be granted in the ecologically sensitive areas, ecological fragile zones etc.

10.4 Status of mining in Kannur district

Table1: Details of revenue collection for the period 2013-'14, 2014-'15 and 2015-'16 (Amount in Rs.)

Revenue Collection (During 2013-14)

Major Minerals		Laterite	China Clay	Lime shell	Granite	Seashell	River Sand	Ordinary Sand	Brick Clay	Ordinary Earth
No.	Particulars	Amount in Rupees								
1	Application fee for Mining Lease									
2	Fee for prospecting licence									
3	Royalty	2588160	360000							
4	Arrear Royalty									
5	Surface Rent									
6	Dead Rent									
7	Panel Interest									
8	Compounding of offence									
	Total	2588160	360000							
Minor Minerals										
No.	Particulars	Amount in Rupees								
1	Royalty			12500	411200		2518932	1695000		48600
2	Arrear Royalty								146890	
3	Surface Rent	8,610			5497					44
4	Arrear Surface Rent									
5	Dead Rent				200					
6	Arrear Dead Rent									
7	Fee for Quarrying Permit	1,59,400			37500				400	800
8	Fee for Quarrying Lease				1000					
9	Fee for Prospecting Licence									
10	Fee for Dealers Licence	6000			1227000			306000		
11	Consolidated royalty (CRPS)	9155000			4860000					
12	Compounding of offence	1600926			265816					84400
13	Other Departments				45000			190630		
14	Other Receipts				2250000					
15	RMCU Compounding									
	Total	1,09,29,936		12,500	91,03,213		25,18,932	2,19,1630	1,46,890	1,33,844
	Grand Total	1,35,18,096	3,60,000	12,500	91,03,213		25,18,932	21,91,630	1,46,890	1,33,844

Revenue Collection (During 2014-15)

Major Minerals		Laterite	ChinaClay	Limeshell	Granite	River Sand	Ordinary Sand	Brick Clay	Ordinary Earth
No.	Particulars	Amount in Rupees							
1	Application fee for Mining Lease								
2	Fee for prospecting licence								
3	Royalty	12027818	150000						
4	Arrear Royalty								
5	Surface Rent	3603							
6	Dead Rent	4921							
7	Panel Interest								
8	Compounding of offence								
	Total	12036342	150000						
Minor Minerals		Amount in Rupees							
No.	Particulars	Amount in Rupees							
1	Royalty			7000	554400	1965610	8923760		
2	Arrear Royalty							143255	
3	Surface Rent	4,580			2678				
4	Arrear Surface Rent								
5	Dead Rent								
6	Arrear Dead Rent								
7	Fee for Quarrying Permit	83,000			20000				
8	Fee for Quarrying Lease								
9	Fee for Prospecting Licence								
10	App. Fee for Dealers Licence				18500				
11	Consolidated royalty (CRPS)	5010000			3430000				
12	Compounding of offence	1429480			916680				163846
13	Other Departments	20000							25000
14	Other Receipts								
15	RMCU Compounding				1400000				
16	Arrear RMCU				5150000				
17	App. Fee for Reg.Mineral Sales Depot				63000				
18	Fee for Dealers Licence				1896000		132000		
	Total	65,47,060		7,000	13451258	1965610	9055760	143255	188846
	Grand Total	1,85,83,402	150000	7,000	13451258	1965610	9055760	143255	188846

Revenue Collection (During 2015-16)

Major Minerals		Laterite	China Clay	Granite	River Sand	Ordinary Sand	Brick Clay	Ordinary Earth	Ordinary Clay	TOTAL
No.	Particulers	Amount in Rupees								
1	Application fee for Mining Lease									
2	Fee for prospecting licence									
3	Royalty	10750869	30000							10780869
4	Arrear Royalty									
5	Surface Rent									
6	Dead Rent									
7	Panel Interest									
8	Compounding of offence	41,561								41,561
	Total	10792430	30000							10822430
Minor Minerals										
No.	Particulers	Amount in Rupees								
1	Royalty			5648400	635906	27864840		161200		34310346
2	Arrear Royalty						2500			2500
3	Surface Rent	6,180		3031						9,211
4	Arrear Surface Rent									
5	Dead Rent			5290						5,290
6	Arrear Dead Rent									
7	Fee for Quarrying Permit	6,71,000		136000					1000	8,08,000
8	Fee for Quarrying Lease			260000						2,60,000
9	Fee for Prospecting Licence									
10	App. Fee for Dealers Licence			58500		1000				59500
11	Consolidated royalty (CRPS)	46600000		9275000						55875000
12	Compounding of offence	4917448		1844660		25000		315192		7102300
13	Other Departments									
14	Other Receipts									
15	RMCU Compounding			9000000						9000000
16	RMCU Compounding (Arrear)			400000						400000
17	Application fee for RMCU			7000						7000
18	CRPS (Arrear)	4462524		5647559						10110083
19	App. Fee for Reg.Mineral Sales Depot			60000		13000				73000
20	Fee for Dealers Licence			3004000		56000				3060000
	Total	5,66,57,152		35349440	635906	27959840	2500	476392	1000	121082230
	Grand Total	6,74,49,582	30000	35349440	635906	27959840	2500	476392	1000	131904660

List of valid mineral concessions

Table 2a: List of Quarrying Lease granted for Granite building stone								
Sl. No.	Concession Holder's Name & Address	Concession No.	Survey No/ Re.Survey No.	Village	Taluk	Area (Ha)	Valid from	Valid to
1	Jacob barry, Barry Estate, Kattusery(PO), Alathur.	269/2007-08/4448/M3/2007 dated, 20.07.07	Resy.no. 340/2pt	Alathur	Alathur	1 Hectres,	12years, 25.07.07	24.07.2019
2	M.D.Anil kumar, M/s Macadam Granites(P)Ltd, Pannikkode (PO), Palakkad	185/2007-08/4569/M3/2007/Dated, 19.06.07	ReSy.No. 427 pt, 435pt.	Erimayur II	Alathur	3.3630 hectres,	10 Years 21.07.2007	20.07.2017
3	M/s. Sahara Granites, Erimayur P.O, Palakkad	63/2012-13/3857/M3/2012 Dt. 28.04.2012	Sy.No. 35/2 & 35/3	Erimayur-I	Alathur	1.8485 Hectares	12 Years 02/05/2012	01-05-2024
4	M/s. Sahara Granites, Erimayur P.O, Palakkad	65/2012-13/3858/M3/2012 Dt. 28.04.2012	Re.Sy.No. 35/2	Erimayur-I	Alathur	2.4282 Hectares	12 Years 02/05/2012	01-05-2024
5	M/s. Sahara Granites, Erimayur P.O, Palakkad	66/2012-13/3859/M3/2012 Dt. 28.04.2012	Re.SyNo. 35/2	Erimayur-I	Alathur	2.6102 Hectares	12 Years 02/05/2012	01-05-2024
6	Sebi. P.L., S/o P.C. Lonai, Panikulangara House, Fashion Street, Mission Quarters, Thrissur - 5	389/2011-12/7219/M3/2011 dt. TVPM, 24.09.2011	Rsy No. 33/2 and 234/2	Kannambra I	Alathur	1.4504 Hect	12 years, 28.09.2011	27.09.2023
7	M/s Kottukapilly Sand & Metals (p) Ltd., Kalpathy P.O., Palakkad.	298/2011-12/5714/M3/2011 dt. 16.08.2011	Sy No. 3/2	Kizhakkachery II	Alathur	2.8409 Hect	10 Years 23.09.2011	22.09.2021

8	V.Sasidharan, Propreitor, M/s. SriSri Granites, Peecharoad, Chithali (PO), Palakkad	240/2008- 09/6739/M3/08/ dated, 14.07.08	Sy.no.663/4,8,9, 10	Kuthanur.1	Alathur	1.4089 Hectres	10 years 28.07.08	27.07.2018
9	Johsn Thomson, Proprietor, M/s. Tropical Granites, Tropical Estate, Kuthanur. P.O, Alathur, Palakkad	492/2008- 09/9439/M3/2008/dat ed, 15.11.08	Resy.no. 651/8	Kuthanur.1	Alathur	1.9320 Hectres	12 years 05.01.09	04.01.2021
10	P.P. Sebastian, Poovathukaran House, Thalore P.O., Thrissur	329/2010- 11/4775/M3/2010 dt. 20.08.2010	Resy.No. 268/2pt	Vadakkenchery I	Alathur	0.4318 Hect	12 Years 27.9.2010	26.09.2022
11	P.T.Davis, Managing Partner, Thomson Metals, Kombidinjamakkal,PO, Thazekkad	58/2011- 12/2870/M3/2011 dt.04.05.2011	Re.Sy. Nos. 208/1, 208/3,209/pt.,210/2 ,210/3,210/4,210/5	Muthalamada I	Chittur	4.8366 Hect.	12 Years 13.05.2011	12.05.2023
12	Binil K John, Mg. Director, Valluvanad quarries and Granites(Pvt) Ltd., Angamally, Ernakulam.	747/2010- 11/910/M3/2011 dt. 31.01.2011	Resy No. 330/2 pt., 330/3pt; and 331/1 pt.	Ambalappara I	Ottappalam	1.5348 Hect	12 Years 11.02.2011	10.02.2023
13	Ajaiwilson, Managing Partner, M/s Malabar Blue Metal, Vengassery (PO) Ambalappara, Palakkad.	184/2008- 09/7822/M3/2007 dated, 19.08.08	Sy.Nos. 460/5pt, 462/9, 462/5, 106/1 pt	Ambalappara.1.	Ottappalam	1.4164 hectres,	12 years 18.07.08	17.07.2020

14	Raphy.P.J., Pudussery pady House, Thrikkur (PO), Thrissur.	296/2008-09/6890/M3/2008/dated, 13.08.2008.	Sy.no. 226/3	Chalavara	Ottappalam	0.8094 Hect.	10 years, 26.09.08	25.09.2018
15	M/s Blue Chips Mines & Industries, Vembalathupadam, Kailiyad P.O., Ottappalam.	Pro.order.No. 668/2008-09/7814/M3/08 dt Tvpmm, 31.01.2009 and 304/09-10/7814/M3/08 dt. 14.09.2009 and Re execution vide Pro.No. 268/2011-2012/7814/M3/2008 dt. 29.07.2011 of DMG	Sy No. 168/ 11 A,	Chalavara	Ottappalam	1.6100 Hect	12 Years 26.08.2011	25.08.2023
16	Geosons Aggregates, Amayur, Pattambi, Palakkad.	32/2006-07/3471/M3/06 dated, 25.04.06	59/4	Koppam	Ottappalam	0.6070 hectres,	12 years 07.06.2006.	06.06.2018
17	M.K.Joseph, Mg. Partner, M/s. Malabar Granites, Amayur P.O., Pattambi, Palakkad.	792/2010-11/4999/M3/2010 dt. 24.02.2011	Resy Nos. 365,366 367/5	Koppam	Ottappalam	3.5204 Hect	12 Years 09.03.2011	08.03.2023
18	M/s J & P Construction & J & P Granites, Choorakode P.O., Pattambi, Palakkad.	Pro.order No. 535/2011-12/7819/M3/2011 dt. 15.11.2011.	Rsy No. 7578/2	Vallappuzha	Ottappalam	1.6190 Hect.	10 Years 30.11.2011	29.11.2021

19	M/s. Malabar Granite Metal, Vaniamkulam Mannannur (PO) Kavalappara, Palakkad	860/2007-08/1283/M3/2008/dated, 28.02.08	SyNo. 39/1pt 39/2pt	Vaniamkulam.2	Ottappalam	1.5702 Hectres	10 years 26.03.08	25.03.2018
20	Binil K John, Managing Partner, M/s. Valluvanad Granites, Nellikkurussi. P.O, Mulanhur, Ottappalam, Palakkad	418/2014-15/9639/M3/2014 Dt. 27/09/2014	Re.Sy.No. 2/2, 5/2	Lakkidi -Perur-1	Ottappalam	1.7822 Hectares	20-10-2014	30-10-2018
21	Smt. Annie Sannie, Mg. Director, M/s Malayakam Aggregates & Sands(P) Ltd, chazhiyattiri (PO), Palakkad	482/2007-08/7505/M3/07 dated, 01.11.07	sy.no. 274 pt.	Thirumittakkode.2	Ottappalam	1.7800 Hectres	12 years 13.11.07	12.11.2019
22	Saji Mon Abraham, S/o Abraham, Palakkattu House, Kummanoor, Kidangoor P.O., Kottayam.	120/2010-11/3355/M3/2010 dt. 26.05.2010	Resy.No: 110/1, 110/3	Akathethara	Palakkad	2.7721 Hect (6.85 acre)	12 Years 11.08.2010	10.08.2022
23	M/s. Royal Sand & Gravels (P) Ltd., Plaza Junction, Dhoni.(P.O), Palakkad	281/2014-15/8473/M3/2014 Dt. 02/08/2014	Sy.No. 2/P, 14/P, 15/P, 16/1P	Akathethara	Palakkad	7.0655 Hectares	12 years 22/08/2014	21-08-2026
24	P.I.Devassia, Arumani Estate, Nochipully, Mundur, Palakkad.	431/2007-08/6475/M3/2007 DATED, 05.10.07	Resy.no. 449/1pt	Mundur.2	Palakkad	0.8174 Hectres	12years, 01.12.07	30.11.2019

25	Sabu Thomas, Kalapurackal House, Ayarkunnam(PO), Kottayam.	200/2007- 08/4819/M3/2007 dated, 25.06.07	Resy.no. 320/2	Puthussery central	Palakkad	1.4165 Hectres,	12 years from 06.08.07	05.08.2019
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Table 2b: List of Quarrying Permit granted for Granite building stone										
Sl. No.	Concession holder's name and address	Village	Taluk	District	Survey No	Area (ha)	Mineral	Concession no.	valid from	valid to
1	K.T.Moosankutty S/o Adamkutty, Kaniyarakkal Thykkandi, P.O.Narath 670 601	Eramam	Taliparamba	Kannur	674/3	0.0971 Hectare	Granite	36/15- 16/MM/GS/CRPS/ DOC/M-4484/15 Dt 20.11.2015	20.11.15	19.11.16
2	Managing Director, Malabar Construction Materials Pvt.Ltd. Edayar, P.O.Kolayad,	Kolayad	Thalasseri	Kannur	70/1	0.5 Hectare	Granite	37/15- 16/MM/GS/CRPS/ DOC/M-5426/15 Dt 26.11.2015	26.11.15	25.11.16
3	Sudharshan S/o Balan, herukunnothparambath House, P.O.Cheruparamba 670 693	Triprangottur	Thalasseri	Kannur	275/1A	40.47 Are	Granite	38/15- 16/MM/GS/CRPS/ DOC/M-5147/15 Dt 02.12.2015	02.12.15	01.12.16
4	V.K.Benni S/o Kuriyakose, Vakkachalil House, P.O.Kolayad 670 650	Kolayad	Thalasseri	Kannur	21/1A1	0.5 Hectare	Granite	39/15- 16/MM/GS/CRPS/ DOC/M-5363/15 Dt 18.12.2015	18.12.15	17.12.16
5	Shaju Jose, Managing Partner, Payyavoor Crushers, Payyavoor 670 633	Payyavoor	Taliparamba	Kannur	1/1	0.3 Hectare	Granite	40/15- 16/MM/GS/CRPS/ DOC/M-5480/15 Dt 19.12.2015	19.12.15	18.12.16
6	Basheer.K.P. Managing Partner, Rock Star, Pullanparathattu, P.O.Charal	Ayyankunnu	Iritty	Kannur	1293	0.5 Hectare	Granite	41/15- 16/MM/GS/CRPS/ DOC/M-5566/15 Dt 11.01.2016	11.01.16	10.01.17
7	Sonia Binoy,	Ayyankunnu	Iritty	Kannur	1293	12	Granite	42/15- 16/MM/GS/CRPS/	14.01.16	13.01.17

	D/o Sebastian, Kizhakkappadavath, P.O.Payam 670 704					Cent		DOC/M-2571/15 Dt 14.01.2016		
8	Kadakkara Ali Kunhi S/o Hussain, Kadakkara House, P.O.Eriam, Edakkome	Vellad	Taliparamba	Kannur	292/1A	0.1457 Hectare	Granite	43/15- 16/MM/GS/CRPS/ DOC/M-2618/15 Dt 15.01.2016	15.01.16	14.01.17
9	C.H.Askar Managing Partner, Hindustan Stone Crusher and Hollow Bricks Unit, P.O.Kallangi 670 706	Vayathur	Iritty	Kannur	28/1A2	0.1943 Hectare	Granite	44/15- 16/MM/GS/CRPS/ DOC/M-3583/15 Dt 15.01.2016	15.01.16	14.01.17
10	K.C.James, Managing Partner, Everest Stone Crusher and Granites, M.T. 89 V Highway Arcade, Kannur	Eruvessi	Taliparamba	Kannur	4	0.4047 Hectare	Granite	45/15- 16/MM/GS/CRPS/ DOC/M-2343/15 Dt 16.01.2016	16.01.16	15.01.17
11	Vasundharan.K. S/o Karunakaran, Madhumandhiram, P.O.Peringome 670 307	Peringome	Taliparamba	Kannur	308/3	0.0971 Hectare	Granite	46/15- 16/MM/GS/CRPS/ DOC/M-5468/15 Dt 08.02.2016	08.02.16	07.02.17
12	K.P.Yunas S/o E.P.Mammad Haji Akkarammal House, P.O.Mayyil 670 602	Thirumeni	Taliparamba	Kannur	284/1 286/1	0.0486 Hectare	Granite	47/15- 16/MM/GS/CRPS/ DOC/M-5616/15 Dt 15.02.2016	15.02.16	14.02.17
13	Jabir.M.A. S/o Assu Haji, Mallikkantakath, P.O.Rayarom	Alakkode	Taliparamba	Kannur	17/1A 1	4.04 Are	Granite	48/15- 16/MM/GS/CRPS/ DOC/M-2503/15 Dt 18.02.2016	18.02.16	17.02.17
14	T.P.Shamsudeen S/o Ahammad Kutty,Green Villa, Kalaroad, P.O.Keecheri 670 702	Kolari	Iritty	Kannur	47/1	0.0486 Hectare	Granite	49/15- 16/MM/GS/CRPS/ DOC/M-4902/15 Dt 24.02.2016	24.02.16	23.02.17

15	V.P.Prabhakaran Holy Granite and Bricks (P) Ltd. Edayar, P.O.Kolayad,	Kannavam	Thalasseri	Kannur	108/1A	0.0971 Hectare	Granite	50/15- 16/MM/GS/CRPS/ DOC/M-3531/15 Dt 24.02.2016	24.02.16	23.02.17
16	Mavilakkandi Balakrishnan, Shajina Nivas, Vessala P.O.Chattukapara 670 592	Koodali	Thalasseri	Kannur	3/1A	0.0971 Hectare	Granite	51/15- 16/MM/GS/CRPS/ DOC/M-2439/15 Dt 24.02.2016	24.02.16	23.02.17
17	Managing Director, Kannur Jilla Black Rock Crushers and Sand Making Industries (P) Ltd., Kouser Complex, Kaltex Junction	Ayyankunnu	Iritty	Kannur	1293	0.3844 Hectare	Granite	52/15- 16/MM/GS/CRPS/ DOC/M-5488/15 Dt 03.03.2016	03.03.16	02.03.17
18	A.Manoharan S/o Kunhiraman, Saraswathi Nilayam P.O.Mangattidom 670 643	Keezhoor	Iritty	Kannur	167/2	0.0444 Hectare	Granite	53/15- 16/MM/GS/CRPS/ DOC/M-2567/15 Dt 16.03.2016	16.03.16	15.03.17
19	Sunny Jose, Managing Partner, Payyavoor Granites Payyavoor	Payyavoor	Taliparamba	Kannur	1/1	0.1 Hectare	Granite	54/15- 16/MM/GS/CRPS/ DOC/M-5481/15 Dt 28.03.2016	28.03.16	27.03.17
20	Project Mananger, R.D.S.Project Ltd., Oranadathchal P.O.Vilayankode 670 504	Kuttoor	Taliparamba	Kannur	74/1D	0.4047 Hectare	Granite	55/15- 16/MM/GS/CRPS/ DOC/M-5615/15 Dt 31.03.2016	31.03.16	30.03.17
21	C.G.George Joint Managing Director, Chendayad Granites (P) Ltd., KSIDC Industrial Growth Centre, Valiyavelicham	Triprangottur	Thalasseri	Kannur	275/1A	29.95 Are	Granite	01/16- 17/MM/GS/CRPS/ DOC/M-396/16 Dt 06.04.2016	06.04.16	05.04.17
22	C.K.Abdurahiman,	Peringome	Taliparamba	Kannur	304/3	0.0972	Granite	02/16- 17/MM/GS/CRPS/	06.04.16	05.04.17

	Managing Partner, Peringome Stone Crusher, Baithulasher, Maniyoor, P.O.Chekkikulam					Hectare		DOC/M-2199/15 Dt 06.04.2016		
23	Aneesh Kumar.K. S/o Madhavan, Madhav Nivas, P.O.Vellarvally 670 673	Tholambra	Thalasseri	Kannur	1/1A	0.0425 Hectare	Granite	03/16- 17/MM/GS/CRPS/ DOC/M-1227/16 Dt 11.04.2016	11.04.16	10.04.17
24	Managing Director, Sampath Crushers Pvt.Ltd. Chepparamb, P.O.Chemberi, 670 632	Nidiyenga	Taliparamba	Kannur	3	0.24 Acre	Granite	04/16- 17/MM/GS/CRPS/ DOC/M-1228/16 Dt 21.04.2016	21.04.16	20.04.17
25	Ravi Paleri Soorya Stone Crusher Kalluvalappu, P.O.Cheruparamb 670 693	Kolavallur	Thalasseri	Kannur	58/1A1	0.0971 Hectare	Granite	05/16- 17/MM/GS/CRPS/ DOC/M-3880/15 Dt 25.04.2016	25.04.16	24.04.17
26	K.Gangadharan S/o Kumaran, K.G.House, P.O.Muthiyenga 670 691	Kuthuparamba	Thalasseri	Kannur	89	0.0971 Hectare	Granite	06/16- 17/MM/GS/CRPS/ DOC/M-5556/15 Dt 04.05.2016	04.05.16	03.05.17
27	K.Khader S/o Moideen, Sajitha Manzil, P.O.Sivapuram 670 702	Sivapuram	Thalasseri	Kannur	131/1B	0.0971 Hectare	Granite	07/16- 17/MM/GS/CRPS/ DOC/M-4663/15 Dt 04.05.2016	04.05.16	03.05.17
28	Anil Joseph S/o Joseph, Kuzhithottu House, P.O.Chembanthotty 670 631	Nidiyenga	Taliparamba	Kannur	25/1A	12 Cent	Granite	08/16- 17/MM/GS/CRPS/ DOC/M-2710/15 Dt 11.05.2016	11.05.16	10.05.17
29	U.Saeed Saj Mahal, Pushpagiri, Taliparamba 670 141	Vellad	Taliparamba	Kannur	292/1A	0.0972 Hectare	Granite	09/16- 17/MM/GS/CRPS/ DOC/M-5799/15 Dt 18.05.2016	18.05.16	17.05.17
30	C.G.George Joint Managing Director,	Kannavam	Thalasseri	Kannur	108/1C	0.0971 Hectare	Granite	10/16- 17/MM/GS/CRPS/ DOC/M-1567/16	25.05.16	24.05.17

	Chendayad Granites (P) Ltd., KSIDC Industrial Growth Centre, Valiyavelicham Koothuparamb, P.O.Muriyad 643 670								Dt 25.05.2016		
31	P.M.Ibrahim Managing Partner, Southern Granites, Madakkampoyil, Peringome	Peringome	Taliparamba	Kannur	328/5	0.0971 Hectare	Granite	11/16- 17/MM/GS/CRPS/ DOC/M-6006/15 Dt 01.06.2016	01.06.16	31.05.17	
32	Jilson Joseph.V. S/o V.M.Joseph, Veliyathil House, P.O.Pulikkurumba 670 582	Nidiyenga	Taliparamba	Kannur	28	40 Are	Granite	12/16- 17/MM/GS/CRPS/ DOC/M-1759/16 Dt 15.06.2016	15.06.16	14.06.17	
33	Jilson Joseph.V. S/o V.M.Joseph, Veliyathil House, P.O.Pulikkurumba 670 582	Nidiyenga	Taliparamba	Kannur	28	40 Are	Granite	13/16- 17/MM/GS/CRPS/ DOC/M-1760/16 Dt 15.06.2016	15.06.16	14.06.17	
34	Shaju Jose, Managing Partner, Payyavoor Crushers, Payyavoor 670 633	Payyavoor	Taliparamba	Kannur	1/1	0.1998 Hectare	Granite	14/16- 17/MM/GS/CRPS/ DOC/M-1678/16 Dt 16.06.2016	16.06.16	15.06.17	
35	Siril Jose, Managing Director, Sampath Crushers (P) Ltd., Nidiyenga, P.O.Chemberi 670 632	Nidiyenga	Taliparamba	Kannur	3	73 Cent	Granite	15/16- 17/MM/GS/CRPS/ DOC/M-5576/16 Dt 22.06.2016	22.06.16	21.06.17	
36	Aby Abraham S/o M.A.Abraham, Anugrah, Kisan Road P.O.Alavil 670 008	Triprangottur	Thalasseri	Kannur	275/1A	0.499 Hectare	Granite	16/16- 17/MM/GS/CRPS/ DOC/M-2007/16 Dt 22.09.2016	22.09.16	21.09.17	
37	Sanny Cyriac	Vayathur	Iritty	Kannur	28/1A2	0.3	Granite	17/16- 17/MM/GS/CRPS/	26.09.16	25.09.17	

	S/o Cyriac Mathew, Pottangal House, Thondiyil.P.O. 670 673					Hectare		DOC/M-803/16 Dt 26.09.2016		
38	Javid.E.P., S/o Moideen.V.P., Santhi Mahal Chekkikulam.P.O. 670 592	Nidiyenga	Taliparamba	Kannur	1/1	24 Cent	Granite	18/16- 17/MM/GS/CRPS/ DOC/M-5212/15 Dt 26.09.2016	26.09.16	25.09.17
39	Mahesh.C.M. Managing Partner, Sreelakshmi Stone Crusher, 27th Mile, P.O.Poolakkutty 670 650	Kanichar	Iritty	Kannur	156/1	0.0971 Hectare	Granite	19/16- 17/MM/GS/CRPS/ DOC/M-3612/15 Dt 29.09.2016	29.09.16	28.09.17
40	Rajesh.T.S. S/o T.R.Sukumaran, Thamarasseriyl House, P.O.Kudiyamala 670 582	Eruvessi	Taliparamba	Kannur	5	36 Cent	Granite	20/16- 17/MM/GS/CRPS/ DOC/M-3972/16 Dt 31.10.2016	31.10.16	30.10.17
41	Ravi Paleri Surya Stone Crusher and Hollow Bricks, P.O.Cheruparamb, 670 693	Kolavallur	Thalasseri	Kannur	150/3	0.0971 Hectare	Granite	21/16- 17/MM/GS/CRPS/ DOC/M-5330/15 Dt 07.11.2016	07.11.16	06.11.17

Sl. No	Concession holder's name and address	Village	Taluk	Survey no	Area (ha)	Concession no.	valid to
1	Raju Thattottu S/o Kunhiraman, Jisha Nivas, P.O.Eruvatti 670 647	Thillenkeri	Iritty	28/4 27/2	0.0972 Hectare	410/15-16/MM/LT/CRPS/ DOC/M-5357/15 Dt 19.11.2015	18.11.16
2	Sunil S/o Gopalan, Keerthana, P.O.Sivapuram 670 702	Muzhakkunnu	Iritty	1/1	0.0971 Hectare	411/15-16/MM/LT/CRPS/ DOC/M-2446/15 Dt 19.11.2015	18.11.16
3	Babu.P. S/o Kunhikannan, Palangattu House, Perinthatta 670 307	Perinthatta	Taliparamba	16	0.0971 Hectare	412/15-16/MM/LT/CRPS/ DOC/M-5211/15 Dt 19.11.2015	18.11.16
4	Panneri Rameshan S/o Koran Mouvannal Panneri House, P.O.Karanthatt 670 308	Ramanthali	Taliparamba	183/2	0.0971 Hectare	413/15-16/MM/LT/CRPS/ DOC/M-4340/15 Dt 23.11.2015	22.11.16
5	Vijayan.N.K. S/o P.V.Krishnan Narangakulangara House, P.O.Karanthattu 670 308	Ramanthali	Taliparamba	185/1	0.0971 Hectare	414/15-16/MM/LT/CRPS/ DOC/M-4346/15 Dt 23.11.2015	22.11.16
6	Mukri Mahamood Mukri House, Thayineri, P.O.Payyannur 670 307	Kankol	Taliparamba	335/1 335/2	0.0971 Hectare	415/15-16/MM/LT/CRPS/ DOC/M-5193/15 Dt 23.11.2015	22.11.16
7	Thamban.P.P. S/o Raman, Puthiya Purayil House, P.O.Pothavoor 670 313	Alappadamb	Taliparamba	478/1	0.0972 Hectare	416/15-16/MM/LT/CRPS/ DOC/M-5193/15 Dt 23.11.2015	22.11.16
8	Kunhiraman.P.V. S/o Kunhappa, Puthiya Valappil House, P.O.Kurumathoor 670 142	Panniyoor	Taliparamba	1/1B	0.0972 Hectare	417/15-16/MM/LT/CRPS/ DOC/M-5361/15 Dt 25.11.2015	24.11.16
9	Harischandran.M.V. S/o Sankaran Nair, Meledath House, P.O.Panniyoor	Panniyoor	Taliparamba	1/1B	0.0972 Hectare	418/15-16/MM/LT/CRPS/ DOC/M-5362/15 Dt 25.11.2015	24.11.16
10	Pavithran.K.	Taliparamba	Taliparamba	1/1	24	419/15-16/MM/LT/CRPS/	24.11.16

	S/o Kunhikoran Kizhakeppadath House, P.O.Taliparamba				Cent	DOC/M-4300/15 Dt 25.11.2015	
11	Kannur Kallukothu Thozhilali Kshema Sahakarana Sangam Lt.,Dhermasala, P.O.Parassinikkadavu 670 563	Chuzhali	Taliparamba	222	0.0972 Hectare	420/15-16/MM/LT/CRPS/ DOC/M-5145/15 Dt 25.11.2015	24.11.16
12	Suneesh S/o Bhaskaran, Aniyankottu House, P.O.Koyyam 670 142	Panniyoor	Taliparamba	137	0.0972 Hectare	421/15-16/MM/LT/CRPS/ DOC/M-5354/15 Dt 25.11.2015	24.11.16
13	Balakrishnan.K. Kayakkil House, P.O.Chuzhali 670 142	Thimiri	Taliparamba	100/2A	24 Cent	422/15-16/MM/LT/CRPS/ DOC/M-4019/15 Dt 25.11.2015	24.11.16
14	Manikandan S/o Govinda Poduval Kanuvatiyil, P.O.Kandoth	Eramam	Taliparamba	469	0.0971 Hectare	423/15-16/MM/LT/CRPS/ DOC/M-4052/15 Dt 30.11.2015	29.11.16
15	M.Rajan S/o Raman, Chalupalappil House, P.O.Thimiri 670 314	Alappadamb	Taliparamba	478/1	0.0972 Hectare	424/15-16/MM/LT/CRPS/ DOC/M-5283/15 Dt 30.11.2015	29.11.16
16	Raghavan.D. S/o Kunhiraman, Dhermal House, P.O.Pilathara	Panapuzha	Kannur	1/1	0.0971 Hectare	425/15-16/MM/LT/CRPS/ DOC/M-4385/15 Dt 30.11.2015	29.11.16
17	Gangadharan. S/o Kunhiraman, Puthiya Veettil House, P.O.Kuttoor 670 306	Perinthatta	Taliparamba	132/1A	0.0971 Hectare	426/15-16/MM/LT/CRPS/ DOC/M-4767/15 Dt 02.12.2015	01.12.16
18	Mohan.P.T. Paleri Thaivalappil, P.O.Olatt Via Thrikkaripur, Karsargod 671 310	Alappadamb	Taliparamba	488/2	0.0972 Hectare	427/15-16/MM/LT/CRPS/ DOC/M-5265/15 Dt 02.12.2015	01.12.16
19	Kunhikannan S/o Koran, Sivam Bhavan, P.O.Puthoor	Triprangottur	Thalasseri	158/2	9.71 Are	428/15-16/MM/LT/CRPS/ DOC/M-5575/15 Dt 02.12.2015	01.12.16
20	Rajeevan.A. S/o Achuthan, Ariyambatt House, P.O.Narath 670 603	Kuttiattoor	Taliparamba	76/3	0.0971 Hectare	429/15-16/MM/LT/CRPS/ DOC/M-3989/15 Dt 02.12.2015	01.12.16

21	Sureshan.V.P. S/o Ambronte Ambu, Vadakkepoyil House, P.O.Kotakkad, Kasargod 671 310	Alappadamb	Taliparamba	478/1	0.0971 Hectare	430/15-16/MM/LT/CRPS/ DOC/M-5284/15 Dt 07.12.2015	06.12.16
22	Purushothaman.M. S/o Kunhikannan, Madappura House, Urathur, P.O.Kosavanvayal 670 593	Kalliad	Iritty	23/1	0.24 Acre	431/15-16/MM/LT/CRPS/ DOC/M-5543/15 Dt 07.12.2015	06.12.16
23	Santhosh Kumar.K. S/o Kuttan, Padmalayam, P.O. Venga Shasthamkotta, Kollam	Chavasseri	Iritty	105	0.0971 Hectare	432/15-16/MM/LT/CRPS/ DOC/M-4475/15 Dt 07.12.2015	06.12.16
24	Rajesh.P. S/o Narayanan, Parukkaran House, P.O.Purakkunnu 670 306	Perinthatta	Taliparamba	45/1	0.0971 Hectare	433/15-16/MM/LT/CRPS/ DOC/M-5573/15 Dt 07.12.2015	06.12.16
25	Santhosh Kumar.T. S/o Pathmanabhan, Thanthrayi House, Mailancheri, P.O.Kuttoor	Kuttoor	Taliparamba	131/1A1	0.0971 Hectare	434/15-16/MM/LT/CRPS/ DOC/M-4662/15 Dt 07.12.2015	06.12.16
26	Ashokan.K. S/o Kunhikannan Kattoor House, P.O.Porakkunnu 670 306	Perinthatta	Taliparamba	46/1A	0.0971 Hectare	435/15-16/MM/LT/CRPS/ DOC/M-3992/15 Dt 07.12.2015	06.12.16
27	Haridas.N.P. S/o M.Damodharan, Naduvile Purayil, P.O.Palakkode 670 305	Ramanthali	Taliparamba	22	0.0971 Hectare	436/15-16/MM/LT/CRPS/ DOC/M-4235/15 Dt 07.12.2015	06.12.16
28	Raghavan.P.V. S/o Ambu, Puthen Veettil, P.O.Chalakkode 670 307	Kankol	Taliparamba	258/3	0.0971 Hectare	437/15-16/MM/LT/CRPS/ DOC/M-5612/15 Dt 09.12.2015	08.12.16
29	John S/o John, Cherusseri House, P.O.Chettiyamparamb 670 674	Kelakom	Iritty	kpd 260/1	0.097 Hectare	438/15-16/MM/LT/CRPS/ DOC/M-5469/15 Dt 09.12.2015	08.12.16
30	Suvarnan.P.V. S/o Kunhappan, Puthiya Veettil House, P.O.Kuttoor 670 306	Perinthatta	Taliparamba	76/2	0.0971 Hectare	439/15-16/MM/LT/CRPS/ DOC/M-4638/15 Dt 09.12.2015	08.12.16
31	Thomas.K.K. S/o Kuriyan, Kuzhimullil House, Eruvessi, P.O.Chundakunnu 670 632	Eruvessi	Taliparamba	64/2	0.0931 Hectare	440/15-16/MM/LT/CRPS/ DOC/M-4480/15 Dt 09.12.2015	08.12.16
32	Abdul Nazar.C.K.	Nidiyenga	Taliparamba	4	0.0971	441/15-16/MM/LT/CRPS/	08.12.16

	S/o Muhammed , C.K.House, P.O.Malappattam 670 631				Hectare	DOC/M-4946/15 Dt 09.12.2015	
33	Ratheesh Philip S/o Paili, Vanjipurayil House, P.O.Nellikutty 670 632	Eruvessi	Taliparamba	57	24 Cent	442/15-16/MM/LT/CRPS/ DOC/M-4564/15 Dt 14.12.2015	13.12.16
34	Aneesh Kumar.C. S/o K.Kunhambu, Chathoth House, P.O.Malappattam 670 631	Sreekandapuram	Taliparamba	252/5	0.0971 Hectare	443/15-16/MM/LT/CRPS/ DOC/M-4945/15 Dt 14.12.2015	13.12.16
35	Santhosh.V.V. S/o Krishnan Nambiar, Velluva Veettil, P.O.Kaithapram 670 631	Eruvessi	Taliparamba	109/1A	48 Cent	444/15-16/MM/LT/CRPS/ DOC/M-4944/15 Dt 14.12.2015	13.12.16
36	Surendran.V.V. S/o Narayanan Valiya Valappil House, P.O.Nidiyenga 670 631	Nidiyenga	Taliparamba	30	24 Cent	445/15-16/MM/LT/CRPS/ DOC/M-5749/15 Dt 14.12.2015	13.12.16
37	Jose V.S. S/o Steephen, Vallarkattil House, Kalluvayal, P.O.Padiyoor 670 703	Padiyoor	Iritty	51/1	0.0971 Hectare	446/15-16/MM/LT/CRPS/ DOC/M-5416/15 Dt 14.12.2015	13.12.16
38	Sunil Kumar Padinhakkara Padinhakkara House, P.O.Karippal 670 581	Thimiri	Taliparamba	100/2A	24 Cent	447/15-16/MM/LT/CRPS/ DOC/M-3288/15 Dt 14.12.2015	13.12.16
39	Sanesh S/o Janardhanan, Vaya Veettil, Kolathoor, Chuzhali.P.O. 670 141	Chuzhali	Taliparamba	72/1A1	0.0972 Hectare	448/15-16/MM/LT/CRPS/ DOC/M-3149/15 Dt 14.12.2015	13.12.16
40	Janardhanan.P.V. S/o Kammaran Nair, Sreenilayam, P.O.Thillengeri 670 702	Thillenkeri	Iritty	64	0.0678 Hectare	449/15-16/MM/LT/CRPS/ DOC/M-5745/15 Dt 16.12.2015	15.12.16
41	Meri Kuriyan D/o Kuriyan Kuzhimullil House, P.O.Chundakunnu 670 632	Eruvessi	Taliparamba	109/1A	0.0971 Hectare	450/15-16/MM/LT/CRPS/ DOC/M-5001/15 Dt 16.12.2015	15.12.16
42	Unnikrishnan.K.K. S/o Appu Nambiar, Krishna Kripa, Velam, P.O.Mayyil 670 602	Nidiyenga	Taliparamba	42	24 Cent	451/15-16/MM/LT/CRPS/ DOC/M-5651/15 Dt 16.12.2015	15.12.16
43	E.P.Sharafudheen	Kalliad	Iritty	46/4	0.0971	452/15-16/MM/LT/CRPS/	20.12.16

	S/o Abdul Rahiman, Subaida Manzil, P.O.Mayyil 670 602				Hectare	DOC/M-5624/15 Dt 21.12.2015	
44	Reji.V.J. S/o Joseph, Vathil Kunnel House, P.O.Thondayil, Via. Peravoor 670 673	Payyavoor	Taliparamba	1/1	0.1943 Hectare	453/15-16/MM/LT/CRPS/ DOC/M-5288/15 Dt 21.12.2015	20.12.16
45	Raveendra.K.P. S/o Kunhappan, Kuttipurath House, P.O.Padiyottuchal 670 307	Alappadamb	Taliparamba	11	0.0971 Hectare	454/15-16/MM/LT/CRPS/ DOC/M-5209/15 Dt 21.12.2015	20.12.16
46	P.Pramod S/o Balan, K.K.Paramb House, P.O.Mangattidam 670 643	Perinthatta	Taliparamba	132/1A	0.4856 Hectare	455/15-16/MM/LT/CRPS/ DOC/M-5533/15 Dt 22.12.2015	21.12.16
47	Ratheesh.K.V. S/o K.T.Karunakaran Alakkatt, P.O.Kankol 670 307	Korom	Taliparamba	106/3	24 Cent	456/15-16/MM/LT/CRPS/ DOC/M-5867/15 Dt 23.12.2015	22.12.16
48	Manoj Kumar.K. S/o Damu, Karuvath House, P.O.Manantheri 670 643	Payam	Iritty	84	0.0971 Hectare	457/15-16/MM/LT/CRPS/ DOC/M-5742/15 Dt 23.12.2015	22.12.16
49	Mahesh.K.P. S/o V.V.Krishna Poduval,Kunnath Manayil Payyadakath House, P.O.Kankol 670 307	Kankol	Taliparamba	183/3	0.0575 Hectare	458/15-16/MM/LT/CRPS/ DOC/M-5795/15 Dt 23.12.2015	22.12.16
50	Sasheendran.V.C. S/o V.Velayudhan, Valiyarambathchalil House, P.O.Pavandoor, Kozhikode 673 613	Kalliad	Iritty	46/4	0.24 Acre	459/15-16/MM/LT/CRPS/ DOC/M-4659/15 Dt 23.12.2015	22.12.16
51	Jasim.K.K. S/o Kunhabdulla Haji, Kunndukandathil House, P.O.Penmeriparambail, Kozhikode 673 542	Kalliad	Iritty	23/1	0.1942 Hectare	460/15-16/MM/LT/CRPS/ DOC/M-5492/15 Dt 23.12.2015	22.12.16
52	Majeed Pattar Kadaval S/o Kunhikoya, Pattarkadavan House, P.O.Pattarkadav, Malappuram 676 519	Kalliad	Iritty	46/4	0.0971 Hectare	461/15-16/MM/LT/CRPS/ DOC/M-5429/15 Dt 23.12.2015	22.12.16
53	Hamza Kutty.P.P. S/o Moidu, Panniyamkandi Puthiya Purayil House, P.O.Kolacheri 670 601	Kalliad	Iritty	46/4	0.0971 Hectare	462/15-16/MM/LT/CRPS/ DOC/M-5857/15 Dt 23.12.2015	22.12.16
54	Riyas.K.	Kalliad	Iritty	1	0.0971	463/15-16/MM/LT/CRPS/	22.12.16

	S/o Muhammed, Riyas Manzil P.O.Edayannur 670 595				Hectare	DOC/M-5824/15 Dt 23.12.2015	
55	Yakhoob.M. S/o Kamal Haji.E.P. Firdous Manzil, P.O.Elambara 670 595	Kalliad	Iritty	46/4	0.48 Acre	464/15-16/MM/LT/CRPS/ DOC/M-5856/15 Dt 23.12.2015	22.12.16
56	Sajesh Bharathan S/o Bharathan, Santhosh, P.O.Thalasseri 670 101	Keezhur	Iritty	48	0.0971 Hectare	465/15-16/MM/LT/CRPS/ DOC/M-5453/15 Dt 23.12.2015	22.12.16
57	Prathosh.P. S/o Premarajan, Payatt House, P.O.Pattannur 670 595	Kalliad	Iritty	46/4	0.0971 Hectare	466/15-16/MM/LT/CRPS/ DOC/M-5144/15 Dt 28.12.2015	27.12.16
58	Prakasan.P. S/o Chanthukutty Nambiar, Payyadakath House, P.O.Kankol 670 307	Kankol	Taliparamba	200	0.0971 Hectare	467/15-16/MM/LT/CRPS/ DOC/M-5865/15 Dt 28.12.2015	27.12.16
59	Sushobh Kongatt S/o K.Sukumaran, Sushanth Nivas, P.O.Sivapuram 670 702	Chavasseri	Iritty	3	0.0971 Hectare	468/15-16/MM/LT/CRPS/ DOC/M-5864/15 Dt 28.12.2015	27.12.16
60	Muhammed Aslam.P.P. S/o Abdulla, T.C.Nivas, P.O.Nirmalagiri 670 701	Payam	Iritty	3/1B	0.0971 Hectare	469/15-16/MM/LT/CRPS/ DOC/M-5965/15 Dt 28.12.2015	27.12.16
61	Prajith Kumar.K. S/o Kunhambu Nair, Krishna Kripa, P.O.Kalliad 670 593	Kalliad	Iritty	3/1	0.0972 Hectare	470/15-16/MM/LT/CRPS/ DOC/M-5798/15 Dt 30.12.2015	29.12.16
62	Ibrahim Kutty.K. S/o Moideen, Shahina Manzil P.O.Kolari 670 702	Chavasseri	Iritty	109/1	0.0971 Hectare	471/15-16/MM/LT/CRPS/ DOC/M-5925/15 Dt 30.12.2015	29.12.16
63	Vishnu Kumar.T.K. S/o Krishnan, Thulasi Bhavan P.O.Kathiroor 670 642	Payam	Iritty	3/1B	0.0971 Hectare	472/15-16/MM/LT/CRPS/ DOC/M-5991/15 Dt 30.12.2015	29.12.16
64	Ahnas.P. S/o Muhammed, Pilathotti House, P.O.Pannasseri, Kozhikode 673 585	Eramam	Taliparamba	114/2	0.0915 Hectare	473/15-16/MM/LT/CRPS/ DOC/M-4533/15 Dt 30.12.2015	29.12.16
65	Shyju.M. S/o K.V.Narayanan, Makkinadi House,	Kankol	Taliparamba	115/1	0.069 Hectare	474/15-16/MM/LT/CRPS/ DOC/M-5794/15	29.12.16

	P.O.Kankol 670 307					Dt 30.12.2015	
66	Prasanthan.K.P. Ponthayatt Puthiya Purayil House, P.O.Malappattam 670 631	Malapattam	Taliparamba	61/2	0.0971 Hectare	475/15-16/MM/LT/CRPS/ DOC/M-5623/15 Dt 30.12.2015	29.12.16
67	Aboobacker.T.K. S/o Mayan Musalyar, Thadathumkandi House, Elayannur, P.O.P.R.Nagar, Mattannur 670 702	Kolari	Iritty	21/1	0.0972 Hectare	476/15-16/MM/LT/CRPS/ DOC/M-5993/15 Dt 30.12.2015	29.12.16
68	Kunhiraman.B. S/o Kannan, Thappichal House, P.O.Kuttiattoor 670 602	Kalliad	Iritty	46/4	0.24 Acre	477/15-16/MM/LT/CRPS/ DOC/M-5355/15 Dt 11.01.2016	10.01.17
69	Varghese S/o Joseph, Nadapurath House, P.O.Kanichar 670 674	Kelakom	Iritty	Kpd 339/2	0.0971 Hectare	478/15-16/MM/LT/CRPS/ DOC/M-6030/15 Dt 11.01.2016	10.01.17
70	Shabu.K. S/o Gopi, Chamathayullaparambath House, P.O.Cheruvancheri 670 650	Manantheri	Thalasseri	32/4	0.1942 Hectare	479/15-16/MM/LT/CRPS/ DOC/M-5866/15 Dt 11.01.2016	10.01.17
71	Chandran.K.V. S/o Kunhambu, Kunnath Valappil House, P.O.Chengallayi 670 631	Nidiyenga	Taliparamba	29	0.0971 Hectare	480/15-16/MM/LT/CRPS/ DOC/M-5988/15 Dt 11.01.2016	10.01.17
72	Anil Kumar.P.P. S/o Kunhikannan,Parambath Porayi House, Elankode, Panoor 670 692	Manantheri	Thalasseri	297/1	0.0971 Hectare	481/15-16/MM/LT/CRPS/ DOC/M-6045/15 Dt 11.01.2016	10.01.17
73	Bhaskaran.K. S/o Nanu, Anneri Nivas, P.O.Muthiyenga	Manantheri	Thalasseri	297/1	0.0971 Hectare	482/15-16/MM/LT/CRPS/ DOC/M-6031/15 Dt 14.01.2016	13.01.17
74	Thooneri Raveendran S/o Narayanan, Thooneri Nivas, P.O.Kolari 670 702	Manantheri	Thalasseri	25/1	0.0971 Hectare	483/15-16/MM/LT/CRPS/ DOC/M-6093/15 Dt 14.01.2016	13.01.17
75	Raghunadhan.C. S/o Kelu Nambiar, Choorikkatt House, P.O.Kuttiyeri 670 141	Kuttiyeri	Taliparamba	22/8	0.0648 Hectare	484/15-16/MM/LT/CRPS/ DOC/M-5797/15 Dt 18.01.2016	17.01.17
76	Ajaya Kumar.V.P. S/o P.Krishnan, Payyaratta House,	Kuttiyeri	Taliparamba	22/5	0.0648 Hectare	485/15-16/MM/LT/CRPS/ DOC/M-5796/15	17.01.17

	P.O.Kangirangad 670 142					Dt 18.01.2016	
77	Raghavan.P. S/o Balan, Pulikkunnil House, P.O.Kurumathoor 670 142	Panniyoor	Taliparamba	31/1	0.0972 Hectare	486/15-16/MM/LT/CRPS/ DOC/M-33/16 Dt 18.01.2016	17.01.17
78	Hamsa.A.C. S/o V.V.Mammu, Arayakkeel House, Kalliad.P.O. 670 593	Kalliad	Iritty	46/4	0.0971 Hectare	487/15-16/MM/LT/CRPS/ DOC/M-201/16 Dt 18.01.2016	17.01.17
79	Santhosh.P.P. S/o Kannan, Puthiya Purayil House, P.O.Kayaralam 670 602	Nidiyenga	Taliparamba	5	0.0971 Hectare	488/15-16/MM/LT/CRPS/ DOC/M-143/16 Dt 18.01.2016	17.01.17
80	Sunil Kumar.K. S/o Raghavan Chandrathil, Sunil Nivas, Kuttiattoor 670 602	Kalliad	Iritty	23/1	0.0971 Hectare	489/15-16/MM/LT/CRPS/ DOC/M-5754/15 Dt 18.01.2016	17.01.17
81	Muneer Kaniyathodi S/o Kutty Hassan Kaniyathodi, Kadampuzha.P.O., Malappuram	Chuzhali	Taliparamba	223/2	0.0972 Hectare	490/15-16/MM/LT/CRPS/ DOC/M-4637/15 Dt 18.01.2016	17.01.17
82	Prakasan.C. S/o Damodharan,Chittayire House, P.O.Ettukudukka 670 521	Kankol	Taliparamba	163/3	0.0603 Hectare	491/15-16/MM/LT/CRPS/ DOC/M-6092/15 Dt 20.01.2016	19.01.17
83	Muhammed Kunhi Anjilath S/o Azainar,Anjilath House, P.O.Pilathara 670 501	Kadanappalli	Kannur	84/2A	0.0971 Hectare	492/15-16/MM/LT/CRPS/ DOC/M-5743/15 Dt 20.01.2016	19.01.17
84	Sunil Thomas S/o Thomas, Puthupparambil House, Randamkadav 670 706	Kooveri	Taliparamba	145/2 188	24 Cent	493/15-16/MM/LT/CRPS/ DOC/M-29/16 Dt 20.01.2016	19.01.17
85	Preman.K.A. S/o Nanu, Krishnajanam P.O.Manantheri 670 643	Manantheri	Thalasseri	41/2	0.0971 Hectare	494/15-16/MM/LT/CRPS/ DOC/M-200/16 Dt 25.01.2016	24.01.17
86	Raghavan Moolayi S/o Kannan, Chandroth House, P.O.Chittariparamba 670 650	Manantheri	Thalasseri	297/1	0.0971 Hectare	495/15-16/MM/LT/CRPS/ DOC/M-5747/15 Dt 25.01.2016	24.01.17
87	Sandeep.T., S/o Sreedharan, Sandeep Nivas, P.O.Kurumathoor 670 142	Kurumathoor	Taliparamba	43/2	0.0972 Hectare	496/15-16/MM/LT/CRPS/ DOC/M-5935/15 Dt 25.01.2016	24.01.17

88	Shaji.A.K. S/o Balan, Ambalathumkandi House, P.O.Muthiyenga 670 691	Puthur	Thalasseri	151/1	24 Cent	497/15-16/MM/LT/CRPS/ DOC/M-5987/15 Dt 25.01.2016	24.01.17
89	Shaji.V.V. S/o M.Ramachandran Atholimmal House, P.O.Manantheri 670 643	Puthur	Thalasseri	151/1	24 Cent	498/15-16/MM/LT/CRPS/ DOC/M-5944/15 Dt 25.01.2016	24.01.17
90	Namath Aneesh S/o Balan, Namath House, P.O.Thanakottoor, Kozhikode 675 509	Payam	Iritty	1/1	0.0971 Hectare	499/15-16/MM/LT/CRPS/ DOC/M-86/16 Dt 25.01.2016	24.01.17
91	Madhu.P.P. S/o Kanaran, Parayulla Parambath House, Kalluvalappu, P.O.Cheruvancheri 670 650	Puthur	Thalasseri	8	24 Cent	500/15-16/MM/LT/CRPS/ DOC/M-6097/15 Dt 25.01.2016	24.01.17
92	Sunil.P. S/o Sreedharan, Sandhya Bhavan P.O.Mattannur 670 702	Muzhakkunnu	Iritty	191/3	0.0971 Hectare	501/15-16/MM/LT/CRPS/ DOC/M-5828/15 Dt 25.01.2016	24.01.17
93	Biju.V. S/o Andi, Koovayil House, P.O.Kolari 670 702	Muzhakkunnu	Iritty	206	0.1943 Hectare	502/15-16/MM/LT/CRPS/ DOC/M-5793/15 Dt 25.01.2016	24.01.17
94	Manoj Kumar.K. S/o Damu, Karuvath House, P.O.Manantheri 670 643	Manantheri	Thalasseri	41/2	0.0971 Hectare	503/15-16/MM/LT/CRPS/ DOC/M-6027/15 Dt 27.01.2016	26.01.17
95	George Kutty S/o Abraham, Anchanikkal House, P.O.Eruvessi 670 632	Eruvessi	Taliparamba	57	24 Cent	504/15-16/MM/LT/CRPS/ DOC/M-27/16 Dt 27.01.2016	26.01.17
96	M.Ramachandran S/o Krishnan Nambiar, Krishna Nivas, Kotheri, P.O.Mattannur 670 702	Keezhallur	Thalasseri	39	0.1942 Hectare	505/15-16/MM/LT/CRPS/ DOC/M-5354/15 Dt 27.01.2016	26.01.17
97	James John S/o John, Nellimoottil House, P.O.Kanichar 670 674	Manathana	Iritty	57/1A	0.0971 Hectare	506/15-16/MM/LT/CRPS/ DOC/M-5565/15 Dt 27.01.2016	26.01.17
98	Narayanan.V.K. S/o Kannan.E.V. Kattil House, P.O.Mayyil	Kolacheri	Taliparamba	20	0.0971 Hectare	507/15-16/MM/LT/CRPS/ DOC/M-5683/15 Dt 03.02.2016	02.02.17
99	Anu Raj Rayaroth	Manantheri	Thalasseri	41/2	0.0971	508/15-16/MM/LT/CRPS/	02.02.17

	Nandanam, P.O.Chittariparamba 670 650				Hectare	DOC/M-6032/15 Dt 03.02.2016	
100	Raju.P. S/o Govindan, Kaithakkal House, P.O.Manantheri 670 643	Manantheri	Thalasseri	41/2	0.0971 Hectare	509/15-16/MM/LT/CRPS/ DOC/M-203/16 Dt 03.02.2016	02.02.17
101	Hamza.K.P. S/o Moideen, Kallothu Puthiya Purayil P.O.Chengallayi 670 631	Chuzhali	Taliparamba	383/4	0.0971 Hectare	510/15-16/MM/LT/CRPS/ DOC/M-204/16 Dt 03.02.2016	02.02.17
102	Assees.K.P. Nafiya Manzil, P.O.Mayyil 670 602	Pattannur	Thalasseri	40	0.0972 Hectare	511/15-16/MM/LT/CRPS/ DOC/M-28/16 Dt 03.02.2016	02.02.17
103	Ashraf.M. S/o Moideen, Maruthiyodankandi House, P.O.Payyavoor 670 631	Chuzhali	Taliparamba	383/2	0.0971 Hectare	512/15-16/MM/LT/CRPS/ DOC/M-5992/15 Dt 03.02.2016	02.02.17
104	Sudheep S/o Velayudhan, Kannamballi House, P.O.Kadampuzha, Malappuram 676 553	Chuzhali	Taliparamba	42/4	0.1943 Hectare	513/15-16/MM/LT/CRPS/ DOC/M-142/16 Dt 03.02.2016	02.02.17
105	Rajesh.C. S/o Kunhikannan, Chulleri House, P.O.Kolacheri 670 601	Kolacheri	Taliparamba	1	0.0971 Hectare	514/15-16/MM/LT/CRPS/ DOC/M-5680/15 Dt 03.02.2016	02.02.17
106	Vinodhan.T.V. S/o Kunhambu, Thamara Valappil House, P.O.Kangirode 670 592	Kalliad	Iritty	3/1	0.0971 Hectare	515/15-16/MM/LT/CRPS/ DOC/M-144/16 Dt 03.02.2016	02.02.17
107	V.C.Gangadharan S/o Narayanan, Rajani Nivas, P.O.Uliyil 670 702	Chavasseri	Iritty	104	0.0971 Hectare	516/15-16/MM/LT/CRPS/ DOC/M-26/16 Dt 03.02.2016	02.02.17
108	Sneharajan.P.S. S/o Sivan Pottayil Pottayil House, P.O.Ulikkal 670 705	Payyavoor	Taliparamba	60	0.0971 Hectare	517/15-16/MM/LT/CRPS/ DOC/M-5430/15 Dt 08.02.2016	07.02.17
109	Manoj Kumar.K. S/o Damu, Karuvath House, P.O.Manantheri 670 643	Payam	Iritty	1/1	0.0971 Hectare	518/15-16/MM/LT/CRPS/ DOC/M-393/16 Dt 08.02.2016	07.02.17
110	Sasi.M., S/o M.Balan, Kavullaparambath House,	Keezhallur	Thalasseri	119/3	0.0971 Hectare	519/15-16/MM/LT/CRPS/ DOC/M-438/16	07.02.17

	P.O.Keezhallur 670 612					Dt 08.02.2016	
111	Prakashan.P.V. S/o Kunhappa, Chandrathil Veedu, P.O.Kuttiattoor 670 602	Kalliad	Iritty	3/1	0.24 Acre	520/15-16/MM/LT/CRPS/ DOC/M-356/16 Dt 08.02.2016	07.02.17
112	Prakashan.P.V. S/o Kunhappa, Chandrathil Veedu, P.O.Kuttiattoor 670 602	Kalliad	Iritty	3/1	0.24 Acre	521/15-16/MM/LT/CRPS/ DOC/M-357/16 Dt 08.02.2016	07.02.17
113	Unnikrishnan S/o Govindan, Kuzhiloor Kavil House, Chepparamb, P.O.Nidiyenga 670 631	Nidiyenga	Taliparamba	1/1	24 Cent	522/15-16/MM/LT/CRPS/ DOC/M-5966/15 Dt 08.02.2016	07.02.17
114	G.Sudheer S/o Anandan, Anil Nivas, P.O.Mattannur 670 702	Kolari	Iritty	24	0.0971 Hectare	523/15-16/MM/LT/CRPS/ DOC/M-473/16 Dt 08.02.2016	07.02.17
115	Farhadh Kuppurayil S/o Abdu Rahiman, Baithul Rahma, Vadikkal , P.O.Madayi	Muzhakkunnu	Iritty	31/1A	0.0971 Hectare	524/15-16/MM/LT/CRPS/ DOC/M-395/16 Dt 08.02.2016	07.02.17
116	Riyas.K. S/o Abdulla Kutty.V.V. Rayaroth Rifina Manzil, P.O.Munderi 670 591	Nidiyenga	Taliparamba	49/1A1	0.0971 Hectare	525/15-16/MM/LT/CRPS/ DOC/M-4676/15 Dt 08.02.2016	07.02.17
117	Mithran.M.P. S/o Nanu, Mottapparambil House, P.O.Cheruvancheri 670 650	Puthoor	Thalasseri	7/1	9.71 Are	526/15-16/MM/LT/CRPS/ DOC/M-5650/15 Dt 10.02.2016	09.02.17
118	Rasheed.K. S/o Hamza, Koottukkan House, P.O.Taliparamba	Kooveri	Taliparamba	188	0.0971 Hectare	527/15-16/MM/LT/CRPS/ DOC/M-515/16 Dt 10.02.2016	09.02.17
119	Haridasan.M. S/o Govindan, Mallikkunnil House, P.O.Kandakkai 670 602	Kalliad	Iritty	46/4	0.0971 Hectare	528/15-16/MM/LT/CRPS/ DOC/M-5964/15 Dt 10.02.2016	09.02.17
120	Rajesh.N.V. S/o Vijayan, Nhandamare Veettil, P.O.Payyannur 670 307	Peringome	Taliparamba	110/1	0.0971 Hectare	529/15-16/MM/LT/CRPS/ DOC/M-5676/15 Dt 15.02.2016	14.02.17
121	Majeed.M.K. S/o Kunhipari Haji Manden Kunnummal House, P.O.Nidiyenga	Nidiyenga	Taliparamba	1/1	24 Cent	530/15-16/MM/LT/CRPS/ DOC/M-5989/15 Dt 15.02.2016	14.02.17

122	Biju.K. S/o Balan, Kuniyil Oorothummal House, P.O.Kathiroor 670 642	Kandamkunnu	Thalasseri	53/2	0.0971 Hectare	531/15-16/MM/LT/CRPS/ DOC/M-64/16 Dt 15.02.2016	14.02.17
123	Biju.K. S/o Balan, Kuniyil Oorothummal House, P.O.Kathiroor 670 642	Kandamkunnu	Thalasseri	53/2	0.0971 Hectare	532/15-16/MM/LT/CRPS/ DOC/M-75/16 Dt 15.02.2016	14.02.17
124	Rajesh.E., S/o Narayanan, V.K.House, P.O.Edayannur	Kalliad	Iritty	3/1	0.48 Acre	533/15-16/MM/LT/CRPS/ DOC/M-616/16 Dt 15.02.2016	14.02.17
125	Musthaffa.P. Pulukkool House, P.O.M.M.Bazar 670 306	Perinthatta	Taliparamba	45/1	0.0971 Hectare	534/15-16/MM/LT/CRPS/ DOC/M-5678/2016 Dt 22.02.2016	21.02.17
126	Hamza Chappan S/o Ibrahim.P.V., Chappan House, P.O.Eruvattur 670 502	Pariyaram	Taliparamba	10	24 Cent	535/15-16/MM/LT/CRPS/ DOC/M-5933/2015 Dt 22.02.2016	21.02.17
127	Anandhan Thacharon S/o Kelan, Anandam, Kallur, P.O.Mattannur 670 702	Chavasseri	Iritty	127/1	0.0971 Hectare	536/15-16/MM/LT/CRPS/ DOC/M-295/2016 Dt 22.02.2016	21.02.17
128	Joseph, S/o Thomas, Thundathil House, P.O.Iritty, Madathil 670 703	Payam	Iritty	1/1	0.0971 Hectare	537/15-16/MM/LT/CRPS/ DOC/M-563/2016 Dt 22.02.2016	21.02.17
129	Muhammed Rafeeque.M.K. S/o Yousaf.K.P. Moolakkattil House, P.O.Madayi	Ramanthali	Taliparamba	22	0.0971 Hectare	538/15-16/MM/LT/CRPS/ DOC/M-652/2016 Dt 24.02.2016	23.02.17
130	Shobin Koroth S/o Varghese George, Payattukalayil House, P.O.Palavayal, Kasargod	Peringome	Taliparamba	110/1	0.0971 Hectare	539/15-16/MM/LT/CRPS/ DOC/M-5854/2016 Dt 24.02.2016	23.02.17
131	Sushobh Kongatt S/o K.Sukumaran, Sushanth Nivas, P.O.Sivapuram 670 702	Payam	Iritty	1/1	0.0971 Hectare	540/15-16/MM/LT/CRPS/ DOC/M-666/2016 Dt 24.02.2016	23.02.17
132	Abdu Rahiman. S/o Muhammed Haji, Kadavath Purayil House, P.O.Payyannur 670 307	Peringome	Taliparamba	117 108/1	0.0971 Hectare	541/15-16/MM/LT/CRPS/ DOC/M-5746/2016 Dt 24.02.2016	23.02.17
133	Damodharan . P	Irikkur	Taliparamba	146/2	48 cent	542/15-16/MM/LT/CRPS	11.01.17

	s/o Raghavan, Vannathankandi House, P.O.Peruvalathuparamba 670 593					DOC/M-729/2016 Dt. 29.02.2016	
134	Muhammedali M.V.P S/O T.K Hamsa Haji, M.P.V. House P.O. Thekkumbad 670301	Peringome	Thaliparamba	21/2	0.0971 Hectare	543/15-16/MM/LT/CRPS/ DOC/M-5679/2015 Dt. 29.02.2016	28.02.17
135	Shaji. C s/o Kumaran, Chembacheri House, P.O. Peruvalathuparambe	Malapattam	Thaliparamba	84/1	0.084 Hectare	544/15-16/MM/LT/CRPS DOC/M-392/2016 Dt. 29.02.2016	28.02.17
136	Prasad. K.V. s/o Bhaskran, Kizhakkiniyil House P.O. Kuttiyatoor	Sreekandapuram	Thaliparamba	49/2	0.0971 Hectare`	545/15-16/MM/LT/CRPS/ DOC/M-6029/2016 Dt. 29.02.2016	28.02.17
137	Damodharan . K.K s/o Krishnan Nambiar, Kuttiyatt Keloth P.O Cherikkode	Malapattam	Thaliparamba	694/1	0.095 Hectare	546/15-16/MM/LT/CRPS/ DOC/M-294/2016 Dt. 29-02-2016	28.02.17
138	Pramod. K.V s/o Govindan , Kalathile Veettil Thappichangad, P.O. Neduvnad	Thillenkeri	Iritty	27/2	0.0819 Hectare	547/15-16MM/LT/CRPS/ DOC/M-6028/2015 Dtd. 29.02.2016	28.02.17
139	Assen. M.P MangatPuthiyapurayil House, P.O Malappattam (Via) Sreekandapuram.	Kurumathoor	Thaliparamba	159/6	0.0971 Hectare	548/15-16/MM/LT/CRPS/ DOC/M-3756/2015 Dtd.02.03.2016	01.03.17
140	Khalid .N s/o M. SaidHaji, Pazhapurayil House, P.O. P.R. Nagar 670702	Kolari	Iritty	21/1	0.0971 Hectare	549/15-16/MM/LT/CRPS/ DOC/M-516/2016 Dtd. 02.03.2016	01.03.17
141	Issmail .k s/o Muhammedkunhi Palakkal Puthiya Purayil P.O. Koshavan Vayal	Kalliad	Iritty	46/4	0.0971 Hectare	550/15-16/MM/LT/CRPS/ DOC/M - 410/2016 Dt.08-03.2016	07.03.17
142	Saleem.k s/o Koyakutty, Cheyum vila Veedu P.O. Punaloor, Kollam Jilla	Kalliad	Iritty	23/1	0.24 Acre	551/15-16/MM/LT/CRPS/ DOC/M-474/2016 Dtd. 08.03.2016	07.03.17
143	Bhaskran.V s/o. P. Krishnan,Varayil House, P.O. Koshavan Vayal	Kalliad	Iritty	46/4	0.48 Acre	552/15-16/MM/LT/CRPS DOC/M- 562/2016 Dtd. 09.03.2016	08.03.17
144	Pradeep.K.	Kandamkunnu	Iritty	53/2	0.0971	553/15-16/MM/LT/CRPS/	08.03.17

	s/o Nanu, Sreejima Nivas, P.O. Ayithara, Mambaram. 670643				Hectare	DOC/M-780/2016 Dtd. 09.03.2016	
145	Vasudevan, S/O Kelan, Parakkandi House, P.O. P.R. Nagar 670702	Chavasseri	Iritty	127/1	0.0971 Hectare	554/15-16/MM/LT/CRPS/ DOC/M-673/2016 Dtd. 09.03.2016	08.03.17
146	Sureshan. T.T Kunhambu. P.P, Thayyil Thavorath House, P.O. Kuttiyatoor	Sreekandapuram	Thaliparamba	50/3	0.0971 Hectare	555/15-16/MM/LT/CRPS/ DOC/M-472/2016 Dtd. 14.03.2016	13.03.17
147	Joy Joseph s/o Joseph, Mullapalli House, P.O. Cherikode, 670631	Nediyenga	Thaliparamba	37/1A1	24 Cent	556/15-16/MM/LT/CRPS/ DOC/M-570/2016 Dtd. 16.03.2016	15.03.17
148	Joy Joseph s/o Joseph, Mullapalli House, P.O. Cherikode, 670631	Nediyenga	Thaliparamba	42	24 Cent	557/15-16/MM/LT/CRPS/ DOC/M-570/2016 Dtd. 16.03.2016	15.03.17
149	Mathew E.P, s/o. Philip, Illikkal House, P.O Chemberi	Nediyenga	Thaliparamba	37/1A1	24 Cent	558/15-16/MM/LT/CRPS/ DOC/M-569/2016 Dtd. 16.03.2016	15.03.17
150	Muhammed Suliman. A s/o. Kunhi Muhammed, Alangadan House ,P.O Chegootour Malappuram , 676503.	Kalliyad	Iritty	23/1	0.1942 Hectare	559/15-16/MM/LT/CRPS/ DOC/M-794/2016 Dtd. 16.03.16	15.03.17
151	Janardhanan . P.V Sreeragam House, Mruthenithatte P.O. Koyyam. 670142	Panniyoor	Thaliparamba	135/2	0.0972 Hectare	560/15-16/MM/LT/CRPS/ DOC/M-3674/2015 Dt.16.03.2016	15.03.17
152	Kunhiraman Nair. K s/o Krishnan Nair, Kanakkancheri House, P.O Chalakode 670307	Kangol	Thaliparamba	96/1	0.0971 Hectare	561/15-16/MM/LT/CRPS/ DOC/M-6099/2015 Dtd. 16.03.2016	15.03.17
153	Puthan Valappil Dhanesh s/o Narayanan, Puthan Valappil House P.O Nediyenga 670631	Nediyenga	Thaliparamba	5	24 Cent	562/15-16/MM/LT/CRPS DOC/M- 6099/2015 Dtd. 16.03.2016	15.03.17
154	Shabeer. K s/o Abdul Salam Haji, Kalathintavida House P.O. Sreekandapuram , 670631	Nediyenga	Thaliparamba	1/1	0.24 Acare	563/15-16/MM/LT/CRPS/ DOC/M-202/2016 Dtd. 21.03.2016	20.03.17
155	Radha. K w/o Prabhakaran, Prajosh Nivas	Kandamkunnu	Thalassery	53/2	0.1942 Hectare	564/15-16/MM/LT/CRPS/ DOC/M-5800/2015	20.03.17

	Ayithara , Mambaram. 670643					Dtd. 21.03.2016	
156	Haridas. V s/o. Andi Kathayi, Koovayil House P.O. Kolari 670702	Panniyoor	Iritty	27/5	0.0971 Hectare	565/15-16/MM/LT/CRPS/ DOC/M-997/16 Dtd. 23.03.2016	22.03.17
157	Sureshkumar . P.P S/O. Kunhiraman. U, Puthiyapurayil House, P.O. Aravanchal. 670307	Perinthatta	Thaliparamba	16	0.0971 Hectare	566/15-16/MM/LT/CRPS/ DOC/M-663/16 Dtd. 23.03.2016	22.03.17
158	K.P. Balakrishnan Ushas, s/o Kunhiraman, P.O Kuttiyatoor 670602	Koodali	Thalassery	1/1A	0.097 Hectare	567/15-16/MM/LT/CRPS/ DOC/M-1062/16 Dtd. 23.03.2016	22.03.17
159	Chandrashekar. K.P s/o Govindhan Nambiar, Pratheeksha P.O. Pattanoor	Payam	Iritty	52	0.0971 Hectare	568/15-16/MM/LT/CRPS DOC/M-1013/16 Dtd. 28.03.2016	27.03.17
160	Manoharan.U s/o. Kannan, Urumi House, P.O. Kuttiyatoor ,670602	Chuzhali	Thaliparamba	221/1	0.0931 Hectare	569/15-16/MM/LT/CRPS DOC/M-394/16 Dtd. 30.03.2016	29.03.17
161	N.Binu S/o Janardhanan, Nilankol House, P.O.Kalliasseri	Perinthatta	Taliparamba	18/1	0.0971 Hectare	01/16-17/MM/LT/CRPS DOC/M-5990/15 Dtd. 04.04.2016	03.04.17
162	Varghese Joseph S/o Joseph, Chiratta Velikkuzhi House, P.O.Kelakom 670 674	Kelakom	Iritty	Kpd 298/1	0.0971 Hectare	02/16-17/MM/LT/CRPS DOC/M-5821/15 Dtd. 06.04.2016	05.04.17
163	C.Manoharan S/o Kannan, Chappadi House, P.O.Kalliad	Kalliad	Iritty	46/4	0.0971 Hectare	03/16-17/MM/LT/CRPS DOC/M-3929/15 Dtd. 11.04.2016	10.04.17
164	Kamarudheen.C.P. S/o Ahammed, Akkarammal House, P.O.P.R.Nagar 670 702	Chavasseri	Iritty	104	0.0971 Hectare	04/16-17/MM/LT/CRPS DOC/M-1188/16 Dtd. 18.04.2016	17.04.17
165	E.P.Narayanan, S/o Anandan Nambiar, Puthalath House, P.O.Kanoor 670 542	Panniyoor	Taliparamba	1/1A3	24 Cent	05/16-17/MM/LT/CRPS DOC/M-802/16 Dtd. 20.04.2016	19.04.17
166	Saji Mon S/o Raghavan, Pulimoottil Veedu, P.O.Koyyam	Chuzhali	Taliparamba	332/3	0.0971 Hectare	06/16-17/MM/LT/CRPS DOC/M-727/16 Dtd. 20.04.2016	19.04.17

167	Sunil Kumar.C.V. S/o Kundan Nambiar, Chelora Veettil, P.O.Koyyam 670 142	Chuzhali	Taliparamba	17/1	0.0972 Hectare	07/16-17/MM/LT/CRPS DOC/M-804/16 Dtd. 20.04.2016	19.04.17
168	Sreelesh.K.V. S/o Sreedharan, Kunhuvalappil House, Adicheri, P.O.Malappattam 670 631	Kalliad	Iritty	46/4	0.24 Acre	08/16-17/MM/LT/CRPS DOC/M-846/16 Dtd. 20.04.2016	19.04.17
169	Manoharan.C. S/o Narayanan, Chodon House, Kodallor, P.O.Nanicheri	Chuzhali	Taliparamba	32/2	0.0972 Hectare	09/16-17/MM/LT/CRPS DOC/M-1161/16 Dtd. 25.04.2016	24.04.17
170	Siddique.P. S/o Ibrahim, Ambiloth Puthiya Purayil P.O.Kurumathoor 670 142	Chuzhali	Taliparamba	328/2	0.0971 Hectare	10/16-17/MM/LT/CRPS DOC/M-730/16 Dtd. 25.04.2016	24.04.17
171	Muhammed Ans.C., S/o Moidu, Suhailas, P.O.Kuttiyeri 670 142	Chuzhali	Taliparamba	340/1	0.0972 Hectare	11/16-17/MM/LT/CRPS DOC/M-1060/16 Dtd. 25.04.2016	24.04.17
172	Abdul Rasaque.M. S/o Aboobacker, Mavukandi House, P.O.Cherupazhassi 670 601	Kalliad	Iritty	3/1	0.24 Acre	12/16-17/MM/LT/CRPS/ DOC/M-934/16 Dtd. 25.04.2016	24.04.17
173	Joshi, S/o Thomas, Akkakkunnel House, P.O.Kosavanvayal	Payyavoor	Taliparamba	1/1	0.1943 Hectare	13/16-17/MM/LT/CRPS/ DOC/M-3878/16 Dtd. 27.04.2016	26.04.17
174	Sathyan.P.V. S/o Bhaskaran, Puthiya Veettil, P.O.Kosavanvayal 670 593	Kalliad	Iritty	1	0.24 Acre	14/16-17/MM/LT/CRPS/ DOC/M-948/16 Dtd. 02.05.2016	01.05.17
175	Abdul Maharroof.C., S/o Muhammed Ali, Aladankandi Puthiya Purayil P.O.Cherupazhassi 670 601	Payyavoor	Taliparamba	1/1	0.1922 Hectare	15/16-17/MM/LT/CRPS/ DOC/M-1762/16 Dtd. 02.05.2016	01.05.17
176	Santhosh.V.V. S/o Govindan, Devi Savidam Kolappa, P.O.Pattannur	Kalliad	Iritty	3/1	0.0971 Hectare	16/16-17/MM/LT/CRPS/ DOC/M-352/16 Dtd. 02.05.2016	01.05.17
177	Rasheed Pakkattumolel Aliyar, S/o Aliyar, Pakkattumolel House, P.O.Eramallur, Ernakulam Dist. 686 691	Kalliad	Iritty	1	0.0972 Hectare	17/16-17/MM/LT/CRPS/ DOC/M-1061/16 Dtd. 02.05.2016	01.05.17
178	R.K.Sudhakaran	Padiyoor	Iritty	112/3	0.0971	18/16-17/MM/LT/CRPS/	01.05.17

	S/o M.Gopalan, Dwaraka Chalode, P.O.Edayannur 670 595				Hectare	DOC/M-1594/16 Dtd. 02.05.2016	
179	R.K.Sudhakaran S/o M.Gopalan, Dwaraka Chalode, P.O.Edayannur 670 595	Padiyoor	Iritty	112/3	0.0971 Hectare	19/16-17/MM/LT/CRPS/ DOC/M-1593/16 Dtd. 02.05.2016	01.05.17
180	Kunhappa.K. S/o Kunhambu Kokkadan House, P.O.Nidiyenga 670 631	Nediyinga	Taliparamba	63/1A	0.0971 Hectare	20/16-17/MM/LT/CRPS/ DOC/M-1186/16 Dtd. 04.05.2016	03.05.17
181	Babu.P.P. S/o Balakrishnan, Padiyath Parambil House, P.O.Nidiyenga 670 631	Nidiyenga	Taliparamba	18/1C	0.0971 Hectare	21/16-17/MM/LT/CRPS/ DOC/M-1187/16 Dtd. 04.05.2016	03.05.17
182	Manoj Mathew S/o Mathew, Kochithara House, P.O.Chettiyampamb	Nuchiyad	Iritty	1	0.0971 Hectare	22/16-17/MM/LT/CRPS/ DOC/M-1862/16 Dtd. 04.05.2016	03.05.17
183	Prasad Cheran Veettil, S/o Padmanabhan, Cheran Veettil, P.O.Nidiyenga 670 631	Nidiyenga	Taliparamba	41	24 Cent	23/16-17/MM/LT/CRPS/ DOC/M-1764/16 Dtd. 04.05.2016	03.05.17
184	Gopalan.V.O. S/o Odhenan Vayakkeel, Vayakkeel House, P.O.Kuttiyeri 670 142	Panapuzha	Kannur	1/1A	0.0971 Hectare	24/16-17/MM/LT/CRPS/ DOC/M-5748/15 Dtd. 04.05.2016	03.05.17
185	Manoharan.P.P.V., S/o T.V.Govindan Puthiya Purayil Vengalodan, P.O.Chuzhali 670 141	Nidiyenga	Taliparamba	5	0.052 Hectare	25/16-17/MM/LT/CRPS/ DOC/M-1096/16 Dtd. 04.05.2016	03.05.17
186	Rajesh.E., S/o Narayanan, V.K.House, P.O.Edayannur 670 595	Kalliad	Iritty	3/1	0.1942 Hectare	26/16-17/MM/LT/CRPS/ DOC/M-1839/16 Dtd. 04.05.2016	03.05.17
187	Saneesh.K. S/o P.K.Kannan, Manasam, Vaduvankulam, P.O.Kuttiattoor 670 602	Kalliad	Iritty	17	0.1942 Hectare	27/16-17/MM/LT/CRPS/ DOC/M-1825/16 Dtd. 09.05.2016	08.05.17
188	Muhamed Basheer.K.P. S/o Abdulla, Najma Manzil, Parippumkadavu, P.O.Malappattam 670 631	Chavasseri	Iritty	70/3	0.0971 Hectare	28/16-17/MM/LT/CRPS/ DOC/M-1718/16 Dtd. 09.05.2016	08.05.17
189	Mathew, S/o Varghese, Athirthemukkil House,	Nidiyenga	Taliparamba	5	0.0974 Hectare	29/16-17/MM/LT/CRPS/ DOC/M-1766/16	08.05.17

	P.O.Chembanthotty 670 631					Dtd. 09.05.2016	
190	Paulose, S/o Varky, Paramban House, P.O.Manathana 670 674	Payyavoor	Taliparamba	1/1	0.0971 Hectare	30/16-17/MM/LT/CRPS/ DOC/M-1763/16 Dtd. 09.05.2016	08.05.17
191	Thomas Vettiathanath S/o Chacko, Vettiathanath House, P.O.Paisakkari 670 633	Payyavoor	Taliparamba	1/1	0.0688 Hectare	31/16-17/MM/LT/CRPS/ DOC/M-1877/16 Dtd. 09.05.2016	08.05.17
192	Ratheesan S/o Vijayan, Sariga Nivas, P.O.Kuttiattoor 670 602	Kalliad	Iritty	3/1	24 Cent	32/16-17/MM/LT/CRPS/ DOC/M-1977/16 Dtd. 11.05.2016	10.05.17
193	Madhusoodhanan.K.V. S/o Kannan Nair, Kandoth Veedu, P.O.Chelukunnu 670 301	Pariyaram	Taliparamba	14/1A	0.0971 Hectare	33/16-17/MM/LT/CRPS/ DOC/M-1595/16 Dtd. 11.05.2016	10.05.17
194	Venugopalan. S/o Krishnan Nambiar, Naduvilakandy House, P.O.Uliyil 670 702	Chavasseri	Iritty	115/1	0.0971 Hectare	34/16-17/MM/LT/CRPS/ DOC/M-1886/16 Dtd. 11.05.2016	10.05.17
195	Ramachandran.C.V. S/o Gopalan, Valiya Valappil House, P.O.Nidiyenga 670 631	Nidiyenga	Taliparamba	42	0.0971 Hectare	35/16-17/MM/LT/CRPS/ DOC/M-1767/16 Dtd. 11.05.2016	10.05.17
196	Prathapa Chandran.C.V. S/o Krishnan Nambiar, Reena Nivas, P.O.Punnad 670 703	Keezhur	Iritty	173	0.0971 Hectare	36/16-17/MM/LT/CRPS/ DOC/M-1619/16 Dtd. 13.05.2016	12.05.17
197	George S/o Thomas, Mukkattu Kavungal P.O.Adakkathode 670 674	Nuchiyad	Iritty	1	0.0971 Hectare	37/16-17/MM/LT/CRPS/ DOC/M-1876/16 Dtd. 18.05.2016	17.05.17
198	Abdulla.M. S/o Ibrahim, Mannan House, P.O.Taliparamba 670 141	Nidiyenga	Taliparamba	41	0.0971 Hectare	38/16-17/MM/LT/CRPS/ DOC/M-5855/16 Dtd. 18.05.2016	17.05.17
199	Pramod.P. S/o Narayanan Padichal Illath Valappil House, P.O.Kandakkai 670 602	Nidiyenga	Taliparamba	13/1	0.0971 Hectare	39/16-17/MM/LT/CRPS/ DOC/M-1841/16 Dtd. 23.05.2016	22.05.17
200	A.K.Rajendran S/o Kumaran Coolie	Payam	Iritty	3/1B	0.0971 Hectare	40/16-17/MM/LT/CRPS/ DOC/M-2103/16	24.05.17

	Olakkal House, P.O.Maloor 670 702					Dtd. 25.05.2016	
201	Ratheesh.E.P. S/o Kunhiraman, Sreeja Nivas, P.O.Kuttiattoor 670 602	Kalliad	Iritty	3/1	24 Cent	41/16-17/MM/LT/CRPS/ DOC/M-2072/16 Dtd. 30.05.2016	29.05.17
202	Thomas P.J. S/o P.Devassia Joseph. Puthuparambil House, P.O.Keezhpalli 670 704	Payyavoor	Taliparamba	1/1	0.0971 Hectare	42/16-17/MM/LT/CRPS/ DOC/M-2195/16 Dtd. 01.06.2016	31.05.17
203	Shaji Joseph S/o Joseph, Chemplanikkal House, P.O.Randamkadav 670 706	Payyavoor	Taliparamba	1/1	0.0971 Hectare	43/16-17/MM/LT/CRPS/ DOC/M-2196/16 Dtd. 01.06.2016	31.05.17
204	Sushobh Kongatt S/o K.Sukumaran, Sushanth Nivas, P.O.Sivapuram 670 702	Payam	Iritty	3/1B	0.0972 Hectare	44/16-17/MM/LT/CRPS/ DOC/M-1889/16 Dtd. 01.06.2016	31.05.17
205	Suneesh.N. S/o Gopi, Pallikkandi House, P.O.Kottayampoyil 670 691	Payyavoor	Taliparamba	1/1	0.0971 Hectare	45/16-17/MM/LT/CRPS/ DOC/M-2020/16 Dtd. 01.06.2016	31.05.17
206	Sakkeer.P.I. S/o Ibrahim, Parambil House, P.O.Nellikuzhi, Ernakulam Dt.	Kalliad	Iritty	46/4	24 Cent	46/16-17/MM/LT/CRPS/ DOC/M-2231/16 Dtd. 06.06.2016	05.06.17
207	Rameshan.K. S/o Koran, Kadankandi House, P.O.Thottada	Kalliad	Iritty	46/4	0.24 Acre	47/16-17/MM/LT/CRPS/ DOC/M-2236/16 Dtd. 06.06.2016	05.06.17
208	Sunil Kunhiraman S/o Kundiraman Ambalavelil House, P.O.Payam 670 704	Kalliad	Iritty	23/1	0.24 Acre	48/16-17/MM/LT/CRPS/ DOC/M-2229/16 Dtd. 08.06.2016	07.06.17
209	Bava S/o Ibrahim Pareeth, Kanhirakkatt, P.O.Moovattupuzha, Ernakulam Dt. 686 661	Kalliad	Iritty	46/4	0.0971 Hectare	49/16-17/MM/LT/CRPS/ DOC/M-2230/16 Dtd. 08.06.2016	07.06.17
210	Muneer.K. S/o N.M.Ibrahim Kutty, Khadeeja Manzil P.O.Pettikkundu 671 313	Alappadamb	Taliparamba	459/1	0.0971 Hectare	50/16-17/MM/LT/CRPS/ DOC/M-1765/16 Dtd. 08.06.2016	07.06.17
211	Gopalan.T.V. S/o Kunhiraman, Thoduvalan House, P.O.Malappattam	Kalliad	Iritty	1	0.24 Acre	51/16-17/MM/LT/CRPS/ DOC/M-2233/16 Dtd. 08.06.2016	07.06.17

212	Saneesh.K. S/o P.K.Kannan, Manasam, Vaduvankulam, P.O.Kuttiattoor 670 602	Kalliad	Iritty	17	0.1942 Hectare	52/16-17/MM/LT/CRPS/ DOC/M-2343/16 Dtd. 13.06.2016	12.06.17
213	Rajendran.E.K. S/o Anandan, Korothumchal House, P.O.Karaperavoor 670 702	Payam	Iritty	114/1B1A	0.0971 Hectare	53/16-17/MM/LT/CRPS/ DOC/M-2140/16 Dtd. 13.06.2016	12.06.17
214	V.V.Narayanan S/o K.P.Koran, Aiswarya, P.O.Ramanthali 670 308	Kankol	Taliparamba	253/4	0.0971 Hectare	54/16-17/MM/LT/CRPS/ DOC/M-2225/16 Dtd. 15.06.2016	14.06.17
215	Ratheesh Philip S/o Paili, Vanjiparayil House, P.O.Nellikutty 670 632	Eruvessi	Taliparamba	64/2	0.0971 Hectare	55/16-17/MM/LT/CRPS/ DOC/M-207/16 Dtd. 15.06.2016	14.06.17
216	Santhosh.V.V. S/o Krishnan Nambiar, Velluva Veettil, P.O.Kaithapram 670 631	Eruvessi	Taliparamba	109/1A	0.0971 Hectare	56/16-17/MM/LT/CRPS/ DOC/M-1462/16 Dtd. 15.06.2016	14.06.17
217	Anil Philip S/o Philip, Kandamkariyil House, P.O.Chandanakkampara, Payyavoor 670 633	Payyavoor	Taliparamba	1/1	0.0971 Hectare	57/16-17/MM/LT/CRPS/ DOC/M-2311/16 Dtd. 15.06.2016	14.06.17
218	Prakasan.P.V. S/o Kunhappa, Chandrathil House, P.O.Kuttiattoor 670 602	Kalliad	Taliparamba	3/1	0.48 Acre	58/16-17/MM/LT/CRPS/ DOC/M-1851/16 Dtd. 15.06.2016	14.06.17
219	Prakasan.P.V. S/o Kunhappa, Chandrathil House, P.O.Kuttiattoor 670 602	Kalliad	Taliparamba	3/1	0.48 Acre	59/16-17/MM/LT/CRPS/ DOC/M-1850/16 Dtd. 20.06.2016	19.06.17
220	K.Dinesh S/o Raman, Kani House, P.O.Mangattidam 670 643	Kolari	Iritty	97/1	0.0971 Hectare	60/16-17/MM/LT/CRPS/ DOC/M-1978/16 Dtd. 21.06.2016	20.06.17
221	Manoj Kumar.K. S/o K.Damu, Karuvath House, P.O.Manantheri 670 643	Payam	Iritty	1/1	0.0971 Hectare	61/16-17/MM/LT/CRPS/ DOC/M-2443/16 Dtd. 22.06.2016	21.06.17
222	Thooneri Raveendran S/o Narayanan, Thooneri Nivas, P.O.Kolari 670 702	Manantheri	Thalassery	25/1	0.0971 Hectare	62/16-17/MM/LT/CRPS/ DOC/M-2360/16 Dtd. 22.06.2016	21.06.17
223	Noushad Kizhuvapatt	Kalliad	Iritty	23/1	0.0971	63/16-17/MM/LT/CRPS/	21.06.17

	S/o Saithali Kutty, Kizhuvapatt House, P.O.Kadampuzha, Malappuram Dt. 676 553				Hectare	DOC/M-2188/16 Dtd. 22.06.2016	
224	A.P.Raveendran S/o Kunhiraman, Aromal Nivas, P.O.Pavanoormotta 670 602	Nidiyenga	Taliparamba	42	24 Cent	64/16-17/MM/LT/CRPS/ DOC/M-1647/16 Dtd. 22.06.2016	21.06.17
225	Emmanuel.A.J. S/o Joseph, Attangattil House, P.O.Nellikutty 670 632	Payyavoor	Taliparamba	1/1	0.0971 Hectare	65/16-17/MM/LT/CRPS/ DOC/M-2226/16 Dtd. 22.06.2016	21.06.17
226	Moideen.P.P. S/o Abdul Khader, Pullangiyottu Puthiya Purayil House, P.O.Narath 670 603	Koodali	Thalassery	1/1A	0.0971 Hectare	66/16-17/MM/LT/CRPS/ DOC/M-2240/16 Dtd. 22.06.2016	21.06.17
227	Nisar.C. S/o Hussain Kutty, C.C.House, P.O.Irikkur 670 593	Payam	Iritty	1/1	0.0971 Hectare	67/16-17/MM/LT/CRPS/ DOC/M-2469/16 Dtd. 22.06.2016	21.06.17
228	Dineshan.R.V. S/o Sreedharan, Iravadham, P.O.Kadamboor	Kalliad	Iritty	23/1	0.24 Acre	68/16-17/MM/LT/CRPS/ DOC/M-2532/16 Dtd. 27.06.2016	26.06.17
229	Babu.P. S/o Chindan, Padingaprath House, P.O.Kunhimangalam 670 309	Perinthatta	Taliparamba	45/1	0.0971 Hectare	69/16-17/MM/LT/CRPS/ DOC/M-2425/16 Dtd. 27.06.2016	26.06.17
230	M.Ramachandran S/o Krishnan Nambiar, Krishnalayam P.O.Mattannur 670 702	Keezhallur	Thalassery	39	0.0971 Hectare	70/16-17/MM/LT/CRPS/ DOC/M-2359/16 Dtd. 27.06.2016	26.06.17
231	P.Balan S/o Chekki Kannan, Santhi Nivas, P.O.Muringeri 670 612	Kolari	Iritty	20	0.0971 Hectare	71/16-17/MM/LT/CRPS/ DOC/M-2487/16 Dtd. 27.06.2016	26.06.17
232	Laser.K.M. S/o Mathew, Kurisingal House, P.O.Sreekandapuram 670 633	Sreekandapuram	Taliparamba	163/1	0.0971 Hectare	72/16-17/MM/LT/CRPS/ DOC/M-2363/16 Dtd. 27.06.2016	26.06.17
233	Nisar.M.V. S/o Abdul Khader, Maniyoth House, P.O.Malappattam 670 631	Malappattam	Taliparamba	43	0.0971 Hectare	73/16-17/MM/LT/CRPS/ DOC/M-2228/16 Dtd. 27.06.2016	26.06.17
234	Sunil Kumar.K. S/o Raghavan, Sunil Nivas,	Kalliad	Iritty	23/1	0.0971 Hectare	74/16-17/MM/LT/CRPS/ DOC/M-2300/16	26.06.17

	P.O.Kuttiattoor 670 602					Dtd. 27.06.2016	
235	Abdul Khader.K.R. S/o Khalid.P.K. K.R.House, P.O.Irikkur 670 593	Kalliad	Iritty	46/4	24 Cent	75/16-17/MM/LT/CRPS/ DOC/M-2505/16 Dtd. 27.06.2016	26.06.17
236	Rajesh.N.V. S/o Vijayan, Nghanamare Veettil P.O.Payyannur 670 307	Peringome	Taliparamba	117	0.0971 Hectare	76/16-17/MM/LT/CRPS/ DOC/M-2466/16 Dtd. 27.06.2016	26.06.17
237	K.K.Rajeevan, S/o Govindan, Govindam, A.K.G.Nagar, P.O.Mattannur 670 702	Chavasseri	Iritty	104	0.0971 Hectare	77/16-17/MM/LT/CRPS/ DOC/M-2229/16 Dtd. 27.06.2016	26.06.17
238	M.P.Madhsoodhanan S/o Narayanan, Edacheri Veedu, P.O.Ezhilode 670 309	Kankol	Taliparamba	253/5	0.0408 Hectare	78/16-17/MM/LT/CRPS/ DOC/M-2197/16 Dtd. 27.06.2016	26.06.17
239	Shanoj.V. S/o Ramakrishnan.C.P. Shanoj Nivas, P.O.Elambara 670 595	Padiyoor	Iritty	125/6	24 Cent	79/16-17/MM/LT/CRPS/ DOC/M-2190/16 Dtd. 27.06.2016	26.06.17
240	N.K.Manoj Kumar S/o Krishnan Kutty, Kripama P.O.Nirmalagiri 670 701	Manantheri	Thalassery	25/1	0.0971 Hectare	80/16-17/MM/LT/CRPS/ DOC/M-2361/16 Dtd. 27.06.2016	26.06.17
241	Ganesh.K. S/o Kannan, Thayyil Valappil House, P.O.Kayaralam 670 602	Sreekandapuram	Taliparamba	161/2	0.0971 Hectare	81/16-17/MM/LT/CRPS/ DOC/M-2227/16 Dtd. 27.06.2016	26.06.17
242	Sudheesh Kumar.K. S/o Balakrishnan Kaden, Balakrishna, Cherukunnu, P.O.Mottammal 670 331	Eramam	Taliparamba	443	0.0971 Hectare	82/16-17/MM/LT/CRPS/ DOC/M-1412/16 Dtd. 27.06.2016	26.06.17
243	Anil Kumar.M. S/o Anandan, Koymeth House, P.O.Kayaralam 670 602	Malappattam	Taliparamba	176/5	0.0971 Hectare	83/16-17/MM/LT/CRPS/ DOC/M-2120/16 Dtd. 27.06.2016	26.06.17
244	Kunhikannan.P.P. S/o Koran, Sivam Bhavan P.O.Puthoor 670 692	Puthoor	Thalassery	2/1	9.71 Are	84/16-17/MM/LT/CRPS/ DOC/M-2071/16 Dtd. 27.06.2016	26.06.17
245	Saseendran.V.C. S/o V.Velayudhan, Valiyaparambath Chalil House, P.O.Pavandoor, Kozhikode 673 613	Kalliad	Iritty	17	0.1942 Hectare	85/16-17/MM/LT/CRPS/ DOC/M-2496/16 Dtd. 27.06.2016	26.06.17

246	Prajil.K. S/o M.Prabhakaran, Prajosh House, P.O.Ayitharambaram 670 643	Kandamkunnu	Thalassery	53/2	0.0971 Hectare	86/16-17/MM/LT/CRPS/ DOC/M-2187/16 Dtd. 27.06.2016	26.06.17
247	Aneesh.M. S/o Govindan, Mavilakkandi House, P.O.Peruvalathuparamba 670 593	Kalliad	Iritty	1	0.0971 Hectare	87/16-17/MM/LT/CRPS/ DOC/M-2467/16 Dtd. 29.06.2016	28.06.17
248	Pradeep Kumar.P.K. S/o Narayanan, Thejus, Kuzhiloor, P.O.Padiyoor 670 703	Sreekandapuram	Taliparamba	234	0.1939 Hectare	88/16-17/MM/LT/CRPS/ DOC/M-2427/16 Dtd. 29.06.2016	28.06.17
249	Saneesh Kumar.K. S/o Narayanan, Kaiprath House, P.O.Malappattam 670 631	Sreekandapuram	Taliparamba	236	0.0971 Hectare	89/16-17/MM/LT/CRPS/ DOC/M-2504/16 Dtd. 29.06.2016	28.06.17
250	President Kannur Kallukothu Thozhilali Kshema Sahakarana Sangam Ltd., Dhermasala, P.O.Parasinikadavu 670 563	Kuttiyeri	Taliparamba	18/2	0.0972 Hectare	90/16-17/MM/LT/CRPS/ DOC/M-2362/16 Dtd. 29.06.2016	28.06.17
251	Sreejesh.V. S/o Sreedharan, Kappanayil Veedu, P.O.Kayani 670 702	Kalliad	Iritty	1	24 Cent	91/16-17/MM/LT/CRPS/ DOC/M-2603/16 Dtd. 30.06.2016	29.06.17
252	Anil Kumar.M. S/o Anandan, Koymeth House, P.O.Kayaralam 670 602	Kolacheri	Taliparamba	8/1	0.0971 Hectare	92/16-17/MM/LT/CRPS/ DOC/M-598/16 Dtd. 30.06.2016	29.06.17
253	Riyas.K. S/o Ammad, Konhantavida House, P.O.Ponmeriparambil, Kozhikode Dist 673 542	Kalliad	Iritty	23/1	0.1942 Hectare	93/16-17/MM/LT/CRPS/ DOC/M-2653/16 Dtd. 30.06.2016	29.06.17
254	Riyas.K. S/o Ammad, Konhantavida House, P.O.Ponmeriparambil, Kozhikode Dist 673 542	Kalliad	Iritty	23/1	0.0971 Hectare	94/16-17/MM/LT/CRPS/ DOC/M-2654/16 Dtd. 30.06.2016	29.06.17
255	V.Rajesh S/o T.V.Gopalan, Vengottil House, Chooliyad, P.O.Malappattam 670 631	Kalliad	Iritty	46/4	9.71 Are	95/16-17/MM/LT/CRPS/ DOC/M-2535/16 Dtd. 01.07.2016	30.06.17
256	Vinod Kumar.K.P.	Paduvilayi	Thalassery	2	9.71	96/16-17/MM/LT/CRPS/	03.07.17

	S/o Sreedharan, Andromida, P.O.Ancharakkandi 670 612				Are	DOC/M-2265/16 Dtd. 04.07.2016	
257	Radhakrishnan.C.M. S/o Madhavan Nair, Chettikkatt House, P.O.Edavaramba 670 511	Peringome	Taliparamba	38/5	0.097 Hectare	97/16-17/MM/LT/CRPS/ DOC/M-2465/16 Dtd. 04.07.2016	03.07.17
258	Rajendran.C.M. S/o Parameshwaran, Chemmancheri House, P.O.Padiyottuchal 670 307	Peringome	Taliparamba	110/3	0.096 Hectare	98/16-17/MM/LT/CRPS/ DOC/M-2522/16 Dtd. 04.07.2016	03.07.17
259	Radhakrishnan.K. S/o Kunhappa, Kunnaran Veedu, P.O.Mathil 670 307	Perinthatta	Taliparamba	46/1A	0.1944 Hectare	99/16-17/MM/LT/CRPS/ DOC/M-2503/16 Dtd. 04.07.2016	03.07.17
260	Ramakrishnan Kuruvan S/o Anandan Kuruvan, Sneha Nivas, P.O.Chavasseri 670 702	Kalliad	Iritty	46/4	0.24 Acre	100/16-17/MM/LT/CRPS/ DOC/M-2670/16 Dtd. 04.07.2016	03.07.17
261	M.Narayanan, S/o Kunhiraman, Bindu Nivas, P.O.Pattannur 670 595	Kalliad	Iritty	23/1	0.0972 Hectare	101/16-17/MM/LT/CRPS/ DOC/M-2508/16 Dtd. 04.07.2016	03.07.17
262	Pradeepan.C. S/o Govindan, Parambathankandi House, P.O.Munderi 670 591	Kalliad	Iritty	29/3A	0.0971 Hectare	102/16-17/MM/LT/CRPS/ DOC/M-2640/16 Dtd. 04.07.2016	03.07.17
263	Hamsa Kutty.M. S/o Muhammed , Niduvattpurayil House, P.O.Malappattam	Sreekandapuram	Taliparamba	160/1	0.0971 Hectare	103/16-17/MM/LT/CRPS/ DOC/M-2480/16 Dtd. 04.07.2016	03.07.17
264	Mohanankomath Ikkomath House, P.O.Chittadi, Alakkode 670 571	Peringome	Taliparamba	225/5	0.0965 Hectare	104/16-17/MM/LT/CRPS/ DOC/M-2470/16 Dtd. 04.07.2016	03.07.17
265	Vasudevan, S/o Kelan, Parakkandi House, P.O.P.R.Nagar 670 702	Chavasseri	Iritty	105	0.1943 Hectare	105/16-17/MM/LT/CRPS/ DOC/M-2267/16 Dtd. 07.07.2016	06.07.17
266	Muhammed Sajir S/o Musthafa.N., Koottukkan House, P.O.Karimbam 670 142	Taliparamba	Taliparamba	67	24 Cent	106/16-17/MM/LT/CRPS/ DOC/M-4478/16 Dtd. 08.07.2016	07.07.17
267	C.Manoharan S/o Chappadi Kannan,	Kalliad	Iritty	22	0.48 Acre	107/16-17/MM/LT/CRPS/ DOC/M-2232/16	07.07.17

	Chappadi House, P.O.Kalliad 670 593					Dtd. 08.07.2016	
268	Saneesh.K. S/o Kannan, Manasam, Vaduvankulam, P.O.Kuttiattoor 670 602	Nidiyenga	Taliparamba	37/1A1	0.1943 Hectare	108/16-17/MM/LT/CRPS/ DOC/M-2592/16 Dtd. 11.07.2016	10.07.17
269	Sharafudheen.E.P. S/o Abdu Rahiman, Subaida Manzil P.O.Mayyil	Kalliad	Iritty	46/4	24 Cent	109/16-17/MM/LT/CRPS/ DOC/M-2780/16 Dtd. 11.07.2016	10.07.17
270	Rajesh.P. S/o Narayanan, Parukkar House, P.O.Porakkunnu670 306	Perinthatta	Taliparamba	45/1A	0.0971 Hectare	110/16-17/MM/LT/CRPS/ DOC/M-2471/16 Dtd. 11.07.2016	10.07.17
271	Prajith Kumar.K. S/o Kunhambu Nambiar, Krishna Kripa, P.O.Kalliad 670 593	Kalliad	Iritty	46/4	0.0972 Hectare	111/16-17/MM/LT/CRPS/ DOC/M-2468/16 Dtd. 11.07.2016	10.07.17
272	Rameshan.V. S/o P.V.Raman, Vadakkiniyil House, Chandapura, Kadanappalli.P.O. 670 304	Kadanappalli	Kannur	84/2B	0.0971 Hectare	112/16-17/MM/LT/CRPS/ DOC/M-2683/16 Dtd. 15.07.2016	14.07.17
273	Gafoor.A.T. S/o K.P.Mammu, A.T.House, Andankulam, C.Poyil.P.O.670 502	Pariyaram	Taliparamba	280/1	24 Cent	113/16-17/MM/LT/CRPS/ DOC/M-889/16 Dtd. 18.07.2016	17.07.17
274	Raveendran.V.C. S/o Kunharaman, Vannara Chalil House, Nedungome.P.O. 670 631	Sreekandapuram	Taliparamba	74/2	0.1942 Hectare	114/16-17/MM/LT/CRPS/ DOC/M-2481/16 Dtd. 18.07.2016	17.07.17
275	Narayanan.V.K. S/o Kannan, Kattil House, Mayyil 670 602	Mayyil	Taliparamba	42/3	0.0972 Hectare	115/16-17/MM/LT/CRPS/ DOC/M-2559/16 Dtd. 18.07.2016	17.07.17
276	Cheriyar.K.C. S/o Cheriyar Joseph, Kottaparambil House, Kakkad.P.O. 670 003	Chavasseri	Iritty	83/2	0.0971 Hectare	116/16-17/MM/LT/CRPS/ DOC/M-2124/16 Dtd. 18.07.2016	17.07.17
277	Aneesh.A. S/o Narayanan, Koonamkandi House, Mullakkodi.P.O. 670 602	Malappattam	Taliparamba	47/1	0.049 Hectare	117/16-17/MM/LT/CRPS/ DOC/M-2900/16 Dtd. 18.07.2016	17.07.17
278	Saneesh.K. S/o Kannan, Manasam, Vaduvankulam, P.O.Kuttiattoor 670 602	Kalliad	Iritty	17	0.1942 Hectare	118/16-17/MM/LT/CRPS/ DOC/M-2921/16 Dtd. 19.07.2016	18.07.17

279	Aneesh.K.C. S/o Govindan, Ajith Nivas, P.O.Mayyil 670 602	Mayyil	Taliparamba	148/3	0.0971 Hectare	119/16-17/MM/LT/CRPS/ DOC/M-2973/16 Dtd. 20.07.2016	19.07.17
280	Nainesh.P. S/o Narayanan, Sreyas, Cheruvancheri.P.O. 670 650	Manantheri	Thalassery	297/1	0.0971 Hectare	120/16-17/MM/LT/CRPS/ DOC/M-2463/16 Dtd. 20.07.2016	19.07.17
281	Dineshan.P. S/o Balan Nambiar, Keloth House, Porora 670 702	Chavasseri	Iritty	104	0.1942 Hectare	121/16-17/MM/LT/CRPS/ DOC/M-2194/16 Dtd. 20.07.2016	19.07.17
282	Biju S/o Kuriyakose, Kunnatharayil House, P.O.Padiyottuchal 670 307	Peringome	Taliparamba	22/5	0.0971 Hectare	122/16-17/MM/LT/CRPS/ DOC/M-2464/16 Dtd. 20.07.2016	19.07.17
283	Rajeevan.K. S/o Anandan, Kottarantavida House, Chendayad.P.O. 670 692	Mokeri	Thalassery	93/1A	24 Cent	123/16-17/MM/LT/CRPS/ DOC/M-2731/16 Dtd. 20.07.2016	19.07.17
284	Radhakrishnan.K.P. S/o Kunhiraman, Kayakapurayil House, Nedungome.P.O. 670 631	Sreekandapuram	Taliparamba	74/6	0.194 Hectare	124/16-17/MM/LT/CRPS/ DOC/M-2599/16 Dtd. 20.07.2016	19.07.17
285	Suhail.M.V.P. S/o Hamsa Haji, M.V.P.House, P.O.Thekkumbad 670 301	Peringome	Taliparamba	21/2	0.098 Hectare	125/16-17/MM/LT/CRPS/ DOC/M-2198/16 Dtd. 20.07.2016	19.07.17
286	Dileep.K.P. S/o Gopalan, K.P.House, Kanghirode.P.O. 670 592	Kalliad	Iritty	3/1	0.0971 Hectare	126/16-17/MM/LT/CRPS/ DOC/M-2597/16 Dtd. 25.07.2016	24.07.17
287	Pradeep.A. S/o Appu Kuttan Nair, Krishna Bhavan Kurumathoor.P.O. 670 148	Kurumathoor	Taliparamba	104/1	0.0971 Hectare	127/16-17/MM/LT/CRPS/ DOC/M-2404/16 Dtd. 25.07.2016	24.07.17
288	Ali.K.C. S/o Muhammed Kunhi, Kinakkool House, Peruvalathuparamba	Kalliad	Iritty	46/4	0.0971 Hectare	128/16-17/MM/LT/CRPS/ DOC/M-2882/16 Dtd. 25.07.2016	24.07.17
289	Shabu.K. S/o Gopi, Chamathayullaparambath House, Cheruvancheri.P.O. 670 650	Manantheri	Thalassery	296	0.0408 Hectare	129/16-17/MM/LT/CRPS/ DOC/M-3043/16 Dtd. 25.07.2016	24.07.17
290	Anandan Thacharon	Chavasseri	Iritty	127/1	0.1942	130/16-17/MM/LT/CRPS/	24.07.17

	S/o Kelan, Anandam, Mattannur 670 702				Hectare	DOC/M-2602/16 Dtd. 25.07.2016	
291	K.K.Rajeevan, S/o Kumaran, Kunhikkandi House, Chekkikulam.P.O. 670 592	Kalliad	Iritty	46/4	0.0971 Hectare	131/16-17/MM/LT/CRPS/ DOC/M-3018/16 Dtd. 25.07.2016	24.07.17
292	Ibrahim Kutty.R.P. S/o Ahammed Kutty, Ram Kunnummal Puthiya Purayil, Mullakodi.P.O. 670 602	Chuzhali	Taliparamba	66/1A1	0.0972 Hectare	132/16-17/MM/LT/CRPS/ DOC/M-2811/16 Dtd. 25.07.2016	24.07.17
293	Shyju.V.V. S/o T.M.Sankaran, Vadakke Veettil House, P.O.Karanthad 670 308	Kankol	Taliparamba	224/1	0.0971 Hectare	133/16-17/MM/LT/CRPS/ DOC/M-1903/16 Dtd. 27.07.2016	26.07.17
294	Abdul Jabbar.T. S/o Aboobacker, Thekkan Marakkath House, Sreekandapuram.P.O. 670 631	Eruvessi	Taliparamba	109/1A	0.0971 Hectare	134/16-17/MM/LT/CRPS/ DOC/M-2941/16 Dtd. 27.07.2016	26.07.17
295	Assees.K.P. S/o Mammad, Akkarammal House, Mayyil.P.O. 670 602	Malappattam	Taliparamba	88	0.1942 Hectare	135/16-17/MM/LT/CRPS/ DOC/M-3071/16 Dtd. 27.07.2016	26.07.17
296	Rameshan.P.V. S/o Chandu Kutty, Puthiya Veettil House, Kosavanvayal.P.O. 670 593	Kalliad	Iritty	1	0.0971 Hectare	136/16-17/MM/LT/CRPS/ DOC/M-2601/16 Dtd. 27.07.2016	26.07.17
297	Biju Kumar.K. S/o Raman.T.K., Kunnummal House, Ettukudukka.P.O. 670 521	Peringome	Taliparamba	26/14	0.0961 Hectare	137/16-17/MM/LT/CRPS/ DOC/M-3008/16 Dtd. 27.07.2016	26.07.17
298	Aji.P.P. S/o Damodharan, Puthan Parambil House, Peringome.P.O.	Peringome	Taliparamba	22/8	0.0961 Hectare	138/16-17/MM/LT/CRPS/ DOC/M-2931/16 Dtd. 27.07.2016	26.07.17
299	Santhosh Kumar.K. S/o Chandan, Kadiyan House, Kozhummal.P.O. 670 521	Peringome	Taliparamba	26/1	0.095 Hectare	139/16-17/MM/LT/CRPS/ DOC/M-3009/16 Dtd. 27.07.2016	26.07.17
300	Preyesh.P. S/o Vasudevan, Kannoath House, Kosavanvayal.P.O. 670 593	Kalliad	Iritty	17	0.0971 Hectare	140/16-17/MM/LT/CRPS/ DOC/M-3078/16 Dtd. 27.07.2016	26.07.17
301	Benny.M.C. S/o Chacko, Meledath House,	Chuzhali	Taliparamba	30	0.0971 Hectare	141/16-17/MM/LT/CRPS/ DOC/M-664/16	26.07.17

	Thadikkadavu.P.O. 670 581					Dtd. 27.07.2016	
302	Ratheesh.P.P. S/o Janardhanan, Kalasaparambath House, Kalliad.P.O. 670 593	Kalliad	Iritty	11/1	24 Cent	142/16-17/MM/LT/CRPS/ DOC/M-1920/16 Dtd. 27.07.2016	26.07.17
303	Musthafa.M.K. S/o Kunhi Muhammed, Mundayadankandi House, Munder.P.O. 670 591	Kalliad	Iritty	29/3A	0.0971 Hectare	143/16-17/MM/LT/CRPS/ DOC/M-2942/16 Dtd. 27.07.2016	26.07.17
304	Raveendran.M. S/o K.Paithal, Arun Nivas, P.O.Kanghileri 670 702	Pazhassi	Iritty	142/1	24 Cent	144/16-17/MM/LT/CRPS/ DOC/M-3044/16 Dtd. 27.07.2016	26.07.17
305	Ibrahim Kutty.K. S/o T.Moideen, Shahina Manzil, P.O.Kolari 670 702	Chavasseri	Iritty	109/1	0.0971 Hectare	145/16-17/MM/LT/CRPS/ DOC/M-2676/16 Dtd. 27.07.2016	26.07.17
306	Sreeshan.K. S/o Kunhiraman, Ammanathil House, Edayannur.P.O. 670 595	Pattannur	Thalassery	9/1	9.7 Are	146/16-17/MM/LT/CRPS/ DOC/M-3006/16 Dtd. 28.07.2016	27.07.17
307	Rajin.K.E. S/o Narayanan, Narayanalayam, Mattannur 670 702	Kalliad	Iritty	22	24 Cent	147/16-17/MM/LT/CRPS/ DOC/M-2729/16 Dtd. 01.08.2016	31.07.17
308	Suresh.P.V. S/o Velayudhan, Payampaniyil House, Chemberi.P.O. 670 632	Eruvessi	Taliparamba	18/2	0.0971 Hectare	148/16-17/MM/LT/CRPS/ DOC/M-2600/16 Dtd. 01.08.2016	31.07.17
309	Aneesh.P.V. S/o Karunakaran, Jisha Nivas, Kosavanvayal.P.O. 670 593	Kalliad	Iritty	1	0.0971 Hectare	149/16-17/MM/LT/CRPS/ DOC/M-3118/16 Dtd. 01.08.2016	31.07.17
310	Sulphikkar.N. S/o Abdulla, Sas Manzil, Chalad.P.O. 670 014	Kooveri	Taliparamba	189	0.0973 Hectare	150/16-17/MM/LT/CRPS/ DOC/M-2991/16 Dtd. 01.08.2016	31.07.17
311	Ganeshan.K. S/o Govindan, Kunnarath House, Kalliad.P.O. 670 593	Kalliad	Iritty	1	0.0971 Hectare	151/16-17/MM/LT/CRPS/ DOC/M-3151/16 Dtd. 01.08.2016	31.07.17
312	Varghese Joseph S/o Joseph, Chiratta Velikkuzhi House, Kelakom.P.O. 670 674	Padiyoor	Iritty	112/4	24 Cent	152/16-17/MM/LT/CRPS/ DOC/M-3073/16 Dtd. 01.08.2016	31.07.17

313	Devassya S/o Joseph, Ikkara House, Chemberi.P.O. 670 632	Nidiyenga	Taliparamba	41	0.0971 Hectare	153/16-17/MM/LT/CRPS/ DOC/M-2022/16 Dtd. 03.08.2016	02.08.17
314	Jayarajan.P. S/o K.V.Narayanan, Kanghirodan House, Nidiyenga.P.O. 670 631	Nidiyenga	Taliparamba	13/1	0.0971 Hectare	154/16-17/MM/LT/CRPS/ DOC/M-3074/16 Dtd. 03.08.2016	02.08.17
315	Manoj Kumar.M.P. S/o Vasudevan, Amith Nivas, Kuttiattoor.P.O. 670 602	Pattannur	Thalassery	40	9.67 Are	155/16-17/MM/LT/CRPS/ DOC/M-3007/16 Dtd. 03.08.2016	02.08.17
316	Balagopalan.A. S/o Chathu Kutty Nambiar, Mavilachalil House, Pattannur.P.O. 670 595	Kalliad	Iritty	46/4	0.1942 Hectare	156/16-17/MM/LT/CRPS/ DOC/M-3188/16 Dtd. 03.08.2016	02.08.17
317	Sudeep S/o Velayudhan, Kannamballi House, Kadampuzha.P.O. 676 553	Chuzhali	Taliparamba	42/4	0.0972 Hectare	157/16-17/MM/LT/CRPS/ DOC/M-2191/16 Dtd. 03.08.2016	02.08.17
318	Krishnan.C.V. S/o Chandu Kutty, Chathoth House, Koyyam.P.O. 670 142	Chuzhali	Taliparamba	43/2	0.0972 Hectare	158/16-17/MM/LT/CRPS/ DOC/M-2787/16 Dtd. 03.08.2016	02.08.17
319	Ummer.P.K. S/o Ali, Arayakkal Poovan Kulathil House, Chuzhali.P.O. 670 632	Chuzhali	Taliparamba	326/4	0.0971 Hectare	159/16-17/MM/LT/CRPS/ DOC/M-728/16 Dtd. 03.08.2016	02.08.17
320	Suresh Babu.T. S/o Nanu, Mottaparambath House, P.O.Chervancheri 670 650	Manantheri	Thalassery	297/1	0.0971 Hectare	160/16-17/MM/LT/CRPS/ DOC/M-3077/16 Dtd. 08.08.2016	07.08.17
321	Prinjith S/o Raghavan, Raghprabha, Chervancheri.P.O. 670 630	Manantheri	Thalassery	296	0.0971 Hectare	161/16-17/MM/LT/CRPS/ DOC/M-2989/16 Dtd. 08.08.2016	07.08.17
322	P.Abdu Haneefa S/o Mayin, Parakkal House, Kondotti.P.O., Malappuram 673 638	Kolavallur	Thalassery	57/2B2	0.0971 Hectare	162/16-17/MM/LT/CRPS/ DOC/M-1852/16 Dtd. 08.08.2016	07.08.17
323	Abdul Salam.A.V. S/o Moideen Kutty, Andyan Valappil House, P.O.Koyyam 670 142	Chuzhali	Taliparamba	320/4	0.0971 Hectare	163/16-17/MM/LT/CRPS/ DOC/M-731/16 Dtd. 08.08.2016	07.08.17
324	Muhammed Suliman.M.	Kalliad	Iritty	23/1	0.1942	164/16-17/MM/LT/CRPS/	07.08.17

	S/o Kunhi Muhammed, Alangadan House, Vengottur.P.O., Malappuram 676 503				Hectare	DOC/M-795/16 Dtd. 08.08.2016	
325	Abdul Saleem.K.P. S/o K.P.Abdul Majeed Haji, Kaippayil Puthiya Purayil House, P.O.Cherupazhassi 670 601	Kalliad	Iritty	22	0.0972 Hectare	165/16-17/MM/LT/CRPS/ DOC/M-2680/16 Dtd. 16.08.2016	15.08.17
326	P.Kunhi Krishnan S/o Govindan, Ajitha Nivas, Manantheri.P.O. 670 643	Manantheri	Thalassery	25/2B1	0.0971 Hectare	166/16-17/MM/LT/CRPS/ DOC/M-3075/16 Dtd. 16.08.2016	15.08.17
327	Abdul Jaleel.C.K. S/o Rahiman Abdul, Chundakkunnummal House, Cherupazhassi.P.O. 670 601	Kalliad	Iritty	46/4	24 Cent	167/16-17/MM/LT/CRPS/ DOC/M-2996/16 Dtd. 16.08.2016	15.08.17
328	Sabir.K. S/o Abdul Rahiman, Keethedath House, Peruvalathuparamba.P.O. 670 593	Kalliad	Iritty	46/4	0.0971 Hectare	168/16-17/MM/LT/CRPS/ DOC/M-3166/16 Dtd. 16.08.2016	15.08.17
329	Manoj Kumar.N.K. S/o Krishnan Kutty, Kripama Nirmalagiri.P.O. 670701	Kandamkunnu	Thalassery	64/1	0.0972 Hectare	169/16-17/MM/LT/CRPS/ DOC/M-2834/16 Dtd. 16.08.2016	15.08.17
330	Raveendran Nambiar, S/o Narayanan, Pappinisseri House, Kosavanvayal.P.O. 670 593	Kalliad	Iritty	17	0.0971 Hectare	170/16-17/MM/LT/CRPS/ DOC/M-3079/16 Dtd. 16.08.2016	15.08.17
331	Praveen.P. S/o Sreedharan, Priya Nivas, Kodolipram, Pattannur.P.O. 670 595	Kalliad	Iritty	17	0.0972 Hectare	171/16-17/MM/LT/CRPS/ DOC/M-3233/16 Dtd. 16.08.2016	15.08.17
332	Sajesh.A. S/o Ramachandran Nambiar, Sanishalayam, Chittariparamba.P.O. 670 650	Kalliad	Iritty	29/3A	24 Cent	172/16-17/MM/LT/CRPS/ DOC/M-2988/16 Dtd. 16.08.2016	15.08.17
333	T.Ashokan S/o Madhavan.T., Thattarath House, Thana.P.O. 670 012	Eramam	Taliparamba	443	0.0971 Hectare	173/16-17/MM/LT/CRPS/ DOC/M-2983/16 Dtd. 17.08.2016	16.08.17
334	M.V.Ramachandran S/o Govindan Nambiar, Theertham, Peruvalathparamba.P.O. 670 593	Kalliad	Iritty	23/1	0.0971 Hectare	174/16-17/MM/LT/CRPS/ DOC/M-3042/16 Dtd. 17.08.2016	16.08.17

335	Abdul Hameed S/o Kunhi Abdul Rahiman, Kuniya House, Periya, Kasaragod 671 316	Peringome	Taliparamba	38/2	0.0972 Hectare	175/16-17/MM/LT/CRPS/ DOC/M-3228/16 Dtd. 17.08.2016	16.08.17
336	Joshi S/o Thomas, Akkakkunnel House, Kosavanvayal.P.O. 670 593	Payyavoor	Taliparamba	1/1	0.0971 Hectare	176/16-17/MM/LT/CRPS/ DOC/M-1902/16 Dtd. 17.08.2016	16.08.17
337	Vishnu Namboothiri S/o Sankaran Namboothiri, Karingulathillam, Athavanad.P.O., Malappuram 676 301	Peringome	Taliparamba	144/1	0.0959 Hectare	177/16-17/MM/LT/CRPS/ DOC/M-2835/16 Dtd. 22.08.2016	21.08.17
338	Renil.T.C. S/o Sreedharan, T.C.Nivas, Cheruparamba.P.O. 670 693	Puthoor	Thalassery	7/1	14.62 Are	178/16-17/MM/LT/CRPS/ DOC/M-3191/16 Dtd. 22.08.2016	21.08.17
339	Sunny Abraham S/o Abraham, Arakkal House, Kanichar.P.O. 670 674	Kelakom	Iritty	KTR 329	0.0971 Hectare	179/16-17/MM/LT/CRPS/ DOC/M-3392/16 Dtd. 22.08.2016	21.08.17
340	Sajan.M.D. S/o David Joseph, Mookanthottathil House, Pettikkundu.P.O., Kasaragod 671 313	Alappadamb	Taliparamba	478/1Pt	0.0971 Hectare	180/16-17/MM/LT/CRPS/ DOC/M-3316/16 Dtd. 22.08.2016	21.08.17
341	Sudhakaran.P. S/o Kumaran, Thapasya, Venmanal Ancharakkandy.P.O. 670 612	Paduvilayi	Thalassery	2	0.0607 Hectare	181/16-17/MM/LT/CRPS/ DOC/M-3467/16 Dtd. 25.08.2016	24.08.17
342	Puthan Parambil Joseph Thomas, Jibin Nivas, Kottiyoor.P.O. 670 651	Kelakom	Iritty	256	0.0931 Hectare	182/16-17/MM/LT/CRPS/ DOC/M-2192/16 Dtd. 29.08.2016	28.08.17
343	Biju Joseph S/o Joseph, Punnasseri House, Perikkode.P.O. 670 631	Sreekandapuram	Taliparamba	233/2	0.0971 Hectare	183/16-17/MM/LT/CRPS/ DOC/M-3227/16 Dtd. 29.08.2016	28.08.17
344	Ashokan.A. S/o Govindan, Palliyath House, Manantheri.P.O. 670 643	Manantheri	Thalassery	25/2B1	0.0971 Hectare	184/16-17/MM/LT/CRPS/ DOC/M-3235/16 Dtd. 29.08.2016	28.08.17
345	Sreekumar.M. S/o Gangadharan, Kuthirummal House, Valiyapoyil.P.O. 671 313	Alappadamb	Taliparamba	478/1Pt	0.0971 Hectare	185/16-17/MM/LT/CRPS/ DOC/M-3317/16 Dtd. 29.08.2016	28.08.17
346	Santhosh.P.P.	Nidiyenga	Taliparamba	8	0.0971	186/16-17/MM/LT/CRPS/	28.08.17

	S/o Kannan, Puthiya Purayil House, Kayaralam.P.O. 670 602				Hectare	DOC/M-1648/16 Dtd. 29.08.2016	
347	Devassya S/o Joseph, Ikkara House, Chemberi.P.O. 670 632	Nidiyenga	Taliparamba	1/1	0.0971 Hectare	187/16-17/MM/LT/CRPS/ DOC/M-2837/16 Dtd. 31.08.2016	30.08.17
348	Damodharan.P. S/o Raghavan.V.V., Vannathankandi House, Peruvalathuparamba.P.O. 670 593	Malappattam	Taliparamba	84/1	0.1942 Hectare	188/16-17/MM/LT/CRPS/ DOC/M-3448/16 Dtd. 31.08.2016	30.08.17
349	Ramachandran.M. S/o Krishnan Nambiar, Krishna Nilayam Mattannur 670 702	Keezhur	Thalassery	43/1	0.0971 Hectare	189/16-17/MM/LT/CRPS/ DOC/M-3449/16 Dtd. 31.08.2016	30.08.17
350	Appukuttan.P.P. S/o Kunhambu, Padinghare Purayil House, Kozhummal.P.O. 670 521	Alappadamb	Taliparamba	396/2	0.089 Hectare	190/16-17/MM/LT/CRPS/ DOC/M-2598/16 Dtd. 31.08.2016	30.08.17
351	P.P.Hamza Kutty, S/o Moidhu Haji, Pannyankandi Puthiya Purayil Kolacheri.P.O. 670 601	Kalliad	Iritty	46/4	0.0971 Hectare	191/16-17/MM/LT/CRPS/ DOC/M-3516/16 Dtd. 31.08.2016	30.08.17
352	Muhammed Rafeeque S/o Ibrahim.P.T., Parathodi House, P.O.Anakkayam, Malappuram 676 569	Kalliad	Iritty	46/4	0.0971 Hectare	192/16-17/MM/LT/CRPS/ DOC/M-3322/16 Dtd. 31.08.2016	30.08.17
353	Bijesh.K.P. S/o Balakrishnan, RMB House, Cherupazhassi.P.O. 670 601	Mayyil	Taliparamba	557/1	0.0971 Hectare	193/16-17/MM/LT/CRPS/ DOC/M-3393/16 Dtd. 05.09.2016	04.09.17
354	Sureshan S/o Narayanan, Mani House, Kalliasseri, Anjarakkandi.P.O. 670 331	Chuzhali	Taliparamba	30	0.0972 Hectare	194/16-17/MM/LT/CRPS/ DOC/M-3483/16 Dtd. 08.09.2016	07.09.17
355	Balakrishnan.K. S/o Kumaran, Anjali Nivas, P.O.Chattukappara 670 602	Kalliad	Iritty	22	0.0971 Hectare	195/16-17/MM/LT/CRPS/ DOC/M-3379/16 Dtd. 19.09.2016	18.09.17
356	Binoy.M.M. S/o Mathai.M.J. Mazhuppel House, Chamathachal.P.O. 670 633	Kalliad	Iritty	1	0.0971 Hectare	196/16-17/MM/LT/CRPS/ DOC/M-3494/16 Dtd. 19.09.2016	18.09.17
357	Chandran.K.V.	Nidiyenga	Taliparamba	8	0.0971	197/16-17/MM/LT/CRPS/	18.09.17

	S/o Kunhambu, Kunnath Valappil House, Chengalayi.P.O. 670 631				Hectare	DOC/M-2992/16 Dtd. 19.09.2016	
358	K.V.Krishnan S/o Narayanan, Lakshmi Nivas, P.O.Edayannur 670 595	Kalliad	Iritty	46/4	24 Cent	198/16-17/MM/LT/CRPS/ DOC/M-3596/16 Dtd. 19.09.2016	18.09.17
359	Shaji S/o Mathai, Mamoottil House, Madathil, P.O.Iritty 670 703	Payam	Iritty	60	0.0971 Hectare	199/16-17/MM/LT/CRPS/ DOC/M-3521/16 Dtd. 22.09.2016	21.09.17
360	Prasad Kotturu S/o Karunakaran, Aswathi House, Padiyoor.P.O. 670 703	Payam	Iritty	1/1	0.0971 Hectare	200/16-17/MM/LT/CRPS/ DOC/M-2499/16 Dtd. 22.09.2016	21.09.17
361	Shamsudheen.S.V. S/o Abdul Kareem Seeruvallappil House, Mathil.P.O. 670 307	Eramam	Taliparamba	449	0.0971 Hectare	201/16-17/MM/LT/CRPS/ DOC/M-3599/16 Dtd. 22.09.2016	21.09.17
362	Raju.P. S/o Narayanan, Chamandi, Poorakkadavath House, Kuttoor.P.O. 670 306	Eramam	Taliparamba	3/2	0.0971 Hectare	202/16-17/MM/LT/CRPS/ DOC/M-2682/16 Dtd. 26.09.2016	25.09.17
363	Sreeshan.K. S/o Kunhiraman, Ammanathil House, Edayannur.P.O. 670 595	Kolari	Thalassery	21/1	0.0971 Hectare	203/16-17/MM/LT/CRPS/ DOC/M-2735/16 Dtd. 26.09.2016	25.09.17
364	Suresh.K. S/o T.Ambu, Kazhakakaran House, Purakkunnu.P.O. 670 301	Perinthatta	Taliparamba	132/1A	0.0971 Hectare	204/16-17/MM/LT/CRPS/ DOC/M-3234/16 Dtd. 26.09.2016	25.09.17
365	Saju.M.V. S/o Varkey, Mattathilanikkal House, Puthiriyadukkam.P.O., Kasargod 671 314	Peringome	Taliparamba	145/1	0.0961 Hectare	205/16-17/MM/LT/CRPS/ DOC/M-3170/16 Dtd. 26.09.2016	25.09.17
366	Prasad.C. S/o Ambadi, Chittankaran House, Pettikkundu.P.O., Kasaragod 671 313	Peringome	Taliparamba	162/6	0.096 Hectare	206/16-17/MM/LT/CRPS/ DOC/M-3126/16 Dtd. 28.09.2016	27.09.17
367	Balakrishnan S/o Narayanan, Elambayil House, Uliyil.P.O. 670 702	Chavasseri	Iritty	3	0.0971 Hectare	207/16-17/MM/LT/CRPS/ DOC/M-2342/16 Dtd. 28.09.2016	27.09.17
368	Rinoop.K.M. S/o Mohanan, Sreehari Nivas,	Muzhakkunnu	Iritty	206	0.0971 Hectare	208/16-17/MM/LT/CRPS/ DOC/M-3633/16	27.09.17

	P.O.Vilakkode 670 703					Dtd. 28.09.2016	
369	Rajeev.T.A. S/o Ayyappan.T. Thanikkaparambil House, Ulikkal.P.O. 670 705	Vayathur	Iritty	28/1A2	0.1942 Hectare	209/16-17/MM/LT/CRPS/ DOC/M-3308/16 Dtd. 28.09.2016	27.09.17
370	Prakashan.M. S/o Raman, Ramapuram House, Cherupazhassi.P.O. 670 601	Sreekandapuram	Taliparamba	161/1	0.0971 Hectare	210/16-17/MM/LT/CRPS/ DOC/M-2686/16 Dtd. 28.09.2016	27.09.17
371	Mohanan.P. S/o P.Madhavan, Parathi House, Palakkode.P.O. 670 305	Ramanthali	Taliparamba	183/2	0.0971 Hectare	211/16-17/MM/LT/CRPS/ DOC/M-3498/16 Dtd. 28.09.2016	27.09.17
372	Muhammed Kunhi.C. S/o Aboobacker, Cherukunnon House, Taliparamba 670 14	Peringome	Taliparamba	161	0.0971 Hectare	212/16-17/MM/LT/CRPS/ DOC/M-3306/16 Dtd. 03.10.2016	02.10.17
373	Balamani.K.P. D/o Chirukandan, Kuthirummal House, P.O.Kankol 670 307	Kankol	Taliparamba	191/1	0.0971 Hectare	213/16-17/MM/LT/CRPS/ DOC/M-3328/16 Dtd. 03.10.2016	02.10.17
374	K.N.Ummer S/o Mayan, Rafseenas, Ancharakkandy.P.O. 670 612	Sreekandapuram	Taliparamba	235/1	0.0971 Hectare	214/16-17/MM/LT/CRPS/ DOC/M-3805/16 Dtd. 03.10.2016	02.10.17
375	Thilakarajan.K.V. S/o Narayanan, Kavile Valappil House, Palakkode.P.O. 670 305	Ramanthali	Taliparamba	186/9	0.081 Hectare	215/16-17/MM/LT/CRPS/ DOC/M-3164/16 Dtd. 03.10.2016	02.10.17
376	Shaji Johnson S/o Varghese, Koottungal House, Nuchiyad 670 705	Payyavoor	Taliparamba	1/1	0.089 Hectare	216/16-17/MM/LT/CRPS/ DOC/M-2922/16 Dtd. 03.10.2016	02.10.17
377	Sunil S/o Kunhiraman, Ambalavelil House, P.O.Payam 670 704	Kalliad	Iritty	23/1	0.0971 Hectare	217/16-17/MM/LT/CRPS/ DOC/M-3080/16 Dtd. 03.10.2016	02.10.17
378	Divakaran.P. S/o T.P.Govindan, Padichi House, Thavidisseri, P.O.Porakkunnu 670 306	Perinthatta	Taliparamba	78/1A1	0.0971 Hectare	218/16-17/MM/LT/CRPS/ DOC/M-3637/16 Dtd. 03.10.2016	02.10.17
379	Nishad.E.K. S/o Ahammed Kutty, Ellikkal House, P.O.Mullakodi 670 602	Malappattam	Taliparamba	754	0.0971 Hectare	219/16-17/MM/LT/CRPS/ DOC/M-3856/16 Dtd. 03.10.2016	02.10.17

380	Shamsudheen S/o Abdu Rahiman, Subaida Manzil Mayyil 670 602	Kalliad	Iritty	46/4	0.1942 Hectare	220/16-17/MM/LT/CRPS/ DOC/M-3199/16 Dtd. 03.10.2016	02.10.17
381	K.K.Raghavan, S/o Narayanan, Kurundhattil Kuttiatt House, P.O.Perikkode 670 631	Nidiyenga	Taliparamba	41	0.0971 Hectare	221/16-17/MM/LT/CRPS/ DOC/M-3776/16 Dtd. 03.10.2016	02.10.17
382	Mathew.E.P., S/o Mathai Philip, Ellikkal House, Chemberi.P.O. 670 632	Nidiyenga	Taliparamba	37/1A1	0.0976 Hectare	222/16-17/MM/LT/CRPS/ DOC/M-3310/16 Dtd. 05.10.2016	04.10.17
383	Babu.P.A. S/o Augusty, Panikulangara House, Kelakom.P.O. 670 674	Payyavoor	Taliparamba	1/1	0.0971 Hectare	223/16-17/MM/LT/CRPS/ DOC/M-3192/16 Dtd. 05.10.2016	04.10.17
384	Joy Joseph s/o Joseph, Mullapallil House, P.O.Perikkode 670 631	Nidiyenga	Taliparamba	42	0.0971 Hectare	224/16-17/MM/LT/CRPS/ DOC/M-3305/16 Dtd. 05.10.2016	04.10.17
385	Vinod S/o Kammaran, Kalpoth House, Kadanappalli.P.O. 670 501	Panapuzha	Kannur	55/3A4	0.0971 Hectare	225/16-17/MM/LT/CRPS/ DOC/M-3528/16 Dtd. 05.10.2016	04.10.17
386	Shibu.K. S/o Narayanan, Kavil House, P.O.Nidiyenga 670 631	Nidiyenga	Taliparamba	42	0.0971 Hectare	226/16-17/MM/LT/CRPS/ DOC/M-3476/16 Dtd. 05.10.2016	04.10.17
387	David.K.Benny S/o Benny, Kakkadiyil House, P.O.Kaithapram 670 631	Sreekandapuram	Taliparamba	52/1	0.072 Hectare	227/16-17/MM/LT/CRPS/ DOC/M-955/16 Dtd. 05.10.2016	04.10.17
388	Ligesh.B. S/o Balan, Chaithanya House, P.O.Cherupazhassi 670 601	Mayyil	Taliparamba	560	0.0971 Hectare	228/16-17/MM/LT/CRPS/ DOC/M-3904/16 Dtd. 05.10.2016	04.10.17
389	Jyothish.P.Thomas S/o Thomas.P.A., Poovathottathil House, Koottupuzha.P.O. 670 706	Payyavoor	Taliparamba	1/1	0.0971 Hectare	229/16-17/MM/LT/CRPS/ DOC/M-2681/16 Dtd. 07.10.2016	06.10.17
390	Sanil.P. S/o K.K.Sathyan Saleena Nivas, P.O.Kuttiattoor 670 602	Kalliad	Iritty	46/4	0.0971 Hectare	230/16-17/MM/LT/CRPS/ DOC/M-3632/16 Dtd. 07.10.2016	06.10.17
391	Tomin George,	Payyavoor	Taliparamba	1/1	0.0971	231/16-17/MM/LT/CRPS/	06.10.17

	S/o George Kutty, Anchanikkal House, Chemberi.P.O. 670 632				Hectare	DOC/M-3952/16 Dtd. 07.10.2016	
392	Hashim.T. S/o Aboobacker, Thekkan Marakkath House, P.O.Sreekandapuram 670 633	Nidiyenga	Taliparamba	31/1AB	0.0971 Hectare	232/16-17/MM/LT/CRPS/ DOC/M-4013/16 Dtd. 14.10.2016	13.10.17
393	Ravi.C. S/o Kannan, Chappadi House, P.O.Kalliad 670 593	Kalliad	Iritty	46/4	0.0971 Hectare	233/16-17/MM/LT/CRPS/ DOC/M-3948/16 Dtd. 14.10.2016	13.10.17
394	Dipesh Sebatian S/o Devassya, Mandappathil House, Kakilampara.P.O., Chemberi 670 632	Payyavoor	Taliparamba	1/1	0.0971 Hectare	234/16-17/MM/LT/CRPS/ DOC/M-4003/16 Dtd. 17.10.2016	16.10.17
395	Sadanandhan.T. S/o Kunhiraman, Thuruthipalli House, Narikkamvalli.P.O., Mandur 670 504	Eramam	Taliparamba	447/2	0.0971 Hectare	235/16-17/MM/LT/CRPS/ DOC/M-3524/16 Dtd. 17.10.2016	16.10.17
396	Anil Kumar.M.V. S/o Karunakaran, Mundayad Valappil House, Mandur.P.O. 670 501	Eramam	Taliparamba	255/1	0.0971 Hectare	236/16-17/MM/LT/CRPS/ DOC/M-3595/16 Dtd. 17.10.2016	16.10.17
397	Suresh Babu.V. S/o Raghavan.K., Indeevaram House, Kodolipram, Pattannur.P.O. 670 595	Kalliad	Iritty	46/4	0.0971 Hectare	237/16-17/MM/LT/CRPS/ DOC/M-3992/16 Dtd. 17.10.2016	16.10.17
398	C.Rameshan S/o Govindan, Arya Nivas, Chattukappara.P.O. 670 592	Maniyoor	Taliparamba	J16/30/ 1445	0.0971 Hectare	238/16-17/MM/LT/CRPS/ DOC/M-3706/16 Dtd. 17.10.2016	16.10.17
399	Rajeevan.A. S/o Achuthan, Ariyambatt House, Narath.P.O. 670 601	Kuttiattoor	Taliparamba	76/3	9.71 Are	239/16-17/MM/LT/CRPS/ DOC/M-5945/16 Dtd. 17.10.2016	16.10.17
400	Radha.K. D/o Govindan, Prajosh Nivas, Ayithara Mambaram.P.O. 670 643	Kandamkunnu	Thalassery	53/2	0.0971 Hectare	240/16-17/MM/LT/CRPS/ DOC/M-3526/16 Dtd. 17.10.2016	16.10.17
401	Prajil.K. S/o Prabhakaran, Prajosh Nivas, Ayithara Mambaram.P.O. 670 643	Kandamkunnu	Thalassery	53/2	0.0971 Hectare	241/16-17/MM/LT/CRPS/ DOC/M-3525/16 Dtd. 17.10.2016	16.10.17
402	Sajesh.V.K. S/o Vijayan, Velluvakkandi House,	Payam	Iritty	1/1	0.0971 Hectare	242/16-17/MM/LT/CRPS/ DOC/M-4009/16	16.10.17

	Madathil, P.O.Irity 670 703					Dtd. 17.10.2016	
403	Binu Narayanan S/o K.K.Narayanan, Karatt Kollakkatt House, Kosavanvayal.P.O. 670 593	Kalliad	Irity	22	0.0971 Hectare	243/16-17/MM/LT/CRPS/ DOC/M-3779/16 Dtd. 17.10.2016	16.10.17
404	Sumesh.K.E. S/o Kannan, Kakkatt Edadathil House, P.O.Porakkunnu 670 306	Eramam	Taliparamba	442/1	0.0971 Hectare	244/16-17/MM/LT/CRPS/ DOC/M-3307/16 Dtd. 17.10.2016	16.10.17
405	Manoj Kumar.K. S/o Damu, Karuvath House, Manantheri.P.O. 670 643	Payam	Irity	1/1	0.0971 Hectare	245/16-17/MM/LT/CRPS/ DOC/M-3999/16 Dtd. 17.10.2016	16.10.17
406	Shaji.C. S/o Kumaran, Chembacheri House, P.O.Peruvalathuparamba 670 593	Malappattam	Taliparamba	84/1	0.0971 Hectare	246/16-17/MM/LT/CRPS/ DOC/M-3979/16 Dtd. 17.10.2016	16.10.17
407	Suresh S/o P.V.Kunhikannan, P.V.K.House, Payannur 670 307	Alappadamb	Taliparamba	478/1	0.0972 Hectare	247/16-17/MM/LT/CRPS/ DOC/M-3862/16 Dtd. 17.10.2016	16.10.17
408	Abdulla Kutty S/o Moideen Kutty, Nazeeb Manzil, Edayannur.P.O. 670 595	Muzhakkunnu	Irity	206	0.1943 Hectare	248/16-17/MM/LT/CRPS/ DOC/M-3971/16 Dtd. 19.10.2016	18.10.17
409	Bhaskaran.V. S/o Panniyeri Krishnan Varayil House, Kosavanvayal.P.O. 670 593	Kalliad	Irity	46/4	0.0971 Hectare	249/16-17/MM/LT/CRPS/ DOC/M-3742/16 Dtd. 19.10.2016	18.10.17
410	Prakashan.C.V. S/o Padmanabhan, Cheran Veettil, P.O.Nidiyenga 670 631	Nidiyenga	Taliparamba	42	0.0971 Hectare	250/16-17/MM/LT/CRPS/ DOC/M-3275/16 Dtd. 19.10.2016	18.10.17
411	Mohanan.K. S/o Ambu, Kozhunthil House, P.O.Pettikkundu 671 313	Alappadamb	Taliparamba	478/1	0.0971 Hectare	251/16-17/MM/LT/CRPS/ DOC/M-3311/16 Dtd. 19.10.2016	18.10.17
412	P.M.Nizar S/o Mammu, Padingarakkara House, P.O.Keezhpally 670 704	Payam	Irity	1/1	0.0971 Hectare	252/16-17/MM/LT/CRPS/ DOC/M-4056/16 Dtd. 19.10.2016	18.10.17
413	Noushad.K.P. S/o Saithali Kutty,Kizhuvapatt House, Kadampuzha.P.O., Malappuram 676 553	Kalliad	Irity	23/1	0.0971 Hectare	253/16-17/MM/LT/CRPS/ DOC/M-2189/16 Dtd. 19.10.2016	18.10.17

414	Rajan.A S/o Kannan, Thai Valappil House, P.O.Nidiyenga 670 631	Nidiyenga	Taliparamba	37/1A1	0.0971 Hectare	254/16-17/MM/LT/CRPS/ DOC/M-4051/16 Dtd. 19.10.2016	18.10.17
415	George.K. S/o Kudichirippil Sebastian, Kudichirippil, Pooparamba.P.O. 670 632	Payyavoor	Taliparamba	1/1	0.0971 Hectare	255/16-17/MM/LT/CRPS/ DOC/M-3193/16 Dtd. 19.10.2016	18.10.17
416	Vijayan Panayada S/o Chathu Kutty, Vijayapuram House, P.O.Manantheri 670 643	Manantheri	Thalassery	297/1	0.097 Hectare	256/16-17/MM/LT/CRPS/ DOC/M-3527/16 Dtd. 19.10.2016	18.10.17
417	Unnikrishnan.P. S/o Kunhiraman, Pottayannel House, P.O.Malappattam 670 631	Kalliad	Iritty	46/4	24 Cent	257/16-17/MM/LT/CRPS/ DOC/M-3934/16 Dtd. 19.10.2016	18.10.17
418	Secretary Kannur Building Materials Marketing Co Op. Society Ltd., No.C 1741, Pappinisseri.P.O.670 561	Eramam	Taliparamba	41	0.0971 Hectare	258/16-17/MM/LT/CRPS/ DOC/M-4037/16 Dtd. 19.10.2016	18.10.17
419	Shaj.K. S/o Gopalan, Kannambath House, Muzhappala.P.O. 670 611	Kalliad	Iritty	17	0.0971 Hectare	259/16-17/MM/LT/CRPS/ DOC/M-3463/16 Dtd. 19.10.2016	18.10.17
420	Abdul Nazar S/o Muhammed, C.K.House, P.O.Malappattam 670 631	Nidiyenga	Taliparamba	30	0.0971 Hectare	260/16-17/MM/LT/CRPS/ DOC/M-3045/16 Dtd. 21.10.2016	20.10.17
421	Joseph.N.M S/o Mathai, Nellikkathadathil House, Chundakkunnu.P.O. 670 632	Eruvessi	Taliparamba	57	0.097 Hectare	261/16-17/MM/LT/CRPS/ DOC/M-3610/16 Dtd. 24.10.2016	23.10.17
422	Chandrasekaran.K.P. S/o Govindan Nambiar, Pratheeksha Pattannur.P.O. 670 595	Payam	Iritty	52	19.43 Hectare	262/16-17/MM/LT/CRPS/ DOC/M-3811/16 Dtd. 24.10.2016	23.10.17
423	Sajeesh Paleri S/o Janardhanan, Paleri House, Mathil.P.O. 670 303	Alappadamb	Taliparamba	478/1Pt	0.0971 Hectare	263/16-17/MM/LT/CRPS/ DOC/M-3313/16 Dtd. 24.10.2016	23.10.17
424	Raghavan.U. S/o Kannan, Oonathil House, P.O.Kankol 670 307	Perinthatta	Taliparamba	45/1	0.0972 Hectare	264/16-17/MM/LT/CRPS/ DOC/M-4024/16 Dtd. 24.10.2016	23.10.17
425	V.V.Hareesh	Nidiyenga	Taliparamba	38/1A1	0.0971	265/16-17/MM/LT/CRPS/	23.10.17

	M.V.Govindan, Madathil Valappil House, P.O.Malappattam 670 631				Hectare	DOC/M-4008/16 Dtd. 24.10.2016	
426	Ibrahim Kutty.R.P. S/o Ahammed Kutty, Ram Kunnummal Puthiya Purayil, Mullakodi.P.O. 670 602	Malappattam	Taliparamba	1104	0.0971 Hectare	266/16-17/MM/LT/CRPS/ DOC/M-2812/16 Dtd. 24.10.2016	23.10.17
427	Dileep Kumar.P. S/o Gopalan Nambiar, Pappinisseri Veettil P.O.Chuzhali 670 142	Chuzhali	Taliparamba	333	0.0972 Hectare	267/16-17/MM/LT/CRPS/ DOC/M-2948/16 Dtd. 26.10.2016	25.10.17
428	A.V.Gopalan Kannanchira Raman,Aruvath Valappil House, P.O.Pavanoormotta 670 602	Chuzhali	Taliparamba	223/2	0.0972 Hectare	268/16-17/MM/LT/CRPS/ DOC/M-3518/16 Dtd. 26.10.2016	25.10.17
429	Shatheesan.E.M S/o Vijayan, Sariga, P.O.Kuttiattoor 670 602	Kalliad	Iritty	3/1	0.0971 Hectare	269/16-17/MM/LT/CRPS/ DOC/M-4168/16 Dtd. 26.10.2016	25.10.17
430	Saji Pilakkatt S/o Stephen Pilakkatt, Pilakkatt House, P.O.Padiyottuchal 670 307	Peringome	Taliparamba	26/1	0.0973 Hectare	270/16-17/MM/LT/CRPS/ DOC/M-2310/16 Dtd. 26.10.2016	25.10.17
431	Vinod.K. S/o Kunhappa, Kuttyan Kandi House, P.O.Koodali 670 592	Kalliad	Iritty	46/4	24 Cent	271/16-17/MM/LT/CRPS/ DOC/M-4156/16 Dtd. 26.10.2016	25.10.17
432	Lakshmanan S/o Gopalan, Manyath House, Mathamangalam.P.O. 670 306	Perinthatta	Taliparamba	18/1	0.0971 Hectare	272/16-17/MM/LT/CRPS/ DOC/M-3631/16 Dtd. 31.10.2016	30.10.17
433	Satheeshan.T.N. S/o Narayanan Nair, Thottiyil House, Chundakkunnu.P.O. 670 632	Nidiyenga	Taliparamba	1/1	0.0971 Hectare	273/16-17/MM/LT/CRPS/ DOC/M-3855/16 Dtd. 31.10.2016	30.10.17
434	Nitheesh.T.V. S/o Kunhiraman, Thilathil House, P.O.Peruvalathuparamba 670 593	Nidiyenga	Taliparamba	41	0.0971 Hectare	274/16-17/MM/LT/CRPS/ DOC/M-3777/16 Dtd. 31.10.2016	30.10.17
435	Muhamed Nabeel S/o T.P.Hamza, Valiya Valappil House, Ettikulam.P.O. 670 308	Ramanthali	Taliparamba	231/1	0.0971 Hectare	275/16-17/MM/LT/CRPS/ DOC/M-4225/16 Dtd. 31.10.2016	30.10.17
436	Satheeshan Ittammal S/o Anandan,	Eramam	Taliparamba	439	0.0971 Hectare	276/16-17/MM/LT/CRPS/ DOC/M-3323/16	30.10.17

	Ezhilode.P.O. 670 309					Dtd. 31.10.2016	
437	Ranjith.K. S/o Raghavan.P. Karimbil House, Kodakkad.P.O. 671 310	Alappadamb	Taliparamba	478/1	0.0972 Hectare	277/16-17/MM/LT/CRPS/ DOC/M-3951/16 Dtd. 31.10.2016	30.10.17
438	V.M.Vamanan Namboothiri S/o Harijayandan Namboothiri, Amritha Jyothi Pallikkunnu.P.O. 670 004	Chuzhali	Taliparamba	341/1	48 Cent	278/16-17/MM/LT/CRPS/ DOC/M-4176/16 Dtd. 02.11.2016	01.11.17
439	U.Manoharan S/o Kannan, Urumi House, P.O.Kuttiattoor 670 602	Chuzhali	Taliparamba	225/3	0.0972 Hectare	279/16-17/MM/LT/CRPS/ DOC/M-4250/16 Dtd. 02.11.2016	01.11.17
440	Muhammed Shereef S/o Muhammed Kutty, Kalodi House, Kadampuzha.P.O., Malappuram 676 553	Chuzhali	Taliparamba	223/2	0.0972 Hectare	280/16-17/MM/LT/CRPS/ DOC/M-3775/16 Dtd. 02.11.2016	01.11.17
441	Muhammed Noufal.K. S/o Abdu, Kadakkadan House, P.O.Indianoor, Malappuram 676 503	Chuzhali	Taliparamba	223/2	0.0972 Hectare	281/16-17/MM/LT/CRPS/ DOC/M-4287/16 Dtd. 02.11.2016	01.11.17
442	Meri Kurian D/o Kurian, Kuzhimullil House, Chundakkunnu.P.O. 670 632	Eruvessi	Taliparamba	57	19.31 Are	282/16-17/MM/LT/CRPS/ DOC/M-3594/16 Dtd. 02.11.2016	01.11.17
443	Kanakan.K. S/o Kunhappan, Kadankottu House, P.O.Muyyam 670 142	Panniyoor	Taliparamba	2	0.0972 Hectare	283/16-17/MM/LT/CRPS/ DOC/M-3123/16 Dtd. 03.11.2016	02.11.17
444	Kunhikrishnan.P.P. S/o P.P.Koran, Puthiya Purayil House, P.O.Koyyam 670 142	Chuzhali	Taliparamba	379/4	0.0972 Hectare	284/16-17/MM/LT/CRPS/ DOC/M-4248/16 Dtd. 07.11.2016	06.11.17
445	K.V.Radhakrishnan S/o Kunhambu Nambiar, Kuttiattu Veettil, P.O.Chengalayi 670 631	Chengalayi	Taliparamba	1	0.0352 Hectare	285/16-17/MM/LT/CRPS/ DOC/M-3630/16 Dtd. 07.11.2016	06.11.17
446	Lakshmanan.P. S/o Kunharaman, Kizhakkeyil House, P.O.Kayaralam 670 602	Kayaralam	Taliparamba	5	0.0971 Hectare	286/16-17/MM/LT/CRPS/ DOC/M-4112/16 Dtd. 07.11.2016	06.11.17
447	Govindan.T.P. S/o Kadungodan, Thekkayil Parambath House,	Thriprangottur	Thalassery	98/1A	0.097 Hectare	287/16-17/MM/LT/CRPS/ DOC/M-4100/16	13.11.17

	P.O.Poyiloor 670 693					Dtd. 14.11.2016	
448	Raghavan.P.M. S/o Kannan, Parambil House, P.O.Keezhariyoor, Kozhikode District	Kalliad	Iritty	1	0.0971 Hectare	288/16-17/MM/LT/CRPS/ DOC/M-4289/16 Dtd. 14.11.2016	13.11.17
449	Rajeevan.K.K. S/o M.K.Kumaran Kunhikkandi House, P.O.Chekkikulam 670 592	Mayyil	Taliparamba	557/1	0.0971 Hectare	289/16-17/MM/LT/CRPS/ DOC/M-4386/16 Dtd. 14.11.2016	13.11.17
450	Rajan.C. S/o Raman, Varshalayam, P.O.Chittariparamba 670 650	Chavasseri	Iritty	105	0.0971 Hectare	290/16-17/MM/LT/CRPS/ DOC/M-4364/16 Dtd. 14.11.2016	13.11.17
451	T.Vasudevan S/o Kelan, Parakkandi House, P.O.P.R.Nagar 670 702	Chavasseri	Iritty	127/1	0.0971 Hectare	291/16-17/MM/LT/CRPS/ DOC/M-3497/16 Dtd. 14.11.2016	13.11.17
452	Prakashan.P.V. S/o Kunhappa, Chandrathil House, P.O.Kuttiattoor 670 602	Kolari	Iritty	67/1	0.1942 Hectare	292/16-17/MM/LT/CRPS/ DOC/M-4363/16 Dtd. 14.11.2016	13.11.17
453	K.K.Radhakrishnan S/o Keppukutty Nambiar,Koyodan Koroth House, P.O.Koottumugham 670 631	Kalliad	Iritty	11/1	0.0971 Hectare	293/16-17/MM/LT/CRPS/ DOC/M-4171/16 Dtd. 14.11.2016	13.11.17
454	Sreenivasan.R. S/o Kannan, Rermmal House, Chithappile Poyil.P.O. 670 502	Perinthatta	Taliparamba	75/1	0.0971 Hectare	294/16-17/MM/LT/CRPS/ DOC/M-3574/16 Dtd. 16.11.2016	15.11.17
455	Mukri Muhammed, S/o Ahammed, Mukri House, Payyannur.P.O. 670 307	Kankol	Taliparamba	335/1 335/2	0.0971 Hectare	295/16-17/MM/LT/CRPS/ DOC/M-4076/16 Dtd. 16.11.2016	15.11.17
456	Kunhikrishnan.K. S/o Kunhiraman, Koonicheri House, Punjakkad, Payyannur.P.O. 670 307	Ramanthali	Taliparamba	41	0.0971 Hectare	296/16-17/MM/LT/CRPS/ DOC/M-4437/16 Dtd. 16.11.2016	15.11.17
457	Rajesh.N.V. S/o Vijayan.N.V., Nhandhamare Veettil, P.O.Payyannur 670 307	Peringome	Taliparamba	117	0.0971 Hectare	297/16-17/MM/LT/CRPS/ DOC/M-4283/16 Dtd. 16.11.2016	15.11.17
458	Muhammed Rafeeque.M.K. S/o Yoosaf.K.P., M.K.House,	Ramanthali	Taliparamba	231/1	0.0971 Hectare	298/16-17/MM/LT/CRPS/ DOC/M-4438/16	15.11.17

	P.O.Madayi 670 304					Dtd. 16.11.2016	
459	Panneri Rameshan S/o Koran, Panneri House, P.O.Karanthad 670 308	Ramanthali	Taliparamba	183/2	0.0971 Hectare	299/16-17/MM/LT/CRPS/ DOC/M-4443/16 Dtd. 16.11.2016	15.11.17
460	Priyesh.K.V. S/o Kumaran.U.K.,U.K.Nivas, P.O.Cherupazhassi 670 601	Mayyil	Taliparamba	557/1	0.0971 Hectare	300/16-17/MM/LT/CRPS/ DOC/M-3778/16 Dtd. 16.11.2016	15.11.17
461	Sahad.O.V. S/o Muhammed, Ottavalappil House, P.O.Chuzhali 670 142	Chuzhali	Taliparamba	332/3	0.0972 Hectare	301/16-17/MM/LT/CRPS/ DOC/M-4439/16 Dtd. 16.11.2016	15.11.17
462	Dineshan.K. S/o Variyath Mannan, Madapurakkal House, P.O.Kolari 670 702	Chavasseri	Iritty	105	0.0971 Hectare	302/16-17/MM/LT/CRPS/ DOC/M-3707/16 Dtd. 16.11.2016	15.11.17
463	Ramachandra.M.K. S/o Krishnan Maniyani, Kurumunchi House, P.O.Mouvar, Kasargod 671 543	Kooveri	Taliparamba	145/2	0.0971 Hectare	303/16-17/MM/LT/CRPS/ DOC/M-3685/16 Dtd. 16.11.2016	15.11.17

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7. www.keralasoils.gov.in

Geology of Kerala

Physiography

Physiographically the state can be divided into four domains from east to west, viz., the Western Ghats, the foothills, the midland and the coastal low-land.

Western Ghats

The hill ranges of the Western Ghats rise to an altitude of over 2500m above the MSL and the crest of the ranges marks the inter-state boundary in most of the places. A breach in the continuity of the ranges marks the Palghat Gap with a sinistral shift of 50 km between the shifted crests. The Wynad plateau and the Munnar (10°57'00": 77°31'00") upland fall within this zone.

Foothills

The foothills of the Western Ghats comprise the rocky area from 200 to 600m above MSL. It is a transitional zone between the high-ranges and midland.

Midland region

This forms an area of gently undulating topography with hillocks and mounds. Laterite capping is commonly noticeable on the top of these hillocks. The low, flat-topped hillocks forming the laterite plateau range in altitude from 30-200m and are observed between coastal low-land and the foothills.

Coastal low-land

Coastal low-land is identified with alluvial plains, sandy stretches, abraded platforms, beach ridges, raised beaches, lagoons and estuaries. The low-land and the plains are generally less than 10m above MSL.

Rivers

Kerala is drained by 44 rivers, many of which originate from the Western Ghats. Except Kabini, Bhavani and Pambar which are east-flowing, the rest of rivers are west-flowing and join the Arabian Sea. A few of them drain into the backwaters. Most important rivers (with their length in km in parenthesis) of the state, are Chandragiri(105), Valapatnam (110), Achankovil (120) Kallada (121), Muvattupuzha (121), Chalakudy (130), Kadalundi(130), Chaliyar (169), Pampa (176), Bharathapuzha (209) and Periyar (244).

Geology

Geologically, Kerala is occupied by Precambrian crystallines, acid to ultra basic intrusives of Archaean to Proterozoic age, Tertiary (Mio-Pliocene) sedimentary rocks and Quaternary sediments of fluvial and marine origin (Fig.I). Both the crystallines and the Tertiary sediments have been extensively lateritised.

Based on the detailed studies by GSI during the last three decades, the following stratigraphic sequence has been suggested.

	Quaternary (Q)	Pebble bed Kadappuram Formation (marine) Periyar Formation (fluvial) Viyyam Formation (fluvio-marine) Guruvayur Formation (Palaeo-marine)
	Mio-Pliocene (N 12) (Tertiary Tt)	Latente Warkalli Formation (Sandstone and clay with lignite intercalations) Quilon Formation (Fossiliferous limestone and calcareous marl).
	Mesozoic (61-144Ma.)	Gabbro / Dolerite dykes
P	Younger granites (550-390Ma)	Alkali granites, granite, Granophyres and other acid intrusives
R		
O	Chamockites (younger) (550Ma)	Massive chamockite, incipient chamockite, Cordierite chamockite
T		
E	Ultrabasic/basics (Younger) (700-600Ma)	Perinthatta anorthosite, Kartikulam gabbro, Adakkathodu gabbro, Begur diorite
R		
O	Basic Intrusives (2100-1600Ma)	Agali- Anakkatti dykes
Z		
O	Migmatite/gneiss/older granitoid (PGC II) (Ptm)(2500-2200Ma)	Gamet-biotite - gneiss with associated migmatites, quartzo-felspathic gneiss, hornblende gneiss, hornblende-biotite gneiss, quartz- mica gneiss
I	Vengad (APtv) Group	Quartz-mica schist and quartzite, conglomerate
C		

A	Charnockite(older) (Ac) 2600Ma	Mafic granulite, pyroxene granulite, Banded magnetite quartzite and gneissic charnockite
R		Quartzite, mafic granulite, calc-granulite garnet-biotite-sillimanite-cordierite gneiss, garnet-biotite-gneiss, leptynite
C	Khondalite Group (Ak)	
H	Peninsular Gneissic Complex (PGC I) (Ap) (3000Ma)	Foliated granite, homblende gneiss, pink granite gneiss, biotite gneiss
A	Layerd ultrabasic - basic Complex (3100- 3000Ma)	Peridotite, dunite, pyroxenite, anorthosite
E		
A	Wynad Schist Complex (Aw) (3200Ma)	Talc-tremolite schist , fuchsite quartzite, amphibolite, calc granulite, quartz sericite schist, kyanite quartzite, garnet - sillimanite gneiss/ schist, magnetite quartzite, kyanite mica schist
N		

Base not recognised

Archaean

Rocks of Archaean Era encompass a wide spectrum of litho-assemblages ranging from khondalite, charnockite, gneiss and meta-sedimentary rocks occupying the Western Ghats including the foothill region. The Khondalite and Charnockite Group are correlated with the Eastern Ghat Supergroup based on the overall similarity in lithology and geochronology.

Wynad Supracrustals

The meta-sedimentary, and ultramafic rocks occurring in the Wynad District generated keen interest among the GSI geologists in 1970s. The high-grade Wynad supracrustal rocks are correlated with the Sargur Schist Complex of the Karnataka (Nair, *et al*, 1975; Adiga, 1980). The schistose rocks are characterised by intense deformation, medium to high-grade metamorphism, migmatitisation and lack of sedimentary structures. The schist complex consists of meta-ultramafites, schist, meta-pelites, meta-pyroxenite, serpentinite, talc-tremolite rock and amphibolite.

The meta-sedimentaries occur as thin linear bodies within the migmatites. These consist of pelites, psammopelites and quartzites. The predominant rock types are corundum- mica schist, kyanite schist, quartz- mica schist and iron stone.(Anil Kumar *et al*,1993).

These rocks occur as narrow arcuate belts, lenses, and other forms of enclaves within Peninsular gneisses and charnockite. The group can be divided into medium-to low- grade metasedimentary

rocks and meta-mafic and meta-ultramafic rocks. The lithology of the high-grade schists consist of quartz-mica schist with kyanite, quartz-sericite schists, quartzites, magnetite quartzite, fuchsite quartzite and meta-ultramafites. Their contact with the surrounding gneisses are concordant due to later co-folding. Several linear belts of such high-grade schists and ultramafite enclaves occur as isolated bands within the granulite and gneissic terrain of Kasaragod and Kannur districts.

Layered ultrabasic- basic complex

Remnants of layered basic- ultrabasic complex are reported from Attappadi area (Nambiar 1982). The ultramafics are represented by meta-pyroxenite, meta-dolerite, peridotite with chromite and meta-gabbro (Lahiri *et al*, 1975). The anorthosite of Attappadi is only a few metre thick. Occurrences are around Narsimukku, Pudur and Melmulli areas. An east-west trending narrow lenticular body of serpentinitised dunite is reported from Punalur mica mine belt.

A minor body (200 m long and 10-15m wide) of anorthosite was reported within pyroxene-granulite-charnockite terrain from Katanjari *parambu* of Kasargod district (Adiga, 1979).

Another dismembered layered igneous complex consisting of alternate layers of peridotite and pyroxenite within charnockite was traced around Panathadi area of Kannur District (Adiga, 1980).

Peninsular Gneissic Complex- I (PGC-I)

The rocks of Peninsular Gneissic Complex (PGC) are exposed in the northern parts of Kerala adjoining Karnataka. This consists of a heterogeneous mixture of granitoid materials. The equivalent rocks of PGC in Kerala include hornblende-biotite gneiss (sheared), biotite-hornblende gneiss, foliated granite and pink granite gneiss. Granite gneiss is exposed along the intra-State boundary of Palakkad District as well as in Idukki District. Pink granite gneiss, though widespread, is best developed in Devikolam (10°04'00": 77°06'30"), and Udumbanchola (10°00'00":77°15'00") areas of Idukki District.

This consists of gneisses showing preponderance of either hornblende or biotite. The percentage of hornblende and biotite varies from place to place. This can be traced from Manantoddy to further northwest upto the west coast. West of Manantoddy, the rock is hornblende gneiss. It shows coarse granulitic to gneissic texture and is composed of hornblende, feldspar, quartz, pyroxene, biotite and garnet. Alkali feldspar shows alteration to clay and sericite. Biotite is mainly secondary after hornblende.

Around Mahe and Thalasseri, the biotite gneiss (Nair *et al.*, 1974) is medium-grained and gneissose rock consisting of alternate layers of mafics and felsics.

Khondalite Group

The Khondalite Group of rocks include calc-granulites, quartzite and para-gneisses of pelitic parentage. Para-gneisses are ubiquitous and are well-developed in the southern part of the state, particularly, in Thiruvananthapuram and Kollam districts. Calc-granulite and quartzite occur as bands within the para-gneisses and amidst the Charnockite Group and migmatitic gneisses.

Calc-granulite

Calc-granulite occurs as linear bands mainly in the eastern part of Kollam and Thiruvananthapuram District, northeast and east of Munnar in Idukki district and in parts of Palakkad District. The rock is generally medium to coarse-grained, inequigranular and granoblastic in texture. It consists of diopside and plagioclase. Minerals like wollastonite, scapolite, calcite, garnet, spinel, sphene, quartz and apatite are also present in different proportions.

Quartzite

Quartzite occurs as linear bands amidst the khondalitic gneiss, charnockite and migmatitic gneisses. These bands are exposed between Pathanamthitta (9°15'45": 76°47'00"), and Muvattupuzha (9°59'00": 76°35'00") in Ernakulam District. The rock is coarse-grained and generally white in color with a brownish coating on the weathered surface. It consists of granular quartz with subordinate feldspar, garnet and iron oxide.

Garnetiferous biotite-sillimanite gneiss

Garnetiferous biotite- sillimanite gneiss is well-developed in the southern part of the state. It occurs in close association with the migmatitic gneisses, charnockite and charnockite gneisses, mostly as weathered outcrops. Sillimanite- rich bands occur alternating with garnet - rich portions or with quartzo-feldspathic layers. Rutile and iron oxides are the common accessory minerals.

Charnockite Group

Charnockite Group shows great diversity in lithology comprising pyroxene granulite, hornblende pyroxenite, magnetite quartzite, charnockite and hypersthene-diopside gneisses and cordierite gneiss. Charnockite and charnockitic gneiss have preponderance over all other crystalline rocks covering 40 -50% of the total area of the State. The charnockites are well-exposed in the central and northern parts of Kerala including the high-hills of the Western Ghats. Charnockite has lesser predominance in Thiruvananthapuram and Kollam districts. In Attappady, the Bhavani Shear Zone is limited by the charnockite massif of the Nilgiri plateau on the north. Though the interrelationship of the Charnockite and the Khondalite is not clear, in many places there are intercalations rather than interlayering of one with the other. In Palakkad District, the Khondalite Group of rocks structurally overlie the charnockite. The occurrence of pyroxene granulite as fine and linear bodies within the charnockite of Tirur, suggests that charnockite is a product of migmatization of pyroxene granulite (Vidyadharan and Sukumaran, 1978). Charnockite and charnockitic gneiss consist of quartz, feldspar and biotite. Garnet-bearing variants are also observed. The basic charnockite is more granulitic and contains clino- and ortho- pyroxenes, feldspar, biotite and garnet whereas the acid variety (alaskite/ enderbite) is greenish black, coarse-grained, massive to poorly foliated rock consisting of quartz, feldspar and pyroxenes. Basic charnockite has low- potash feldspar and more clinopyroxene. This is devoid of garnet and graphite, but shows a little amount of biotite (Chacko, 1922). Due to the polygenetic nature of the rock, geochemical and

mineralogical variations do exist between charnockites reported from Kerala. In the Periyar valley region, in Idukki and Kottayam districts, pyroxenite and alaskite constitute the Charnockite Group (Nair, and Selvan, 1976).

The available age data indicate that the massive charnockites are older and their ages range between 2155 and 2930 ± 50 Ma (Soman, 1997).

Also charnockite has been subjected to retrogression and migmatization.

Archaean to Palaeo-Proterozoic

Vengad Group

A succession of schistose rocks in parts of Tellicherry taluk in Kannur district is described as Vengad Group of rocks (Nair, 1976). The Vengad Group comprises of basal conglomerate, quartzite and quartz-mica schist. The contacts are highly gradational. The conglomerate shows graded bedding and quartzite shows current-bedding.

An angular unconformity marked by conglomerate horizon extending from Kuthuparamba ($11^{\circ}49'30''$: $75^{\circ}34'00''$) to Vengad ($11^{\circ}53'30''$: $75^{\circ}32'00''$) in Kannur district, separates the younger quartz-mica schist and quartzite from the older schistose and gneissic rocks. The lithology consists of basal oligomictic conglomerate, quartzite, quartz-biotite-muscovite schist and biotite quartzite. The schists are exposed over an area of 300 sq km having a lensoidal shape with its longer axis trending in NW-SE direction. The basement rock is gneissic or migmatitic with relicts of high-grade schists, ultramafites and quartzites of the Wynad Schist Complex. Four major occurrences of conglomerate are noticed in a NW-SE direction over a length of 10 km.

Lack of migmatization, presence of primary structures and low-grade metamorphic minerals characterize these rocks.

Migmatite\ Gneiss\ Granitoid (PGC-II)

Quartzo-feldspathic gneiss

Migmatite includes variety of gneissic rocks which are next in importance to charnockite as a dominant litho-assemblage. Quartzo-feldspathic gneiss occurring along the contact zone between garnet-biotite gneiss and garnet-sillimanite gneiss of Thiruvananthapuram area represents an original intrusive phase. It is a feebly foliated, fine-grained, leucocratic granulitic

rock occurring in close association with garnet-sillimanite gneiss and garnet-biotite gneiss with gradational contact relationship in the southern parts of Kerala. The origin of this rock is attributed to stress-induced injection of acid materials into the host rocks (Nageswara Rao and Raju, 1970).

Garnet- biotite gneiss

Garnet-biotite gneiss is well-developed in the northeastern parts of Kollam and Thiruvananthapuram districts. This carries inclusions of pyroxene granulite and disseminations of graphite at many places (Jacob, 1965). It consists of quartz, microperthite, biotite, plagioclase and graphite. This rock also occurs in the northern parts of Palakkad District in close association with khondalite, charnockite and hornblende gneiss. These rocks are subsequently formed by retrogression and migmatization of the Khondalite Group.

East of Kottayam and Idukki districts, light grey, pink garnet-bearing biotite gneiss is widely seen. It is a gneissic granulite. The presence of biotite and concentration of garnet in layers give the rock a banded appearance. (GSI, 1995).

Hornblende gneiss, hornblende-biotite gneiss, quartz- mica gneiss

These rock types occur within the migmatites and associated retrograded charnockite. The naming is purely based on the preponderance of the minerals and these rocks occur in the Periyar valley area east of Thodupuzha. (Nair and Selvan, 1976). These medium-grained, foliated, banded rocks consist of alternate layers rich in hornblende or biotite. Bands of coarse to medium-grained light grey to pink granite traverse these rocks. Hornblende- biotite gneiss showing lit par lit relationship with the granite gneisses is the dominant rock type in the Periyar valley. This is admixed with contorted bands and enclaves of pyroxene granulite, calc-granulite and hornblende- biotite granulite. These are highly deformed.

In the Palakkad gap area, these gneisses occur over a large area, showing migmatitic structures such as agmatites, nebulites, schlierens, ptygmatic folds, quartzo-feldspathic neosomes and ferromagnesian palaeosomes. (Muraleedharan and Raman, 1989).

Proterozoic

Basic intrusives

Basic dyke emplacements within the Archaean crystalline rocks of Kerala are spread throughout the entire length and breadth of the state. Of these, dolerite dyke occurring north of the Palakkad gap had given Proterozoic age whereas in the south this dyke is of Phanerozoic

age. The older basic dykes are metamorphosed along with the country rocks and are now recognised as epidiorite and amphibolite. Another set of dykes, apparently post-dating the regional metamorphic event are subjected to thermal metamorphism. Clouding and sericitisation of feldspars and uralitisation of pyroxenes are common in such dykes. In the absence of chronological data such dykes are considered to be of Proterozoic age. Most of the dykes are vertical in disposition and are traced as linear features. *En-echelon* pattern of some dyke swarms suggests that magmatic intrusion was controlled by shearing of the host rock., Mineralogically, the dykes are made up mostly of plagioclase feldspar and pyroxene(augite and aegirine-augite) with magnetite, apatite and olivine as accessories. The ENE-WSW dolerite dyke swarm of Agali- Anakkati area in Palakkad District within the Bhavani Shear zone showed in isotopic age from 1900 to 2000 Ma (Radhakrishna and Mathew Joseph, 1993). The rock is highly jointed and altered (Jacob, 1965). Similar basic intrusive bodies are traced in the Achankovil shear zone in Vazhamuttam (9°14'00":76°46'40"), Kulasekhara pettah (9°16'00":76°47'45") (Thomas Mathai *et al*, 1984). Sheet-like bodies of fine to medium-grained, dark coloured meta-gabbro occurs in Periyamuli (11°13'00"; 76°43'00") for about 20 km in ENE-WSW direction, Karuvarai (11°04'00"; 76°32'30") and few gabbro bodies south of Thuvapattu (11°06'30"; 76°44'45") in Attapady valley, Palakkad district. Meta-gabbro forms small hillocks east of Payyanam (10°31'00"; 76°21'00"), southwest of Kainur (10°36'00"; 76°09'00") and Chemmannur (10°41'00"; 76°01'00"), Vaga (10°35'00"; 76°06'00") and Arthat (10°37'00"; 76°03'00") in Trichur District (Mahadevan, 1962).

Dykes in north Kerala show , NW-SE, NE-SW and NNW-SSE trends. Host rocks are charnockite, gneisses and supracrustals(Radhakrishna *et al* 1991). Dykes are mainly dolerite but occasional meta-gabbro or meta-norite are also traced. In Agali- Anaikatti area of the Attapadi- Bhavani shear zone, dykes are confined within a 20-25km wide zone and extend from west of Agali to eastward for about 100km following a ENE-WSW direction.(Radhakrishna, *et al*, 1999).

The rock consists of 95% calcic plagioclase, 5% clinopyroxenes and subordinate amounts of magnetite. There are a number of concordant and discordant basic intrusive of dolerite and gabbro,meta-gabbro, meta-norite, meta-pyroxenite and anorthositic gabbro. These are not mappable and are seen in Pappinpra (11°06'20", 76°05'56") Velli(11°04'00":76°07'45"),

Kalpetta (11°04'12":76°05'32"). An extensive basic diorite has been mapped over an area of 25 sq km at Panavalli (11°53'30",76 ° 2'30"; Nair, *et al* 1976).

The rock is composed predominantly of calcic plagioclase (95%) rest clinopyroxene with subordinate amount of magnetite. Another relatively small body of anorthosite is around Kalivalli (11°51'30"; 76°12'30") in south Wynad taluk, Wynad District.

Ultrabasic/ basic intrusive (younger)

Perinthatta Anorthosite

A major elliptical body of anorthosite spread over an area of more than 50 sq.km is reported from Perinthatta (12°10'00":75°17'30";Vidyadharan *et al*, 1977). The anorthosite is with a very irregular border and a tongue-like projection into the country rock of charnockite and pyroxene granulite of Kannur District.The anorthosite is coarse to very coarse-grained, and shows variations from pure anorthosite to gabbroic anorthosite and gabbro from the centre to the periphery suggestive of zoning. The modal composition corresponds to nearly 95% plagioclase (An₅₈₋₇₂) and <10% clinopyroxene, apatite, calcite and magnetite. The gabbroic variants have more of mafics.

The structural configuration suggests that the anorthosite was emplaced in synformal structure as a phacolith. The flow-banding in anorthosite indicates its syntectonic emplacement. The Perinthatta anorthosite is assigned a Proterozoic age.

Ezhimala gabbro-granophyre complex

The major high-relief feature proximal to the Perinthatta anorthosite is constituted by the gabbro-granophyre Complex (Nair and Vidyadharan, 1982). The granophyre massif is fringed by the gabbro to the east and south. The Bavali fault running north of the complex is presumed to have dismembered the body from the Perinthatta anorthosite. Locally, the gabbro has anorthositic differentiates within it. Veins of granophyre traverse the gabbro at places give rise to breccia-like structures. The granophyre shows a sharp contact with the gabbro into which it intrudes. Rapakivi structure is observed within the granophyre. According to Nair and Vidyadharan (1982) rocks of Ezhimala complex display bimodal character with conspicuous basic and silicic components.

Kartikulam and Karraug Gabbro

Two gabbro bodies namely Kartikulam gabbro and Karraug gabbro are located northeast of Manantoddy bordering the Karnataka (Nair *et al*, 1975).The gabbro body at Kartikulam

occupies an area of about 45 sq.km. with an elliptical shape within the gneissic terrain. The actual contact with the gneiss is concealed but it is believed to be sharp. At many places, the gabbro is agmatized by coarse quartzo-feldspathic material.

The gabbro is coarse-grained and of uneven texture consisting essentially of plagioclase and pyroxene. Variation to anorthositic composition is noticed. The plagioclase is of labrodorite composition and shows alteration to sericite at places (Rema Warriar and Venkataraman, 1986). The pyroxenes are uraltized to varying degrees.

The Karraug gabbro body is located east of it and south of the Kabini River. It shows similar features as that of the Kartikulam gabbro. The rock shows phenocrysts of feldspar set in a fine matrix of flaky minerals.

Adakkathodu gabbro

At Adakkathodu(12°31'35"; 75°10'25"), northwest of Manantoddy, a 8 km long meta-gabbro, is intrusive into the basement gneisses on three sides and the Wynad schists in the east. It occurs proximal to the Bavali fault/lineament. It encloses, patches of quartz-sericite schists and biotite gneiss. (Nair *et al*, 1975). The rock is mesocratic to melanocratic, medium to coarse grained consisting mainly of pyroxene and plagioclase. The rock shows sub-ophitic texture and consists of enstatite and intermediate plagioclase of andesine-labrodorite composition (Nair *et al*, 1976). While the gabbro bodies of Kartikulam and Karraug to the east are olivine- bearing, the Adakkathodu gabbro is enstatite- bearing. Olivine, augite and zoned feldspars are recorded from the eastern body while the western body is enstatite- bearing, without the zoning in feldspar.

Begur diorite

An extensive basic diorite body (25 sq.km.) has been traced north of Manantoddy in the Begur Reserve Forest (Nair, *et al*, 1976). It extends from Thirunelli to the Karnataka State border. The southern contact is with augen gneisses indicating emplacement along shear zones while the northern one with sillimanite gneisses. Aplite and dolerite veins are seen traversing the rock mostly parallel to the regional foliation. The rock is mesocratic to melanocratic, coarse-grained and consists of pink to grey feldspar, hornblende and biotite.

The rock is feebly gneissic and at places porphyritic (Rema Warriar and Venkataramana, 1986). The phenocrysts are mostly plagioclase. Mafics at times swerve round the phenocrysts

giving rise to augen structure. Hornblende is altered to biotite and chlorite. Accessories include epidote, apatite, zoisite and opaques.

The diorite shows tholeiitic characteristics. The diorite is considered as a transitional rock from the gabbro with which it is spatially associated in the nearby area with the plagioclase become more sodic.

Charnockites [younger]

The area south of Palakkad exposes charnockite over large areas. The charnockites are represented by acid micropertitic charnockite and intermediate gneissic charnockite occurring in association with garnetiferous biotite gneiss and khondalite (Narayanaswamy and Purna Lakshmi, 1967). Massive charnockites are developed on a regional scale and occur as mappable litho-units (Raju and Gopalakrishnan, 1972), around Nedumangad. The massive charnockites in majority of the cases are acid and intermediate in composition. The rock is medium to coarse-grained and shows xenoblastic texture. It is composed of quartz, feldspar, pyroxenes, garnet and graphite with accessories like biotite, zircon, apatite and monazite.

Small patches, lenses or veins of charnockite occur in the gneisses of amphibolite facies in the Thiruvananthapuram area (Nageswara Rao and Raju, 1970). Here, the incipient charnockites are thought to have formed by transformation of paragneisses. (Hansen *et al*, 1987; Santosh *et al*, 1990). A few dominant varieties of incipient charnockites have been categorized by Ravindra Kumar and Chacko (1986) on the basis of their mode of occurrence, association and chemical processes involved in their development. At Kottavattom, north of Thiruvananthapuram, the charnockite consisting of quartz, K-feldspar, plagioclase, biotite, garnet and orthopyroxene as essential minerals and graphite, zircon, ilmenite, monazite, apatite, rutile and magnetite as accessory minerals are products of transformation of gneisses into coarse-grained charnockites along a system of conjugate fractures and foliation planes. (Saritha and Santosh, 1996).

Cordierite or Charnockite Gneiss

Cordierite bearing large linear zones of charnockites were reported around Pathanamthitta (Nageswara Rao and Jacob, 1967) area. Cordierite charnockites or orthopyroxene-garnet-cordierite bearing gneisses (Sinha Roy *et al*, 1984; Santosh, 1987) occur as discontinuous bodies in the northern parts of Thiruvananthapuram and in selected stretches further south around Koliakode. The rock is composed of cordierite, orthopyroxene, plagioclase, K-feldspar, spinel and quartz and a little garnet and biotite.

The growth of cordierite and orthopyroxene took place concomitantly during the conversion of gneisses to charnockites. At Nellikala in Pathanamthitta, the cordierite occurs as anhedral grains of variable sizes in the charnockites (Nandakumar, 1996).

Younger granites

The granites and its variants occur around Chengannur in Alappuzha and Pathanamthitta districts, Munnar in Idukki District, Peralimala in Kannur district and Kalpetta and Ambalavayal in Wynad District. Many of these granites occur as later emplacements along crustal fractures and faults. The Achenkovil – Tamraparni tectonic zone, the Attapadi shear zone, Bavali shear zone and the Moyar shear zone are all marked by granitic emplacements

Ambalavayal granite

The Ambalavayal (11°37'15"; 76 °03'30") granite having an oval shape covers an area of 50 sq.km. The granite is light pink in color and is composed of quartz, pink feldspar, hornblende and biotite. The pegmatites traversing the granite show occasional flakes of molybdenite. The Amabalavayal granite occurring in the proximity of the Bavali lineament is thought to be emplaced during its reactivation. The granite is intrusive into the hornblende-biotite gneiss (migmatite) and the Wynad Supracrustals (Anilkumar *et al*, 1993). Four types of granites are recorded, viz., foliated granite, pink granite, grey granite and aplitic granite.

The foliated granite consists of quartz, microcline, orthoclase, plagioclase, biotite, hornblende, chlorite, calcite and zircon. The pink granite is a medium-grained consisting of quartz, microcline, plagioclase, sericite, chlorite, apatite, rutile, zircon and biotite. The grey granite is a medium-to fine-grained rock consisting of quartz, microcline, sericite, biotite, chlorite and calcite. The aplitic granite is a very fine-grained massive rock consisting of quartz, microcline, orthoclase, plagioclase, sericite, biotite, calcite, chlorite, apatite and opaques.

K-Ar age of Ambalavayal granite (560 ± 30 Ma, Nair, *et al*, 1985) is lower than Rb-Sr age (595 ± 20 m.a Santhosh *et al*, 1986), but is higher than that of U-Pb-age (505 ± 20 ma, Odom, 1982). The reason for this variation in the date may be attributed to the different techniques adopted and also to the presence of biotite of multiple generation.

Munnar granite

The Munnar (10°05'00"; 77°05'00") granite with an areal extent of 50 sq km is an E-W trending irregular body emplaced within the migmatite and apophyses extend into the surrounding gneisses. The granite dated to be 740 ± 30 m.y (Odom, 1982) is traversed by pegmatite, aplite

and quartz veins. Three types of granite are recorded. Foliated granite, Coarse pink granite and medium grey granite. The foliated granite consists of stringers and streaks of mafics consisting of biotite, hornblende, chlorite and magnetite alternating with felsics consisting of quartz and potash feldspar. Potash feldspar is predominantly orthoclase. The closely spaced foliations are persistent but discontinuous. This granite forms a domal structure south of Munnar. It has a sharp contact with the migmatite. Coarse pink granite consists of pink feldspar, quartz and a little amount of mafics. Mafics are biotite, sphene and hornblende. Medium grained grey granite, consists of quartz, feldspar, biotite, chlorite, zircon, sphene, epidote, calcite and sericite.

Major element data of Munnar granites do not show any significant variation amongst the three granites. Content of iron is more in medium grey granite and foliated granite. Different variation diagrams reveal a slight tendency towards alkali granite. The foliated granite shows more percentage of orthoclase than the other two granites. (Nair and Anil Kumar, 1990)

Ezhimala granophyre – granite complex

A prominent granophyre body forms the hill known as Ezhimala, covering an area of 20 sq km in Kannur District. The granophyre is associated with gabbro and granite and is traversed by dolerite dykes. Two types of granophyres have been deciphered; coarse-grained leucocratic one and medium-grained one with more mafics. Drusy type, confined to higher elevation contain numerous vug lines with secondary minerals like quartz and calcite. Rocks of Ezhimala Complex display bimodal character with conspicuous basic and silicic components and total lack of rocks of intermediate composition typical of anorogenic suites (Nair and Vidyadharan, 1982). The granophyre is pink to ash grey coloured, massive, fine to coarse-grained, holocrystalline with equigranular texture. The granites are of two types. The major light pink granite with less of mafics show gradational relationships with the more greyish porphyritic variant (Varadan and Venkataraman, 1976).

Granophyre shows a typical granophyric intergrowth of quartz and feldspar forming the ground mass with phenocrysts of potash feldspar and some zoned plagioclase. The groundmass is totally of orthoclase. Augite is the chief ferro-magnesium mineral. Accessories include apatite, sphene, epidote, calcite and magnetite. Texturally the rock shows variation from coarse-grained leucocratic types with less mafics in the southern portion of the hill and medium to coarse grained type towards northern parts.

Minor outcrops of rapakivi granites are recorded within the granophyres of Ezhimala Complex. Anorthosites of Perinthatta and Kadannappally and granite, granophyre of Ezhimala together form the Ezhimala Complex. The light pink granite with less mafics is the major variety showing a gradational relationship with the more greyish porphyritic variety. The porphyritic variety, at places, shows rapakivi structure. The porphyritic granite shows mantled feldspar megacrysts. This variety grades into porphyritic granites without mantled feldspar and at higher levels grades into granophyre. The granite contains 60% of orthoclase feldspar, 5-10% of plagioclase, 20-25% of quartz with 4% of biotite, epidote, magnetite and fluorite. The low initial Sr_{87}/Sr_{86} ratio indicate that the rocks have a relatively minor amount of older sialic material. The Rb-Sr age of the granophyre is estimated to be 678 m.y (Nair and Vidyadharan, 1982). The Ezhimala Complex lies in close proximity to the Bavali lineament suggesting reactivation along the lineament and intrusion of the body.

Kalpatta granite

The Kalpatta ((11°36'15";76°05'15")) granite is an oval- shaped intrusive into the Wynad schist and covers an area of 44 sq km (Rao and Varadan, 1967). The rock is grey coloured, medium-grained, homogenous biotite granite and has sharp contact with the country rock. A feeble foliation is imparted to the granite at places by biotite flakes. Xenoliths of amphibolite / hornblende gneiss are visible near the periphery. Irregular veins of pegmatite / aplite traverse the granite and also the enclaves. The K-Ar age of the biotite from the Kalpatta granite is dated as 512 ± 30 m.a (Nair *et al*, 1985) and 527 m.a (GSI). Presence of enclaves and absence of significant replacement textures along with the geochemical characteristics assign a magmatic parentage for the granite. The proximity of the pluton to the Bavali lineament probably suggests intrusion along this fracture.

Three types of granites such as coarse grained biotite-granite, fine grained biotite granite, and porphyritic granite are mapped on the basis of texture, colour and mode of occurrence. Coarse-grained granite is a massive bluish grey rock with large xenoblasts of quartz and feldspars. The accessories include biotite, zircon, apatite and sphene. Blastesis of feldspar and sphene are common. Microcline, orthoclase, and plagioclase are seen as the major feldspar. Plagioclase composition varies from albite to oligoclase. This rock is exposed in Trikkaiappetta (11°35'04":76°08'41":), Manikkunnu (11°35'41":76° 07'09"), Kuttamangalam (11°30'08":76°07'11":) (Anilkumar *et al*, 1993).

Fine biotite-granite is a fine grained massive rock exposed around Muttimala (76°06'38":11°37'06"). It consists of orthoclase, quartz, microcline, biotite, sericite, zircon, sphene, apatite and opaques. Myrmekitic quartz is recorded. Pophyritic granite consists of myrmekitic quartz, microcline, sericite and biotite. Very coarse grained biotite with included crystals of orthoclase, microcline and albite are common. Except for the texture, all the three granites show similar characters. (Anilkumar, *et al* 1993). Based on Rb-Sr dating , Kalpatta granite is dated 765 Ma. (Odom 1982).

Chengannur granite

The Chengannur (9°18'45"; 76°31'00") granite in Pathanamthitta District is an oval shaped body with the long axis trending in east-west direction covering an area of 15 sq.km in and around Chengannur. The granite is intrusive into the charnockite gneisses. The body is emplaced close to the Achankovil shear zone. K-Ar date of the hornblende indicates an age of 550 m.a (Soman *et al*, 1983). The Chengannur granite is inferred to be a post kinematic granite of magmatic parentage.

Two types of granites are recorded. One is medium-grained pink granite and the other is coarse-grained grey granite. The former consists of quartz, perthitic feldspar, plagioclase, biotite, hornblende, apatite and zircon. The composition of plagioclase varies from albite to oligoclase. Microcline perthite is also seen. The coarse grained grey granite consists of perthite, plagioclase, hornblende, biotite, quartz with occasional occurrence of hypersthene,apatite and zircon. Hornblende and biotite are less common by occurred minerals than hypersthene. Relicts of hypersthene are also seen. This granite may be a product of granitisation of charnockite. K₂O content always exceeds that of Na₂O . The high SiO₂,high alkali, high Fe/Mg ratio, high values of Gallium indicate that the granite belongs to alkali type. It might have an origin from recycled and rehydrated continental crust. (Nair and Anil Kumar,1990).

Peralimala granite

The Peralimala (11°09'19":75°38'46") alkali granite is a linear intrusive body emplaced along the axial trace of a mega fold in EW direction. Peralimala intrusive body occurs as a diatreme of alkali composition with a maximum linear extension of 15 km and a width of 3 km. Based on colour, texture, composition and mode of occurrence four types of granites are identified. These are pink gneissic granite, porphyritic granite, grey granite and pink granite. Pink alkali granite is a coarse-grained rock consisting of microcline, orthoclase, plagioclase, quartz,

hornblende, epidote, aegirine, sphene, calcite, perthite and apatite. Quartz is present in only subordinate amounts. Feldspar content is very high. The preferred orientation of feldspar gives a crude alignment. At Perumpunna, (75°44'00":11°55'28") pink gneissic granite shows preferred orientation of biotite and pyroxene. The porphyritic granite occurs as a lensoidal body containing quartz, feldspar, pyroxene and hornblende. Feldspar forms the phenocrysts in a matrix of quartz-feldspar and mafics. Grey granite is a coarse- to medium- grained rock with microcline, quartz, orthoclase, perthite, hornblende and zoisite. Light grey granite is a medium-grained rock consisting of microcline, orthoclase, plagioclase (albite to oligoclase), epidote, aegirine, hornblende and rutile. The major element chemistry of the granite do not show much variation. The pink granite shows high content of potash. A negative correlation for K₂O content with respect to SiO₂ is very pronounced for pink granite owing to its alkaline nature. Barium and strontium show very high values for Peralimala granite. (Anilkumar *et al*,1993).

Sholayur granite

The Sholayur (11°04'15";76°42'00") granite, is exposed around Kuttiyadikal Mala (11°01'52":76°42'00") and Vachchpathi (11°04'15":76°44'00"). It is a homophanous medium-grained, pink coloured granite, consisting of quartz, orthoclase, microcline, oligoclase, perthite, aegirine augite, biotite, hornblende and sphene. In some places, calcite, apatite, sericite are also observed. The schlierens mark the contact zone of the granites with the host rock. This granite is emplaced within the Wynad supracrustals. SiO₂ varies from 58.76 to 73%, Al₂O₃ 14% to 17%, Na₂O 1.8% to 2.4% and K₂O 0.8 to 1.5%. The distribution of SiO₂ is highly non-uniform within the same type of granite. The pink granite is becoming alkali granite at places.(Anil Kumar and Nair,1992).

Intermediate intrusives

The syenite body at Mannapra (10°30'00";76°32'00") is exposed as an elongated NW-SE trending body covering an area of 8 sq km in Thrissur District. The syenite intrusive, makes sharp contact with the charnockite near the charnockite-migmatite contact. The rock is medium to coarse- grained at its peripheries and tends to be coarse-grained towards the centre. Mineralogically, the rock is composed of alkali feldspar, orthopyroxene, clinopyroxene and amphibole with minor amounts of plagioclase, biotite and opaques. A small syenite (Angadimugar syenite) body is located in Kumbala village (12°35'15"; 76°07'00") and about 20 km east of Kumbala in Kasaragod District. The intrusive body has an elliptical outline and covers an area of 5 sq km. The body is intrusive into the Khondalite Group and encloses

enclaves of amphibolite in the peripheral parts. The rock is medium to coarse grained, light grey and massive.

Mesozoic intrusives

Basic intrusives

Basic intrusives in Kerala, mainly represented by dyke swarms in NNW-SSE to NW-SE trend, cut across all the metamorphic rocks and the earlier structural trends. Their unmetamorphosed nature and stratigraphic relation with the country rocks prompted their correlation to the Deccan Trap volcanism.

The basic dykes have been emplaced into the migmatites and charnockite in NNW-SSE to NW-SE and ENE-WSW directions along distensional and shear fractures respectively. Dolerite dykes of Kerala are mostly quartz tholeiites rarely clinotholeiite. The basic dykes of Pathanamthitta ($9^{\circ}15'45''$: $76^{\circ}45'30''$) are genetically unrelated types. These dykes have not undergone any internal differentiation during intrusion.

The variation in the chemistry of individual dykes may be due to the cogenetic differential sequence. Dolerite dykes intrude the country rocks at an angle greater than 80° . The dolerite dykes of Kuttuparamba ($11^{\circ}49'30''$: $75^{\circ}34'00''$) in Kannur District shows cross cutting relationship with all the formations. The basic dykes of Vamanapuram ($8^{\circ}43'00''$: $76^{\circ}54'00''$) are either gabbroic or doleritic intruding the gneissic rocks. These are trending NNE to SSW and NNW to SSE directions and are unmetamorphosed. Mineralogically all these dykes show more or less same composition except the meta-dolerites. Variation in the trace elements like Ti, Zr can be attributed to the differential degree of partial melting of the mantle material. (Nair and Gopala Rao, 1989).

The unmetamorphosed Idamalayar gabbroic dyke with a NNW-SSE trend is traced for over 80 km in the central part of Kerala. The rock is mesocratic, medium-grained, porphyritic and is composed of plagioclase (andesine to labradorite), hornblende and opaques. The reported age of 75 m.y for the Idamalayar dyke (Subramaniam, 1976) links it in time-relationship with Deccan Trap volcanism.

The NNW-SSE trending leucogabbro dykes in central Kerala dated by whole rock K-Ar method gave an age of 81 ± 2 m.y and the NW-SE trending dolerite dyke 69 ± 1 m.y. The

dolerite dykes are thought to have represented the feeder system for Deccan Trap volcanic sequences (Radhakrishna *et al*, 1994).

Basic dykes of Pathanamthitta area yielded ages of 99 Ma to 117 Ma and there are dykes which have yielded ages 104 ± 5 Ma, $127 \pm$ Ma and $476 \pm$ Ma. These wide variations may be due to a protracted history of emplacement and the effect of Eocambrian to palaeozoic tectonothermal events affecting this region (Sinha Roy and Ramakrishnan, 1983.)

In Thiruvananthapuram District, Anakudi and Nedumannur dolerite dykes are dated by K-Ar method and the whole rock ages are 104 ± 5 Ma and 127 ± 2 Ma respectively (Sinha Roy and Ramakrishnan, 1983).

Tertiary Sedimentary rocks

Mio-Pliocene sedimentary rocks are fairly widespread in the southern coastal belt, their remnants being noticeable in the central and northern coastal areas. These sedimentary rocks consist of a series of variegated clay and sandstones with lenticular seams of lignite, known as Warkalli Formation, underlain by more compact marly sands with shell fragments and thin horizons of limestone (Quilon Formation).

The Tertiary sediments have a gentle dip towards west. The Warkalli Formation extends in a narrow belt from Thiruvananthapuram ($8^{\circ}28'30''$: $76^{\circ}57'20''$) to Kasaragod ($12^{\circ}30'00''$: $74^{\circ}59'00''$) between coastal and midland regions with intervening promontories of the crystalline rocks. The Quilon Formation is mainly seen at Paravur ($08^{\circ}48'00''$: $76^{\circ}40'00''$) Padappakkara ($08^{\circ}58'30''$: $76^{\circ}38'00''$) and some other places around Kollam and Alappuzha districts.

Quilon Formation

The Quilon Formation consisting of fossiliferous shell limestone alternating with thick beds of sandy clays and calcareous clays have been reported from Padappakkara (type locality), Nedumgolam, Edavai ($8^{\circ}45'20''$: $76^{\circ}42'00''$) and Varkala ($8^{\circ}44'00''$: $76^{\circ}43'00''$) and Cherthala ($9^{\circ}41'00''$: $76^{\circ}20'00''$) along the west coast of Kerala. The Quilon limestone contains numerous fossils of foraminifera, corals, echinoids and molluscs. The Lower Miocene age for lower stratigraphic horizons and the Upper Miocene age for the topmost beds of the Quilon Formation indicate the lower and upper age limits of these marine sediments. The

predominance of black clays, sandstone, bluish grey brackish water shell limestone and nodular limestone clearly indicate deposition in a lagoonal condition .

Warkalli Formation

The Warkalli Formation of Mio-Pliocene age extends all along the Kerala coast. The type section of the Warkalli Formation described by King (1882) is from the sea cliff at Varkala. The exposed section at Varkala cliff is 28-30 m thick consisting of unconsolidated sands of variegated clays, white plastic clays, and carbonaceous sandy clays enclosing impersistent seams and lenses of lignite. The carbonaceous clays and lignite are often impregnated with nodules of marcasite.

Fairly thick beds of carbonaceous clays with lignite seams occur around Nadayara kayal, Tamarakulam (9°08': 76°37'), Puliur (9°18'00": 76°35'00"), Payangadi (12°00'20": 75°15'40"), Nileswaram (12°15'00": 75°07'00"), Kanhangad (12°17'40': 75°05'00") and in the cliff sections near Cheruvathur (12°13'00": 75°09'50"). The most characteristic feature of the Warkalli Formation is the impersistent nature of the constituent beds, suggestive of shallow basin margin deposits.

Laterite

Kerala is the home of the laterite as it was first named by the Dutch traveller, Buchanan 1807. Laterite is widespread in its distribution in the midland region of Malappuram, Kannur and Kasaragod districts where it forms well-defined mesas. The Archaean crystalline rocks and the Tertiary sedimentary rocks are extensively lateritised. The laterite has wide areal distribution in the State and occurs at all levels upto 2000 m, height though mostly restricted to an altitude of 50-150 m above MSL. in the coastal and midland region. A few bauxitic patches also occur within the laterites. The thickness of laterite cappings varies from a few metres to 50 metre at places. At Chovvara (8°21'30"; 77°01'30") in Thiruvananthapuram District and Chattannur (8°50'30"; 76°46'30") and Kundara (8°57'00": 76°40'30") in Kollam District, a zone of about 2 m thick bauxite is recognised at the contact between the crystallines and the overlying sedimentary rocks. The overlying sedimentary column is also blanketed by laterite of varying thickness. The bauxite at the base of the sedimentaries indicates an earlier pre-Warkalli spell of lateritisation. Further, the erosional features on the top part of the bauxite horizon corroborates the antiquity of the earlier spell of lateritisation (Mallikarjuna and Kapali, 1980).

Generally, the laterite after the crystalline rocks is compact and the top crust moderately indurated. The dark brown crust passes downward to pink and buff coloured soft laterite. Quartz veins, joints and fractures can be traced from the top to the bottom of the laterite profile. The laterite profile over pyroxene granulites, meta-ultramafites and gneisses are characterised by relict foliation that conforms to those of the subjacent rocks which indicate the *insitu* nature of the laterite. Porous and spongy texture is discernible in laterites, after meta-ultramafites. Laterite after the Tertiary sedimentaries is well indurated at the top for about 2 to 5 m. Downwards, the profile grades into soft laterite with remnants of gritstone and culminates into a zone of variegated clay.

Quaternary sediments

Recent to sub-Recent sediments of coastal sands, sticky black clay with carbonized wood, silty alluvium and lagoonal deposits are observed mostly in the low-lying areas from Kollam (11°27'00": 75°40'30") to Ponnani and between Kannur (11°51'30":75°21'45") and Nileswaram (12°15'30":75°08'16"). Alluvium is observed along the major river valleys. At places, along coastal tracts, there are raised sandy beaches composed of fine grained reddish sandy loam known as "terri" sands. Palaeo-beach ridges alternate with marshy lagoonal clay in the coastal area.

The sandy stretches are widest between Alappuzha (9°30': 76°20') and Kottayam (9°35': 76°31'), upto 25 km inland from the shoreline. The Quaternaries of the coastal plain have been classified into (i) the Guruvayur Formation representing the earlier strandline deposits with an elevation of 5-10 m; (ii) the Viyyam Formation of tidal plain deposits; (iii) Periyar Formation being mainly of fluvial deposits and (iv) the Kadappuram Formation representing the beach deposits (Krishnan Nair, 1989).

A pebble bed is traced in Valapattanam and Taliparamba river banks in Kannur district. It is exposed south of Valapattanam (11°55'30": 75 °21'30"), Kambil maloth (11°58':75 °24'), Morazha (11 °58'30": 75°20'30") and Arathiparamba (12°06'00": 75°15'30"). The size of the pebbles ranges in dimension from 4.5 cm x 3 cm to 7 cm x 3 cm with occasional cobbles of size 13 cm x 12 cm. The base of the pebble bed is generally 20 to 40 m above MSL and at places, the pebble bed directly rests over the basement rocks. The pebbles are mostly of quartz and rarely of granite and pyroxene granulite. The distribution of the pebble bed along the major river banks demonstrate it to be flood plain deposits, probably of early Quaternary period (Nair *et al*, 1976). In Malappuram and Kozhikode districts, the pebble bed is traced in the riverine

terraces at Mavur (11°17'45":75°59'00"), Cheruvannur (11°12'8": 75°49'35") and Chellepparambu (11°14'30":75°59'00"). In Thiruvananthapuram District, the Quaternary pebble bed occurs at an elevation of 45 to 50 m above MSL at Pothenkode (8°37'00": 76°48'56"), Idaikode (8°40'11":76°50'49"), Attingal (8°41'49": 76°48'56") and Andoorkonam (8°36'00": 76°52'30").

Submerged upright tree trunks have been reported from a number of places in the coastal area of Kottayam and Alappuzha districts, indicating neotectonic reactivation in the area. Carbon dating of a sample from the submerged forest at Iravimangalam indicate an age of 7050 ± 130 B.P (Pawar *et al*, 1983).

Structure

The structural grain of the southern Peninsula is controlled mainly by the NNW-SSE trending near longitudinal Dharwarian trend which had folded all earlier structures. Since Kerala State falls in the western limb of the mega-structure almost all the rock distribution is aligned in NW-SE direction. However, detailed structural studies carried out in selected parts of the Kerala (Nair and Nair, 2001) had shown that (a) the earliest folds (F₁) which are represented both on mesoscopic and megascopic scale are tight appressed folds of asymmetrical nature which had given rise to axial plane foliations with characteristic platy mineral alignments (b) the F₂ folds on these foliations (post-folial) are open symmetrical and have developed mainly on megascopic scale and control the disposition of the major lithologies. (c) Subsequent folds (F₃) which deform F₁ and F₂ axial plane traces are broad folds on mega-scale identified with the longitudinal Dharwarian trends and (d) a broad swerve on these Dharwarian trends in ENE-WSW is also decipherable (Fig.2).

Detailed analysis of the remote sensing data had revealed the presence of a number of significant lineament patterns in WNW-ESE, NW-SE, NNW-SSE, NNE-SSW and ENE-WSW directions (Nair, 1990). Mega and intermediate lineaments in WNW-ESE were originally crustal fractures and shears which got sealed or obliterated by a number of igneous emplacements of alkali granite, syenite, gabbro, anorthosite, granophyre etc. The emplacements along the Bavali lineament and those along the Achenkovil lineament both of which trending in this direction had given ages ranging from 500 – 678 Ma. Hence they are identified to be the oldest lineament. The Bavali lineament forms the western termination of the Moyar shear. The NW-SE trending lineaments constitute mega lineaments and coincide with the basic dykes occurring throughout the length and breadth of the state. These dykes have

given ages ranging from 61 to 144 Ma. The NNW-SSE trending lineaments are generally intermediate lineaments and are attributed to fractures, faults and major joint patterns in the area. It is recognized that the NNW-SSE trending lineaments define a weak zone along which the west coast evolved by faulting. The eastern limit of the Tertiary basin is found restricted along this lineament direction. These lineaments occurring along the west coast are be active as suggested by the progradation of the coast west of these lineaments (Nair, 1987). The lineaments in NNE-SSW are prominent and are identified with major fractures and this together with those in NNW-SSE are taken to constitute a conjugate system of faults in a N-S compressive regime due to the collision of the Indian plate. The ENE-WSW trending lineaments are intermediate lineaments and are well- developed in the northern parts of the Kerala . Since these lineaments truncate other lineaments as evidenced especially in the coastal stretches it is considered the youngest. Many a recent tremors reported are aligned in this direction and hence considered neotectonically active.

Metamorphism

The Precambrian crystalline rocks of Kerala are chiefly metapelites, charnockites with associated gneisses and granulites, schistose rocks with distinct metapelitic and metamafic / ultramafic affinity and granitic derivatives which include the Peninsular gneisses and migmatites. Except the Wynad schists and the Vengad group, the bulk of the crystalline rocks show granulite to upper amphibolite facies of metamorphism. Wynad schist displays a prograde amphibolite facies metamorphism and the retrogression of these rocks leads to lower amphibolite facies metamorphism. The vast charnockite belt occurring on either side of the Wynad schist belt, in north Kerala, shows petrographic evidences of prograde and retrograde reactions (Nambiar, 1996). The rocks of the Vengad Group show greenschist to lower amphibolite facies of prograde metamorphism. The older intrusive bodies show effects of incipient metamorphism, marked by clouding of feldspar and bending of twin lamellae.

Recent investigations on the pressure – temperature range for the formation of characteristic mineral suits within the metamorphic rocks provide a fair idea on the poly-metamorphic history of the rock suits. Rocks of the Khondalite belt of south Kerala indicate a temperature range of 650 to 850°C and pressures 5 to 6 kb (Srikantappa *et al*, 1985). In the Thiruvananthapuram area, the temperature at the peak of metamorphism indicated by the mineral assemblages of the calc-silicate rocks is about 830°C at 5 K bar considering the vapour absent garnet forming equilibria (Satish Kumar and Santosh, 1996). The scapolite equilibria indicates a peak metamorphic temperature of above 800°C. Stable isotopes in the marble bands suggest that there was no

pervasive infiltration of external fluids. Local infiltration of external carbonic fluid took place during decomposition. Synthesis of such data from different lineament/shear bound segments in Kerala indicate varying metamorphic conditions and uplift history. It is also summarised that there is a progressive decline in the uplift of different segments from north to south (Soman, 1997).

 **SUSTAINABLE DEVELOPMENT GOALS**

