



LOCAL DEVELOPMENT PLAN POOYAPPALLY GRAMA PANCHAYAT 2021



**POOYAPPALLY GRAMA PANCHAYAT
TOWN AND COUNTRY PLANNING DEPARTMENT**

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POOYAPPALLY GRAMA PANCHAYAT 2021
(DRAFT)**

**POOYAPPALLY GRAMA PANCHAYAT
TOWN AND COUNTRY PLANNING DEPARTMENT
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**DEVELOPMENT PLAN
FOR
POOYAPPALLY GRAMA PANCHAYAT -2021**

POOYAPPALLY GRAMA PANCHAYAT
DEPARTMENT OF TOWN AND COUNTRY PLANNING

PREFACE

The need for district planning is well recognized in our country. The Constitution of India by virtue of the 74th Amendment Act of 1992 mandated District Planning Committee of a district to prepare a draft development plan for the district. Article 243 ZD (1) of the Constitution lays down “There shall be constituted in every state at the district level a District Planning Committee to consolidate the plans prepared by the panchayats and the municipalities in the district and to prepare a draft development plan for the district as a whole”. The Constitution also lays down that such plans are to be prepared in the spatial planning approach. Similarly as per the Constitution as well as the State Acts, Local Self Governments have to prepare long range comprehensive plans in Spatial Planning Approach.

Realizing the constitutional responsibility, the District Planning Committee (DPC) of Kollam decided to prepare an Integrated District Development Plan (IDDP) for the District as a whole and Local Development Plans (LDPs) for each local government in the district. The State Government accorded sanction to a project for preparation of these plans as a pilot project in Kollam District under the auspices of the DPC, with the State Department of Town and Country Planning as the nodal agency.

The process of preparation of IDDP and LDPs started in the district in August, 2003. For the preparation of IDDP, DPC has constituted a Special Technical Advisory Committee with sub committees for various sectors. There were a total of 19 sub committees each chaired by a DPC member and convened by the district officer of the sectoral department concerned. Through concerted efforts of elected representatives, officials and other members of the Special Technical Advisory Committee, the DPC Kollam succeeded in drafting the IDDP for the District, thus making the district of Kollam, the first district in the country to have a long range comprehensive development plan prepared in the participatory spatial planning approach. Based on the success of this pilot project Government have decided to extend this programme to other districts in the State as well.

The IDDP for Kollam puts forth a development vision of the district and identifies the role of each Local Self Government in the district, in achieving the same. The development plans for the LSGs, within the frame of the IDDP, are now to be prepared in a time-bound manner for ensuring proper integration between the plans and for making the programme complete and fruitful. In this context, it was decided to complete preparation of LDPs for two LSGs in the district, one for an urban local body and the other for a rural local body, to act as models in preparation of LDPs for remaining LSGs. Pooyappally Grama Panchayat showing predominantly rural character has been selected, for this purpose, from among the 71 grama panchayats in Kollam district.

The Development Plan for Pooyappally Grama Panchayat, prepared within the frame of IDDP for Kollam is now ready. The development concept of the panchayat and the development proposals framed in accordance with the development concept form part of this Development Plan. It is expected that the Plan will act as a guiding frame in the future development of Pooyappally. I take this opportunity to appreciate the Pooyappally Panchayat Committee for taking the initiative in the preparation of the Plan and the Department of Town and Country Planning for providing the required technical support.

Adv. K. Soma Prasad

Chairman

District Planning Committee, Kollam

ACKNOWLEDGEMENT

Kerala has a unique development pattern among the states of India. The settlement pattern existing here is often termed 'rurban' - characterised by a rural - urban continuum. One cannot clearly say where an urban area ends and a rural area starts. Rural - urban differentials are low in our state. The scattered settlement pattern in the state, combined with the very low land-man ratio, results in increased human intervention in land. Our geographical diversity has to be conserved while ensuring the optimum utilisation of land, the most valuable resource. In other words planned development of our settlements, be it rural or urban, is therefore the need of the hour.

As per the Constitution of India, the District Planning Committee has to prepare a draft Development Plan for the district with due regard to matters of common interest between the panchayats and municipalities including spatial planning, sharing of water and other physical and natural resources, the integrated development of infrastructure and environmental conservation. In addition, the Kerala Municipalities Act 1994 and the Kerala Panchayat Raj Act 1994 also stress the need for preparation of development plans through spatial planning approach - needless to say in a participatory manner. These requirements were systematically combined in the pilot project of preparation of Local Development Plans (LDPs) and Integrated District Development Plan (IDDP) for Kollam district, being implemented by the District Planning Committee, Kollam. Being the State Department for local and regional planning Department of Town and Country Planning has the privilege to give technical support to the project.

The IDDP for Kollam district is now ready and it is time to prepare draft LDPs for all LSGs in the district in a time-bound manner. Based on the decision of DPC Kollam to prepare LDP for Pooyappally Grama Panchayat on priority basis, so as to act as a model in preparation of LDPs, the Department expedited the task. I take this opportunity to appreciate the earnest efforts of the officials of the Kollam District office of the Department in the time-bound preparation of the Development Plan for Pooyappally, a Grama Panchayat showing predominantly rural character. The President and Committee members of Pooyappally Grama Panchayat who gave efficient leadership at all stages of plan preparation and the Spatial Integration Committee who prepared the plan in a time-bound manner needs special mention at this point of time.

The Development Plan for Pooyappally Grama Panchayat was prepared through a comprehensive process comprising detailed data collection, data analysis, identification of development issues, setting up of goals and objectives, evolving development concept and detailing out the overall and sectoral development policies and strategies. The Plan has been prepared within the framework of IDDP for Kollam district. At the same time the results of local level analysis and suggestions of the Grama Panchayat of Pooyappally were inputs in drafting the IDDP.

It is hoped that the Local Development Plan for Pooyappally Grama Panchayat will pave way for the comprehensive development of the Panchayat in the years to come.

EAPEN VARUGHESE
CHIEF TOWN PLANNER

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Acknowledgement

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<i>Table 30.2</i>	<i>- Plan/Project expenditure proposed in the substandard colonies in Paravoor Municipality</i>	<i>-</i>	<i>154</i>
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PART - 1

*LOCAL DEVELOPMENT PLAN PREPARATION
PROCESS AND ORGANISATIONAL SET UP*

CHAPTER 1

Introduction

This chapter highlights the regional setting, historical background, biodiversity etc, of Pooyappally Grma Panchayat.

1. Regional Setting

Pooyappally is one out of the 71 Grama (Village) Panchayats in Kollam District. Figure. 1.1. shows the Regional Setting of Pooyappally Grama Panchayat. It is one of the six Grama Panchayats in the Kottarakkara block and it comprises the Pooyappally Village. The distance of Pooyappally from the first order centre in the District, the Corporation of Kollam, and the second order centres of Kottarakkara, Anchal and Chathanoor is shown in figure. 1.1.

Table 1.1 Distance between Pooyappally Panchayat centre and other important centres

Serial No	Centre	Distance (Km)
1	Kollam Corporation	25
2	Kottarakkara	12
3	Anchal	20
4	Chathanoor	15

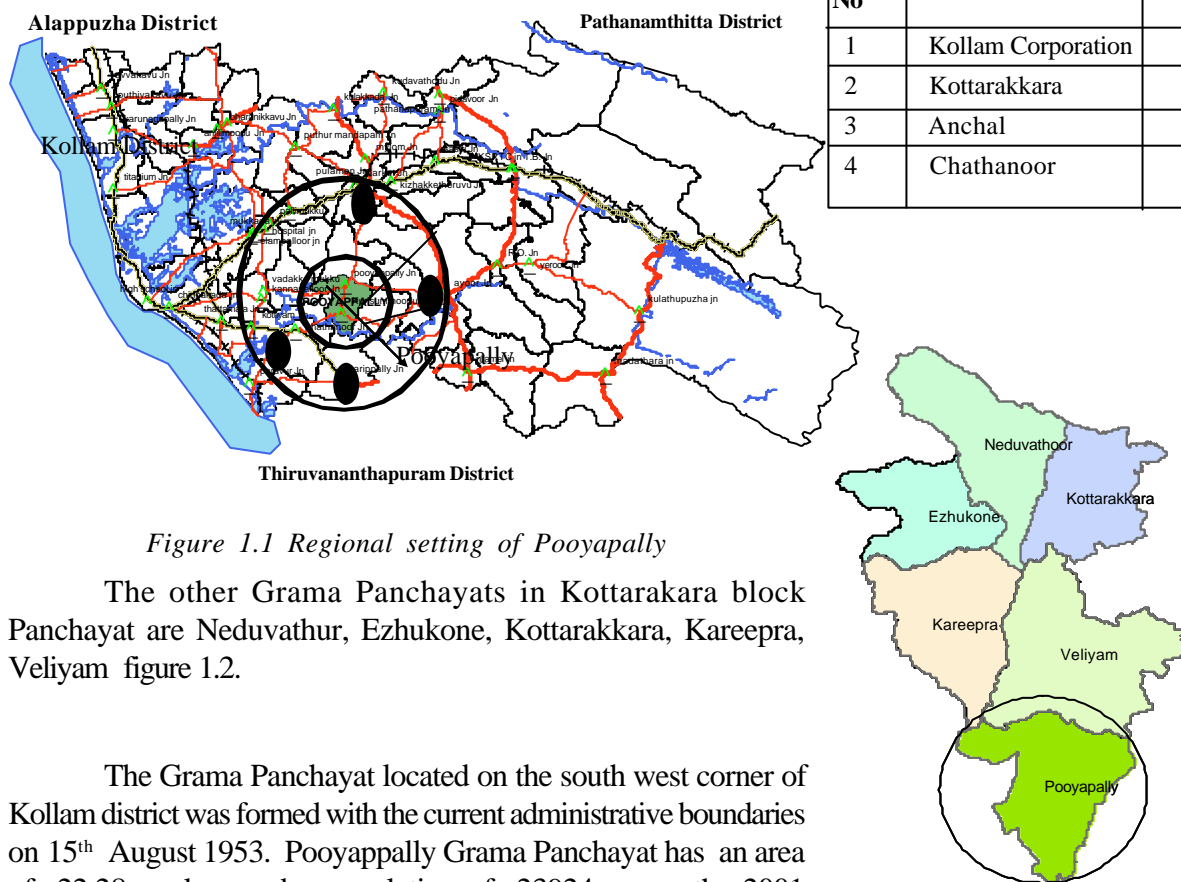


Figure 1.1 Regional setting of Pooyappally

The other Grama Panchayats in Kottarakkara block Panchayat are Neduvathur, Ezhukone, Kottarakkara, Kareepra, Veliyam figure 1.2.

The Grama Panchayat located on the south west corner of Kollam district was formed with the current administrative boundaries on 15th August 1953. Pooyappally Grama Panchayat has an area of 22.28 sq. km. and a population of 23924 as per the 2001 census, and the Grama Panchayat has twelve wards.

Figure 1.2 Grama Panchayats in Kottarakkara Block

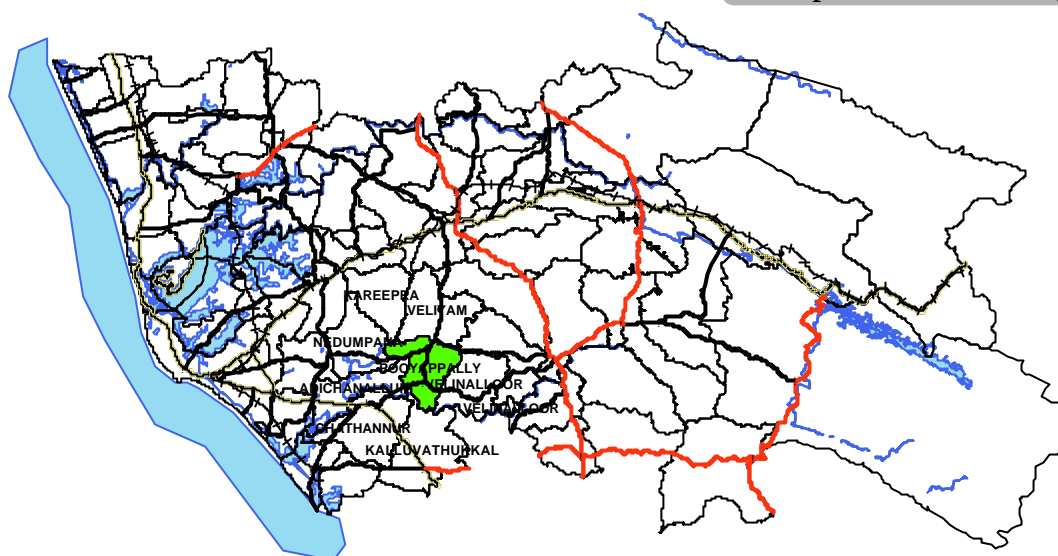


Figure 1.3 Neighbouring Panchayats of Pooyapally

The Grama Panchayats sharing common border with Pooyapally are shown in figure 1.3. Pooyapally Grama Panchayat is situated 10 Kms away from Ithikkara on N.H.47. The major settlements and developed centres around Pooyapally are Kottarakkara, Kannanalloor, Oyur, Ayur, Kottiyam etc. The location of other centres with their distance from Pooyapally are shown in figure 1.4.

Kottarakkara	12 km
Ayur	12 km
Oyur	0.5 km
Kottiyam	12 km
Kannanalloor	10.5 km

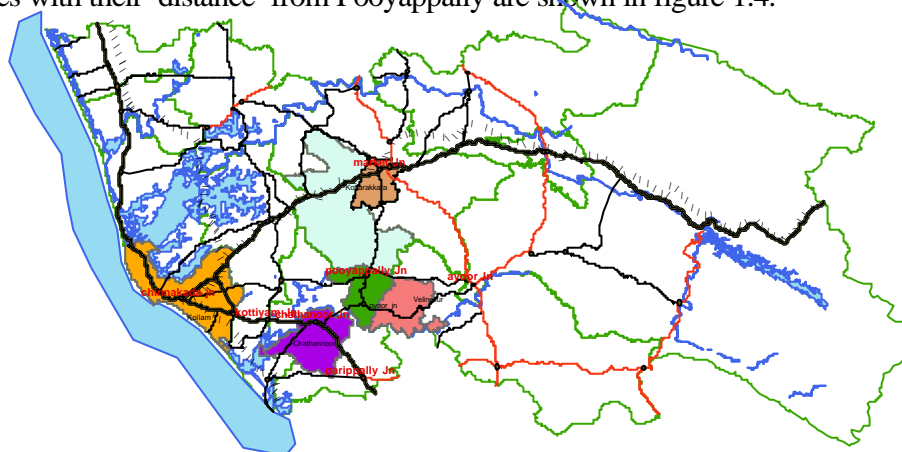


Figure 1.4 Developed centres around Pooyapally

1.2. Socio cultural and historical background.

In 'Kerala Vijnanakosam' and in the books 'Annathe Keralam' and 'Samskarathinte Nazhikkallukal' written by late. Shri. Elamkulam Kunjan Pillai, it is stated that Buddhism was practiced in southern parts of Kerala namely Kottarakkara and Chirayinkil taluks. Almost all temples in this area had the ritual of "Eduppu Kuthira Kettu" which is an indication of spread of Buddhism in this area. The term 'Palli' which is quite common in this region, is also attached to Buddhism and it means 'a Budha Vihar'. Usages like 'Ezhuthu Kalary' and 'Pallikkoodam' etc also might have originated in a similar manner. It is believed that the place name 'Pooyapally' has its origin from the gathering of followers of Buddhism here on days falling on 'Pooyam Nakshathra' for educational purpose. 'Maruthamon pally, having a flat terrain, is another centre in the Panchayat. The term 'marutham' means, flat agricultural land. The place

name 'Maruthamon Pally' might have derived as this place with flat agricultural land had housed either a 'Budha Vihar' or a "Pallikkoodam".

Historian, Sri. Elamkulam Kunjan Pillai records that Pooyapally formed part of the erstwhile princely state of Veliyam, ruled by 'Veliyan'. This princely state had 'Chungathara' near Oyur as its southern boundary and 'Chungathara' north of Odanavattom as its northern boundary. The place name of 'Veliyam' got its origin from the name of the ruler 'Veliyan'.

The 'Makriyillakulam' (Pond without frogs) at Maruthamon Pally of Pooyapally Grama Panchayat also has its place in legends.

Struggle for Independence

The people of this Panchayat had actively participated in the struggle for Indian Independence, agitation for responsive governance in Travancore and in the tenants' uprising. Twelve freedom fighters of this panchayat, under the leadership of Mr. Idikkula, alias Kunjukunju, son of Pooyapally Thottathil Vaidyar participated in the historic march towards the Travancore palace led by Ms. Accamma Cherian. He was brutalized by the horse guards of this state, fell ill and eventually died.

Agrarian revolts in this Panchayat against feudalism were noteworthy. The areas Kottara and Maruthamanpally of this Panchayat were under the domain of the Akavoormana Namboodiri, the first landlord of Travancore. Kottara and Maruthamanpally were among the 600 areas given to Akavoormana as rent free by the then Travancore King. Though the tenant farmers of these areas worked hard in these fields, through the collection of exorbitant land rent they were severely exploited by the landlord. The tenants' agitations against this exploitation started even before independence.

Mr. Veliyam G. Krishna Pillai of Maruthamanpalli, later nicknamed as 'Karshakan' was the leader of these agitations. He also published a bimonthly 'kudiyaan' to voice the problems of the tenants. Later, 'kudiyaan' became a monthly by the name 'Karshakan'.

The first President of this Panchayat, Shri. Janardhanan was one of the ardent follower of Mr. Krishna Pillai.

1.3 Geography of Pooyapally Grama Panchayat.

Major portion of Pooyapally Grama Panchayat still retains the panoramic rural charm of Kerala. The chain of paddy fields, with small streams bordering them along with the chiras, valleyes and hillocks, enhance the rural ambience of Pooyapally. The sacred groves attached to temples as well as the Ithikkara river flowing along the south-western boundary of the Grama Panchayat enhances the calm rural atmosphere here. As per the contour map, the slope of the Pooyapally Grama Panchayat is between 0.01 % to 50 %. 83% of land in Pooyapally has an elevation below 60mts above M.S.L. Map No.1.5 depicts the slope of different areas of Pooyapally. Map No. 1.6 is the contour map of the Grama Panchayat.



Figure 1.5 Slope of the land

According to the range of slopes Pooyapally can be divided into four categories viz.

1. Valleys.
2. Medium Slopes.
3. Steep slopes and.
4. Hillocks

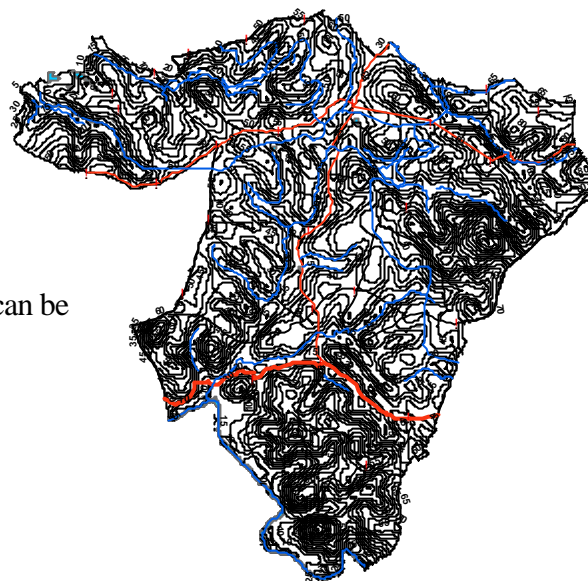


Figure 1.6 Contour map - Pooyapally

1. Valleys

Generally the South East portion of the Panchayat is elevated and north west portion is low lying 80% of the Valleys of Pooyapally are covered with paddy fields . The soil in this portion is fertile clayey soil out of which about 25% of area has sandy clay.

2. Medium Slope

Medium sloped areas of Pooyapally Grama panchayat are the areas falling in the slope range of 15-20%. The soil in this area is generally sandy, clayey, gravelly or sandy clay which is having fairly good fertility and hence the area is put to intense mixed agricultural activity. The medium sloped areas of Pooyapally comprise of fairly flat areas towards east of Maruthamon Pally up to Kozhikode, towards north of Kshethrakkara upto Harijan Handloom society and also the area between eastern side of Kottara and western side of Pooyapally junction.

3. Steep Slopes.

Areas of the Grama Panchayat having slopes more than 30% are included under this category. This area, generally having gravelling clay, is gradually loosing fertility due to soil erosion. The cashew &

tapioca cultivation here is slowly being replaced with rubber cultivation.

4. Hillocks

The Ayiravally kunnu, situated near the eastern boundary of the Panchayat and the Mudiyoorkonam kunnu situated at the southern side of the Panchayat are the places of maximum elevation in the Grama panchayat. The elevations of the highest points of these two locations are 131 meters and 116 mts above MSL. Rubber cultivation is predominant in this area. Homestead cultivation of coconut and tapioca is also common here.

1.4 Soil types

The surface soil types and their extent in Pooyapally are given in table below.

Sl.No	Soil type	Area in hectares
1	Black soil	320
2	Gravelley soil	148
3	Loamy soil	1090
4	Clayey soil	770

The elevated areas of the Grama panchayat having fertile black soil is mainly put to rubber cultivation. Scientific cultivation of rubber in this area helps in preventing soil erosion and in retaining soil fertility. Home-stead cultivation of coconut, tapioca, pepper, banana, ginger, turmeric and tuber crops are also present in settlement areas.

The slopes generally have gravelley soils. Due to soil erosion and excessive soil drainage the slopes are slowly losing fertility. Nowadays Rubber cultivation is getting predominance in the slopes where pulses, and cashew were cultivated earlier.

Continued soil erosion and excessive soil drainage have resulted in lowering of ground water table thus leading to lowering of water level in wells. Also, rocks got exposed at certain locations where the entire top soil was eroded in course of time. Effective measures to curtail top soil erosion and to reduce excessive soil drainage are urgently required in those portions of the slopes.

Sand, gravel and clay comprise the surface soil of the medium sloped areas of Pooyapally. Soil fertility is relatively high and the area is generally under mixed cropping pattern. Major crop here is coconut, although plantain, arecanut, pepper etc are also cultivated. Fruit trees such as jackfruit, mango and tamarind are also common here. Water table is generally high and wells are perennial. Terrain is generally flat in areas lying between Kottara east up to Pooyapally.

Eighty percent of the valley portion is under paddy cultivation. This area has fertile clayey soil. Remaining portion has sandy clay. Areas which are not suitable for paddy cultivation are cultivated with coconut, plantain and vegetables. Paddy lands are slowly being converted into garden lands by cultivation of banana, tapioca, tubers, ginger etc as paddy cultivation is becoming non profitable. Fertility of soil here is decreasing due to dwindling availability of water.

1.5 Climate

This area has humid tropical climate. Minimum temperature is experienced in January (19^oc) and maximum temperature (of 36^o) is experienced in the month of March. Average annual rainfall here is 2554mm. Wind direction is generally from West to East in the months of June-July and from East to West in the months of October -November. Strong dry winds known as 'Vrischikakattu' blowing through the Aruvamozhi gaps of Western Ghat is particular to these areas. Even though this hot dry wind is unbearable to human beings, it supports flowering of plants and thus results in increased productivity.

1.6 Biodiversity

Topographically Pooyapally falls in the midland zone of Kerala. The biodiversity here is distinctly marked by the presence of ponds, 'chiras', sacred groves and a wide variety of plants, with coconut, arecanut, cashew and rubber constituting the major share.

Rare medicinal plants like 'Chamatha', 'Adapothian', 'Thippali', 'Vathamkolli', 'Chuvanna koduveli' etc are also components of the agrobiodiversity here.

Sacred groves and ponds form part of major temple premises. Among the sacred groves, the largest one, 'Kulathur kavu' has a unique ecosystem with a variety of flora and fauna. Hundreds of bats residing on big trees in this sacred grove provide an interesting sight.

DEVELOPMENT PLAN - AN INTRODUCTION

A. LOCAL DEVELOPMENT PLANS AND INTEGRATED DISTRICT DEVELOPMENT PLAN

The development concept of an area can be conceptualised by analysing the development problems and potentials of that area as well as the existing status of various development sectors. Based on this development concept the long range development perspective for comprehensive development of that area along with complimentary sectoral development suggestions are framed. The 'development plan' for an area comprises this long range development perspective and the sectoral development proposals- spatially located and phased, derived within the frame work of the long range development perspective.

Here, it must be taken note of that such a 'Development Plan' for an area can be prepared based on the development policies and proposals both of the surrounding areas and the region as a whole. In other words, both horizontal and vertical integration are to be achieved.

Subsequent to the enactment of 73rd and 74th Constitutional Amendment Acts, respective jurisdictional areas of the three tiers of panchayats viz. grama (village)panchayat, block (intermediate) panchayat and jilla (district) panchayat along with urban local governments viz. municipal councils/ corporations/town panchayats are planning areas. The District Planning Committees (DPCs) Constituted under Article 243 ZD of the constitution of India shoulder the responsibility of achieving integrated development of the district that comprises both rural and urban areas. As per the said Article, consolidation of plans prepared by the panchayats and municipalities in the district and preparation of draft development plan for the district as a whole are responsibilities of District Planning Committees. The Kerala Panchayat Raj Act and the Kerala Municipalities Act also stipulate preparation of long range development plans by Local Self Governments.

The District Planning Committee, Kollam, realising this constitutional responsibility, decided to prepare Integrated District Development Plan (IDDP) for the District as a whole and Local Development Plans (LDPs) for all Local Self Government Institutions (LSGI) in the district in spatial plat form and initiated a pilot project for preparation of development plans as a joint project of all local governments in the District as approved by Government vide G.O (MS) 62/03/Planning dt. 01.08.03. The designated nodal agency for giving technical support for the project is the Department of Town and Country Planning. The Development Plans prepared under this project is unique in many ways:

☞☞☞ The project is based on participatory spatial planning approach. All the development partners like technocrats, politicians, NGO's, Government departments, common men and other decision makers are involved in the process of preparation of LDP and IDDP.

☞☞☞ Unlike other spatial plans prepared in this country, speciality of IDDP and LDP is that the sectoral policies of various development agencies of the planning area are translated into spatial plans. Thus there was a clear change over from sectoral approach to spatial planning approach as the projects ensure integration of various development sectors over a space (An LSGI in the case of LDPs

and District as a whole in the case of IDDP). The integration of various sectors is performed by taking into account the specialities in social, physical and economic aspects of the space, over which the sectors are integrated. This ensures the best and optimum utilization of land, the most valuable resource in the planning area.

✍✍✍ The local plan preparation included integration of analysis based on people's aspirations and technical spatial analysis. The district plan preparation comprised integration of sectoral analysis and spatial analysis including settlement studies. Thus the development perspectives are evolved by integrating the view points of various stakeholders both from mere aspirations and scientific analysis.

✍✍✍ Both IDDP and LDPs are prepared based on 'top-down'-'grass root-up' approach. The data collection, analysis and carving out of local level proposals are done at the grass root level which is later modified, based on the policies derived at a higher level i.e. at the District level while preparing the IDDP. At the same time the policies at the higher level are formulated taking into account the proposal at the lower level (LSGI level).

✍✍✍ State of the art technology - GIS, GPS, satellite imagery, to name a few, are utilized in the preparation of LDP and IDDP.

Now that the draft IDDP for Kollam is prepared, this will act as a broad framework for preparation of local development plans for local governments in Kollam. The Local Development Plan for Pooyappally also has been prepared within this framework. Here, it must be specifically noted that for finalising the IDDP for the District, draft LDPs of all LSGIs in the district shall be an input. Hence, it is of utmost importance that the LDPs of LSGIs are prepared in a time-bound manner.

While preparing development plan of an area in the spatial planning approach, the character of the area are to be given due importance. Some of them are attached to the location/regional setting of the area. Coastal areas show entirely different physical features from that of high land areas. The resource availability of different locations also may be entirely different ranging from the fertile agricultural lands in one place to rare earths and minerals in certain other place. Also, different locations display different characteristics with reference to size, density, distribution and composition of population.

Aspects like availability of physical or social infrastructure also shows wide variation between different locations. If water scarcity is a major problem in Grama Panchayat 'A', flooding will be the major issue faced by Grama Panchayat 'B'. While preparing development plans in spatial planning approach such peculiarities will become the basic parameters in deciding upon the development proposals of the area. Such development proposals are not formulated in an isolated manner but the integrated development concept of the space is derived through integrating key development sectors of the area.

The first stage in preparation of development plans is extensive training programmes to various stakeholders. At the second stage, extensive data collection comprising primary surveys (physical survey, socio-economic survey, heritage survey etc) and data collection from secondary sources are included. This stage is followed by data analysis, identification of development issues, setting up of goals and objectives, formulating development concept, framing of policies, strategies and development suggestion and finally compiling these into the Development Plan with a report and supporting maps.

B. LOCAL DEVELOPMENT PLAN FOR POOYAPPALLY GRAMA PANCHAYAT

Pooyappally, one of the 72 LSGIs of Kollam district, is a Grama Panchayat in Kottarakkara Block Panchayat. It is situated about 20 kms towards south east of Kollam city, the district head quarter. The population of the Grama Panchayat as per 2001 census is 23,924 and its area is 22.28 sq.km.

For the preparation of LDP a Spatial Integration Committee (SIC) was constituted with one active member from each working group as members. An engineering trainee was appointed to assist in the Plan preparation and a resource person was identified for leading role in the data collection and other activities of plan preparation.

- ☞☞☞ Data collection: Extensive data collection was done by the panchayat. Primary surveys were conducted for collecting land use data and socio-economic data. Secondary data collection was entrusted to the working groups. To ensure grass-root level participation, Grama Sabhas were conducted and the suggestions were compiled.
- ☞☞☞ Data Analysis: Two types of analysis viz. local level analysis by the Spatial Integration Committee & spatial analysis by the Department of Town & Country Planning were carried out.
- ☞☞☞ The SIC and the officials of the Department conducted several stake-holder consultations including various line department officials to identify the problems, potentials and development suggestions.
- ☞☞☞ Identification of the thrust area, evolution of development concept and policies and strategies were followed. Finally draft LDP was formulated jointly by Town and Country Planning Department and SIC incorporating sectoral proposals.
- ☞☞☞ Draft IDDP for Kollam District acted as an umbrella plan for preparation of LDP for Pooyappally.

Important Findings:

- ☞☞ The economic base of Pooyappally Grama Panchayat is dependent mainly on agriculture
- ☞☞ 84% of the land of Pooyappally has agriculture potential
- ☞☞ Pooyappally has a comparatively lower population density
- ☞☞ 36% of the main workers of Pooyappally are cultivators/agricultural labourers
- ☞☞ Plot sizes are ideal for promotion of agriculture and animal husbandry activities.
- ☞☞ As per the findings of IDDP, Pooyappally comes under Agro Development Zone. Also it is a fourth order settlement.

The development concept of the Plan was formulated based on the development issues identified through analysis and the goals and objectives set. Various aspects such as concentration of land uses, distribution of population, linkages and inputs from IDDP etc were considered in this regard. Accordingly the Panchayat area was divided into two major zones viz zone where agricultural activities are predominant and zone where residential and other activities are dominating. Development policies and strategies were evolved and Development Plan for Pooyappally was drafted with a perspective of 20 years. Sectoral proposals based on the Plan were also detailed. Broad regulations for guiding the future development of the Grama Panchayat also forms part of the plan. Pooyappally is the first Grama Panchayat in Kollam District to prepare a Local Development Plan under the project of preparation of Local Development Plans and Integrated District Development Plans.

PART - 2

ANALYSIS OF EXISTING SCENARIO

CHAPTER 2

Land Use

Land use survey was conducted in Pooyapally Grama panchayat in the year 2007 to identify the use to which each and every parcel of land is put to. The details of analysis of land use survey conducted and the resultant findings are given hereunder.

2.1 Land use pattern - a comparative study.

Here the land use pattern of Pooyapally Grama Panchayat is compared with the land use patterns of neighbouring panchayats and that of the Kottarakkara Block. Figure 2.1 and 2.2 are the respective land use maps of these areas.

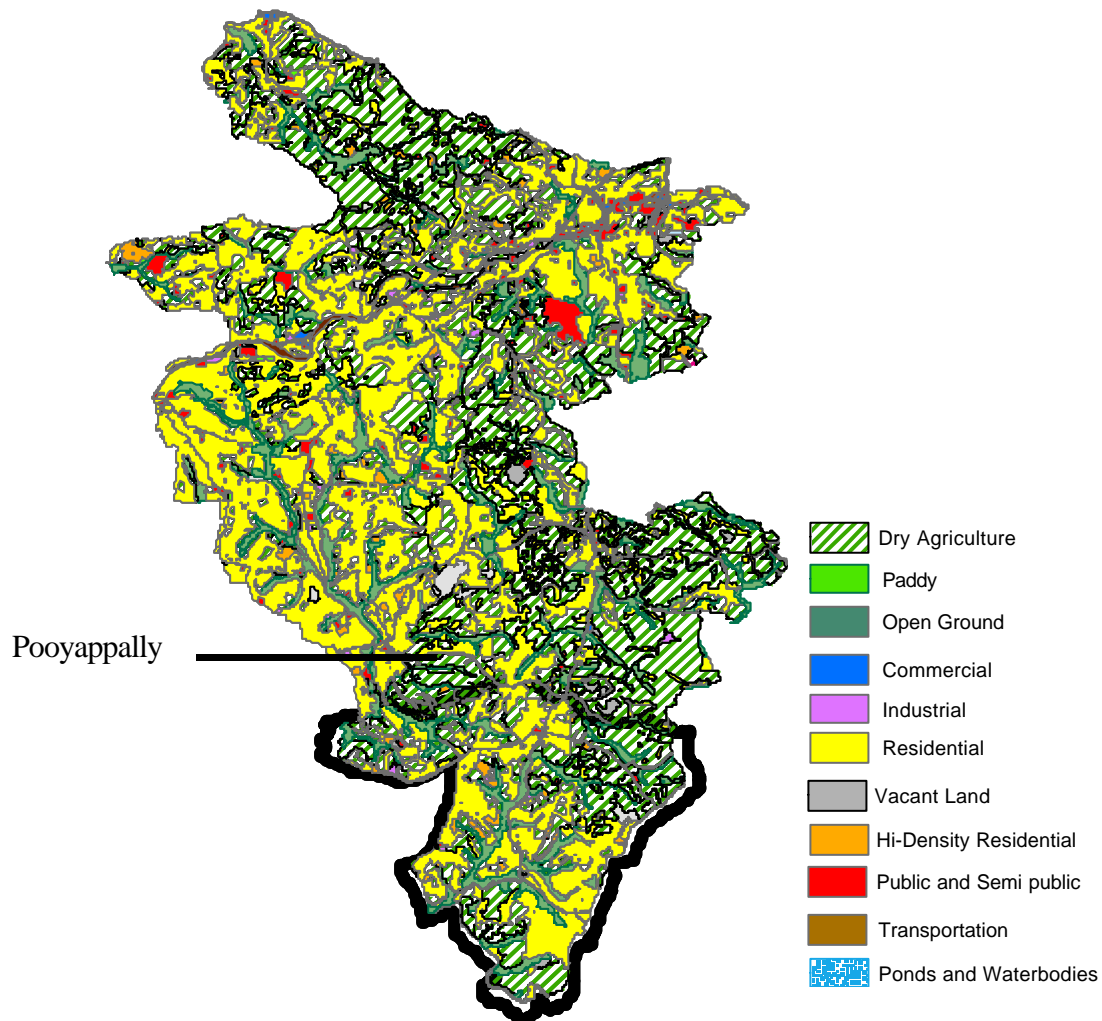


Figure 2.1 Land use map of Kottarakkara Block

Table 2.1. Panchayat wise break up of land use - Kottarakkara Block.

Category of Land use Name of Panchayat	Residential	Commercial	Industrial	Public and Semipublic	Agricultural	Transportation	Water body
Ezhukavu	8.38	0.14	0.08	0.58	5.77	0.39	0.03
Kareepra	14.14	0.06	0.10	0.68	7.12	0.23	0.18
Kottarakkara	8.88	0.28	0.04	1.53	8.03	0.40	0.10
Neduvattam	1.08	0.17	0.15	0.41	14.82	0.41	0.02
Pooyappally	22.02	0.03	0.07	0.14	12.13	0.29	0.18
Veliam	8.01	0.09	0.00	0.20	20.42	0.28	0.23
Total	24.51	0.77	0.44	3.54	68.29	2.00	0.74

Six Panchayats are included in the Kottarakkara Block panchayat having an extent of 132 sq. km. Among them the area of Pooyappally Grama Panchayat is 22.8 sq. km. Predominant use of land in Kottarakkara Block is for agriculture (around 52 %). The comparative table of land uses of local self government institutes of Kottarakkara block is given in Table 2.1 The table reveals that as in the case of Kottarakkara Block Panchayat the predominant use of land in Pooyappally Grama Panchayat also is agricultural. The land use data of Pooyappally Grama Panchayat and neighbouring panchayats is given in table 2.2.

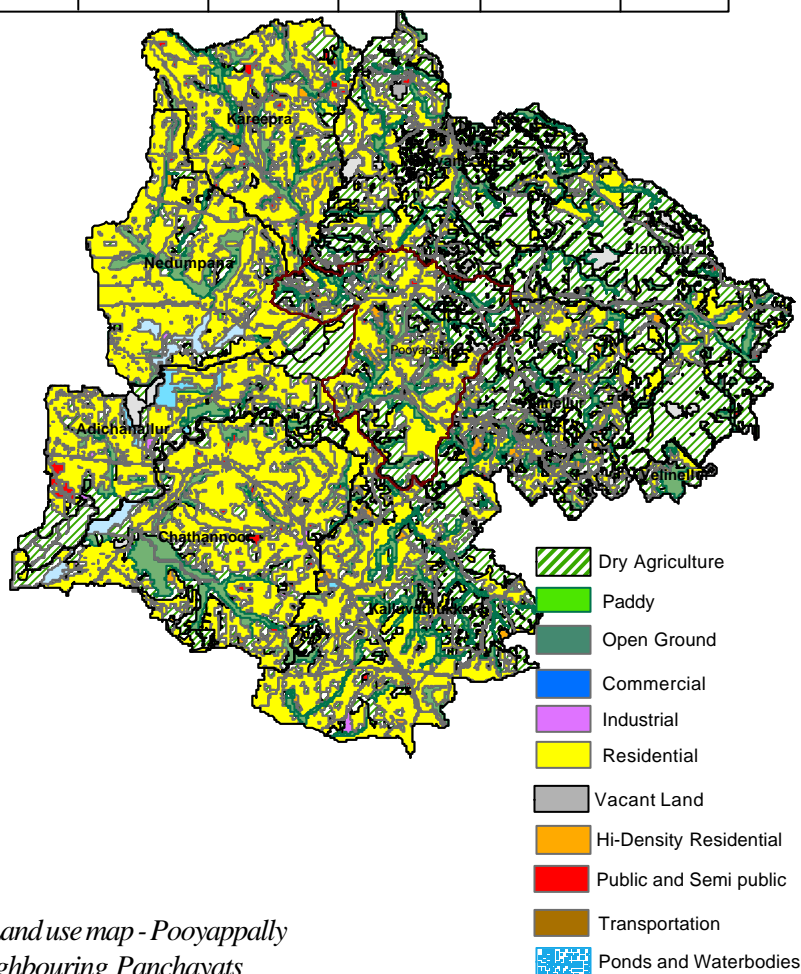


Figure 2.2 Land use map - Pooyappally and neighbouring Panchayats

Adichanalloor, Nedumpana, Chathanoor, Kalluvathukkal, Veliyam, Kareepra, Elamadu, Velinalloor are the immediate surrounding grama panchayats of Pooyappally.

Table 2.2 Comparison of land uses of neighbouring Panchayats of Pooyappally

Category of Land use Name of Panchayat	Residential	Commercial	Industrial	Public and Semipublic	Agricultural	Transportation	Water body
Adichanalloor	3.31	0.13	0.21	0.46	9.77	0.31	1.46
Chathanoor	13.54	0.16	0.33	0.64	11.46	0.50	1.13
Elamadu	4.51	0.02	0.06	0.16	24.41	0.37	0.11
Kalluvathukkal	13.34	0.20	0.21	0.37	15.56	0.68	0.35
Kareepra	14.14	0.05	0.10	0.68	7.12	0.23	1.18
Nedumpana	11.31	0.05	0.11	0.20	5.86	0.45	0.13
Pooyappally	3.02	0.03	0.07	0.14	12.13	0.29	0.18
Velinalloor	3.84	0.17	0.05	0.20	17.21	0.31	0.33
Velium	8.01	0.09	0.06	0.20	20.42	0.28	0.23
Total for the region	111.33	0.99	1.20	3.05	123.94	3.42	5.10

The paddy lands of Pooyappally forms part of a continuous chain of paddy lands existing in the Grama Panchayats on either side of NH. 47. For example, from figure 2.2 it can be seen that the paddy fields in Adichanalloor and Pooyappally forms a continuous chain. In the eastern region of Pooyappally Grama Panchayat we can see rubber cultivation, thus making Pooyappally a transition zone between areas having predominance for paddy/coconut cultivation and areas having predominance for rubber cultivation. Residential land use is predominant in Panchayats like Adichanalloor, Chathanannur, Kareepra, Nedumpana etc, whereas in Pooyappally Grama Panchayat agricultural land use is predominant. The extent of lands under residential and agricultural uses of these Panchayats are compared, in figure 2.3 and in tables 2.5 and 2.6.

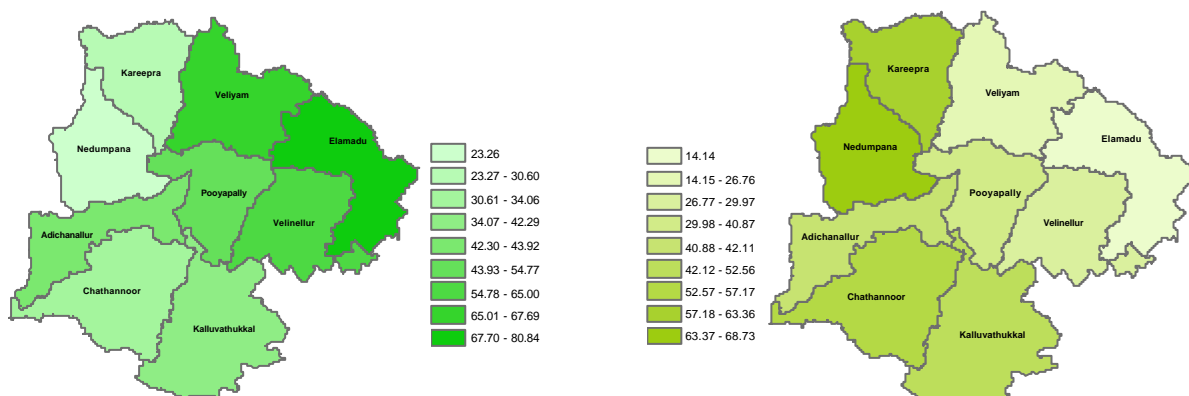


Figure 2.3 Comparative study of extent of lands in agriculture/residential use in Pooyappally and surrounding panchayat

Table 2.3 Comparison of extent of land under residential use in Pooyappally and neighbouring panchayats

Panchayat	Land under Residential use (extent) in hectares	Land under Residential use (Percentage)
Adichanalloor	9.37	42.11
Chathanoor	19.24	57.17
Elamadu	4.27	14.14
Kalluvathukkal	19.34	52.56
Kareepra	14.74	63.36
Nedumpana	17.31	68.73
Pooyappally	9.05	40.87
Velinalloor	7.94	29.97
Velium	8.07	26.76

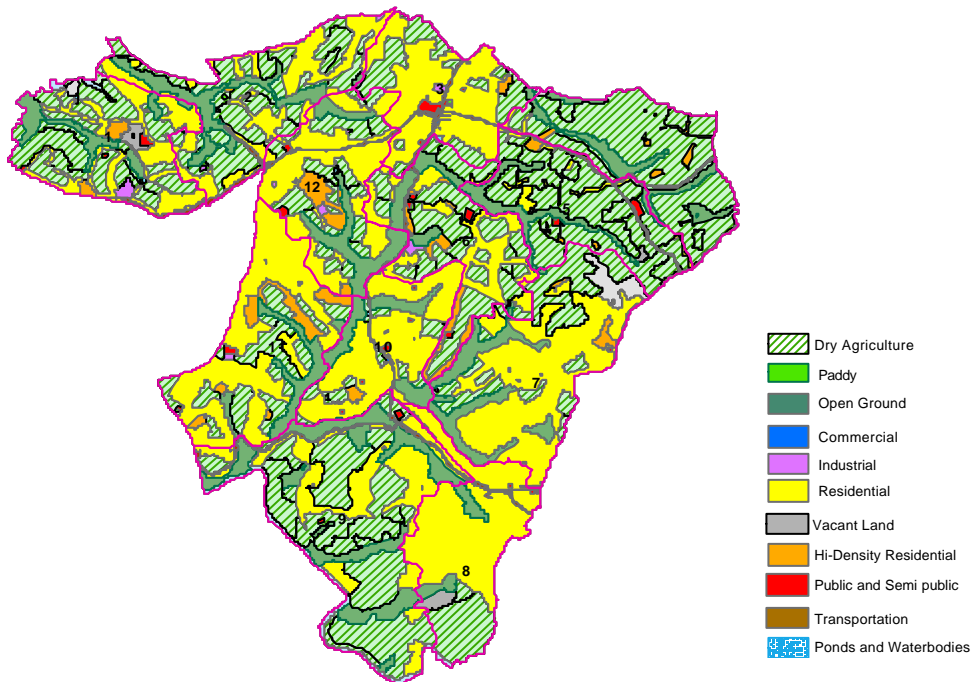
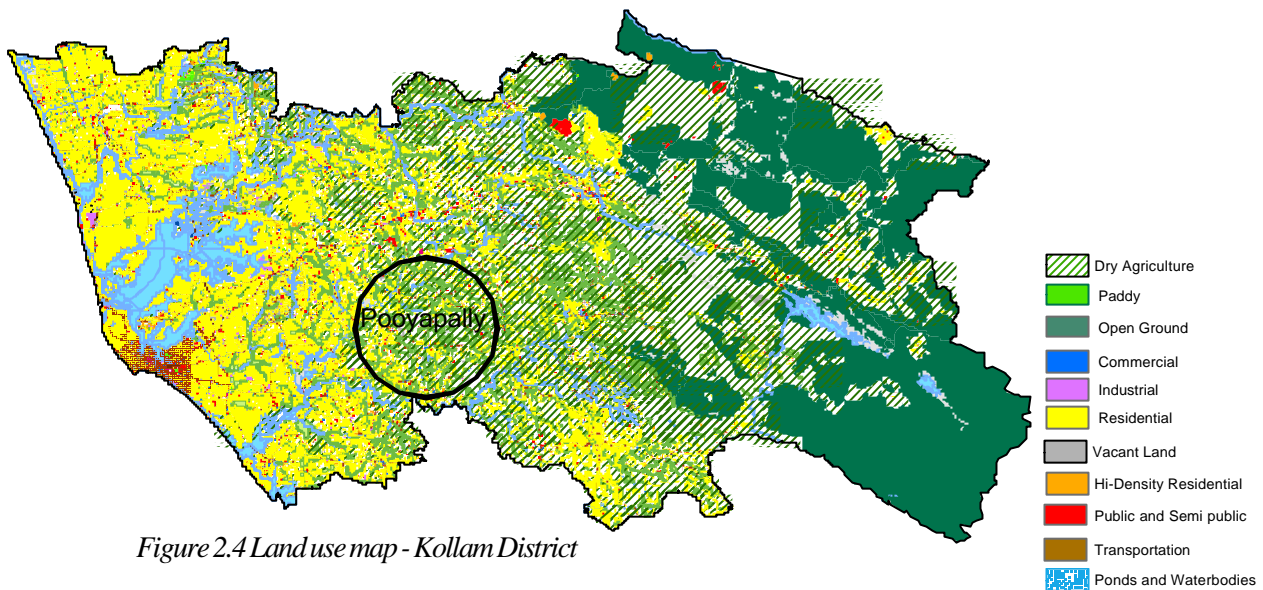
Table 2.4 Comparison of land under agricultural use in Pooyappally and neighbouring panchayats

Panchayat	Land under Agriculture use extent in hectares	Land under Agriculture use (Percentage)
Adichanalloor	9.77	43.92
Chathanoor	11.46	34.06
Elamadu	24.41	80.84
Kalluvathukkal	15.56	42.29
Kareepra	7.12	30.60
Nedumpana	5.86	23.26
Pooyappally	12.13	54.77
Velinalloor	17.21	65.00
Velium	20.42	67.69

It can be seen from table 2.4 above that 54.77% land in Pooyapally Grama Panchayat is under agricultural use . On comparison with the corresponding figure of 33% for Kollam District, it can be observed that in Pooyapally Grama Panchayat, the agricultural sector is predominant.

The concentration index of Pooyapally Panchayat, with respect to agricultural land use, is more than one. Pooyapally is one among a group of Panchayats that are predominantly agricultural in Kollam district.

The land use maps of Kollam District and Pooyapally Grama Panchayat, given in figures 2.4 and 2.5 respectively supports this observation.



The land use break up of Pooyapally Grama Panchayat is given in table 2.5 and figure 2.6

Table 2.5 Land use pattern of Pooyapally Grama Panchayat

Land use	Residential	Commercial	Industrial	Public & Semi	Agricultural	Water bodies	Barren land	Transportation	Total
Area in Sq.km	9.16	0.03	0.07	0.14	12.27	0.19	0.26	0.29	22.28
Land use in	40.85	0.14	0.32	0.62	54.73	0.86	0.11	0.14	100

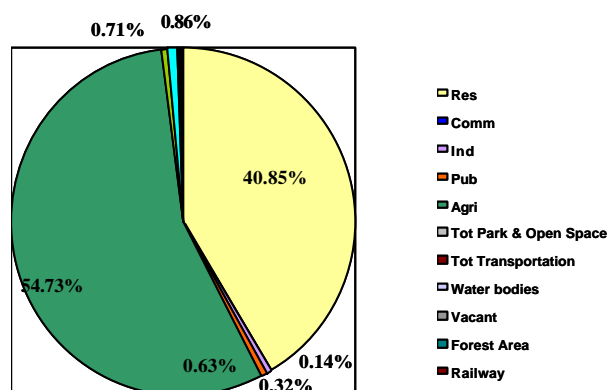


Figure 2.6 Land use break up of Pooyapally Grama Panchayat

Pooyapally Panchayat having an extent of 22.2 sq.km. is divided into 12 wards. 55 % of the total area of the Panchayat is under agricultural use and 41% of the total area is utilized for residential purpose. Extent of land under commercial and industrial uses is only meagre.

Table 2.6 Ward wise land use - Pooyapally Grama panchayat (Area in hectares)

Land use category Ward No	Residential use	Commercial use	Industrial use	Public & semi Public use	Agriculture use	Open spaces	Transportation use	Water bodies	Barren lands
1	0.647	0.003	0.042	0.020	1.168	0.020	0.020	0.049	0.043
2	0.552	0.004	0.007	0.003	1.217	0.002	0.028	0.000	0.000
3	0.967	0.008	0.008	0.028	0.420	0.003	0.038	0.003	0.000
4	0.067	0.000	0.000	0.001	1.536	0.009	0.031	0.001	0.003
5	0.137	0.000	0.000	0.019	1.342	0.000	0.021	0.000	0.012
6	0.566	0.000	0.013	0.018	1.076	0.002	0.017	0.000	0.000
7	1.336	0.001	0.001	0.004	0.957	0.120	0.009	0.001	0.000
8	1.063	0.003	0.000	0.005	0.407	0.000	0.023	0.008	0.045
9	0.770	0.004	0.001	0.008	2.186	0.000	0.064	0.127	0.000
10	0.905	0.003	0.000	0.011	0.380	0.002	0.019	0.002	0.000
11	1.266	0.000	0.007	0.010	0.745	0.002	0.000	0.001	0.000
12	0.885	0.004	0.012	0.014	0.842	0.000	0.026	0.002	0.000

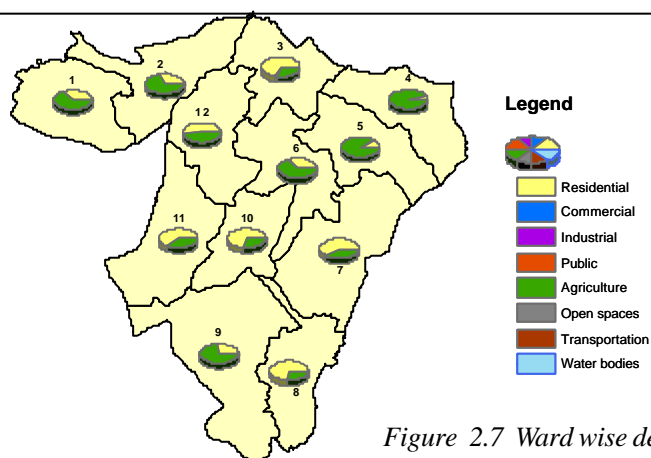


Figure 2.7 Ward wise deviation of use of land

Table 2.6 gives the wardwise break up of land use of Pooyapally . It can be seen that major land use in all the wards in Pooyapally is agricultural . The wards in which agricultural activity is most predominant are Kottara, Thachakkodu, Pooyapally east, Mylode and Chenkulam. Figure 2.7 depicts the wardwise variation of land uses in the Panchayat.

2.2 Spatial concentration of land uses

The method of concentration index (CI) is used for arriving at the spatial concentration of different land uses in each ward.

The concentration index of a particular use of land in a ward =
$$\frac{\text{Percentage of that particular land use in the ward}}{\text{Percentage of the same land use in the Grama Panchayat}}$$

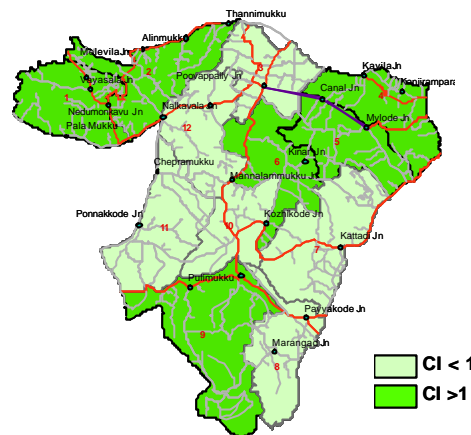


Figure 2.8 Concentration of agricultural sector

The concentration index arrived at in the above method may be one, less than one or greater than one. If the index is less than one there is no concentration of that particular land use in the ward and if the index is one or greater than one there is concentration of that particular land use. The areas /wards where agricultural activities have a concentration in Pooyapally Grama Panchayat, are depicted in figure 2.8 . From the figure, it can be seen that Kottara, Thachakkode, Pooyappally east, Mylode, Chenkulam are the wards where agricultural activities are concentrated. There is no clear concentration of other activities in the Grama Panchayat.

2.3 Categorization of residential zone.

In Pooyapally Panchayat 41% of the land is under residential use. On the basis of the criteria given in Annexure. 29 % of the area is categorized as residential area with potential for agricultural activities. The average size of land holdings here is more than 50 cents. Remaining area (that is 12% to total) under residential use is categorised as purely residential zone. Here the average size of land holdings is less than 25 cents.

After categorization of the residential area as above the land use break up of the panchayat is given in table 2.7.

Table 2.7 Land use break up of Pooyapally - after Catagorization of residential area

Land use Catagory	Purely Resid ential	Public & Semi public	Agricult ural	Water bodies	Barren Land	Transport ation	Residential area having potential for agricultural development
Extent (in hectares)	12	1	55	1	1	1	29

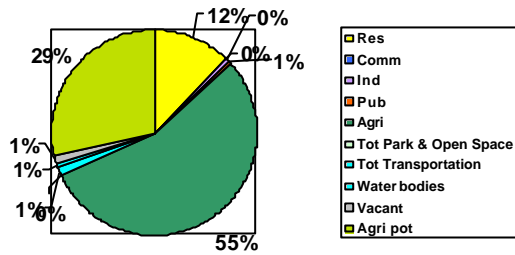


Figure 2.9 Land use break up after categorisation of residential area

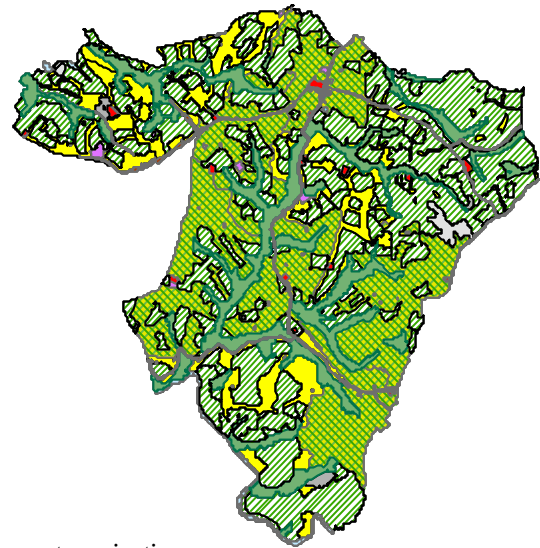


Figure 2.10 Land use map - depicting categorisation of residential area

The land use map of Pooyapally, after the categorization of residential zone is depicted in Figure 2.10. Major portion of the residential zone of Pooyapally Panchayat is suitable for homestead cultivation.

2.4 Functional Character

Pooyapally Panchayat is included in the agro development zone of Kollam district. Pooyapally is one among those panchayats in Kollam district where agricultural activity is predominant.

Figure 2.11 below shows the functional character of various Local Self Government Institutions in Kollam district. Accordingly the functional character of Pooyapally is 'rural'. In other words, in



Figure 2.11 Functional Character - Kollam District

Pooyapally Panchayat the average size of a land holding is more than 70 cents. The ward level analysis of functional character reveals that except for the wards such as Pooyapally town, Payyakkadu, Maruthaman Pally and Nalkavala showing semi rural character, other wards namely Kottara, Thachakkode, Pooyapally east, Mylode, Venkode, Kozhikode, Chenkulam and Punnakkode show purely rural character. Figure 2.1 depicts the functional character of wards of Pooyapally Panchayat.

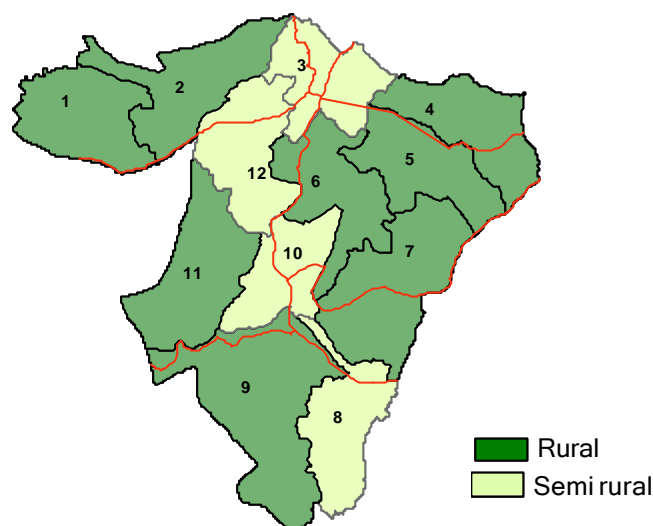


Figure 2.12 Functional character of wards - Pooyapally

2.5 Conclusion

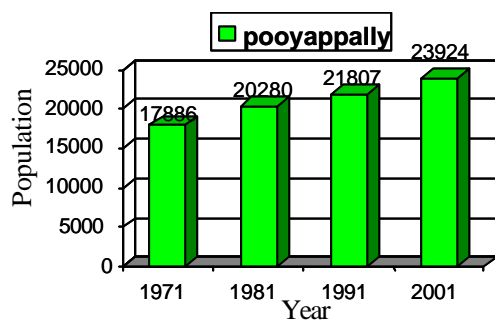
On the basis of analysis of use of land, it is observed that in Pooyapally Grama Panchayat, agricultural sector is dominant. In the case of other sectors any concentration or predominance was not identified here.

CHAPTER 3

Demography

In this chapter various demographic aspects of Pooyappally are analysed such as its population, density of population, growth rate and population distribution.

The total population of the Panchayat as per 2001 census is 23,924. This constitutes 0.92% of the total population of Kollam District. Out of this 12,525 are females and 11,399 are males. The demographic details as per the last three census are given in figure 3.1.



Year	Population	Decadal growth rate of population(%)
1971	17886	
1981	20280	13.38
1991	21807	7.53
2001	23924	9.71

Figure 3.1 Decadal variation of Population - Pooyappally Grama Panchayat

In comparison with the population of different Panchayats of Kottarakkara Block Panchayat it can be seen that, the population of Pooyappally panchayat is only 14% of the population of the Block Panchayat. Out of 6 panchayats the population is the highest in Veliam Grama Panchayat and the lowest in Pooyappally Grama Panchayat. On comparison with the population of neighbouring panchayats also the population of Pooyappally is relatively low (Fig 3.2).

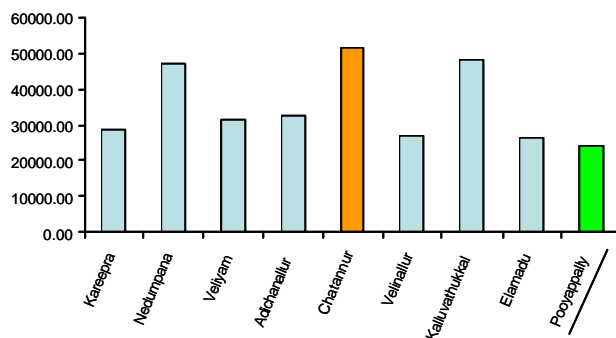


Figure 3.2 Pooyappally -Comparison of Population with nearby Panchayats

Name of Panchayat	Population (2001)
Kareepra	28888
Nedumpana	47488
Veliam	31789
Adichanallur	32906
Chathanur	51679
Velinallur	27065
Kalluvathukal	47940
Ilamad	26382
Pooyappally	23924

3.1 Population growth rate.

The growth rate of population of Pooyappally Panchayat in the decade 1991 -2001 is 9.71% which is more than the growth rate of the district during this period and that of the Kottarakkara block (7.38% and 8.27% respectively).

The population growth rate of Pooyappally during the decades 1971-81 and 1981-91 were 13.73% and 7.53% respectively.

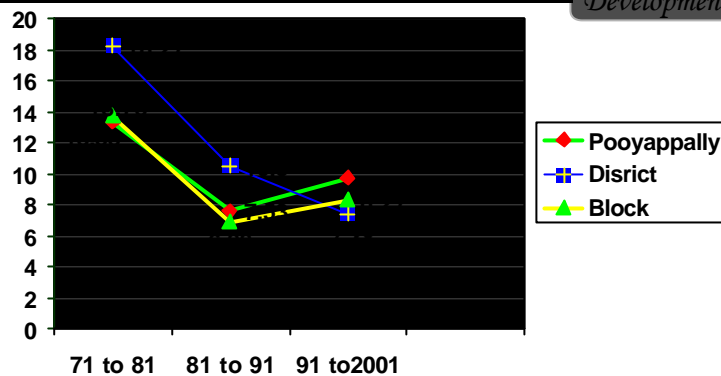


Figure 3.3 Population growth rate of Pooyappally Panchayat, Comparison with Kottarakkara Block and Kollam District

It can also be seen that during the decade 1991-2001 the rate of growth of population in Pooyappally Panchayat is more than that of the surrounding Panchayats also. The socio-economic survey reveals that migration from Pooyappally Panchayat and immigration to this Panchayat are on the lower side. Only 4.75% of the households have at least one migrant and only 1% of the households belong to immigrants.

3.2. Density of population

The density of population of the Pooyappally panchayat is 1081 persons per sq.km, which is less than the density of population of Kollam district. The variations in the density of population of Pooyappally and surrounding Panchayats are compared in Figure 3.4 below.



Grama Panchayat	Population Density Person/sq.km
Nedumpana	1885
Chathanoor	1536
Adichanallur	1480
Kalluvathukal	1303
Kareepra	1241
Pooyappally	1081
Veliam	1054
Velinallur	1022
Ilamad	873

Figure 3.4 Density of population - comparison of Pooyappally and surrounding Panchayat

It can be observed that Pooyappally has a higher population density compared to the eastern panchayats like Elamadu & Velinallur and lower density of population compared to the neighbouring panchayats close to the NH. 47 like Adichanallur, Chathanoor etc.

The density of population of Kottarakkara block panchayat is 1320 persons per.sq. km. Figure 3.5 below depicts the distribution of density of population in various grama panchayats in the block. Among these six panchayats density is the highest in Kottarakara (1695 persons/sq.km) Grama Panchayat and the lowest in Veliam grama panchayat (1054 person/sq.km).

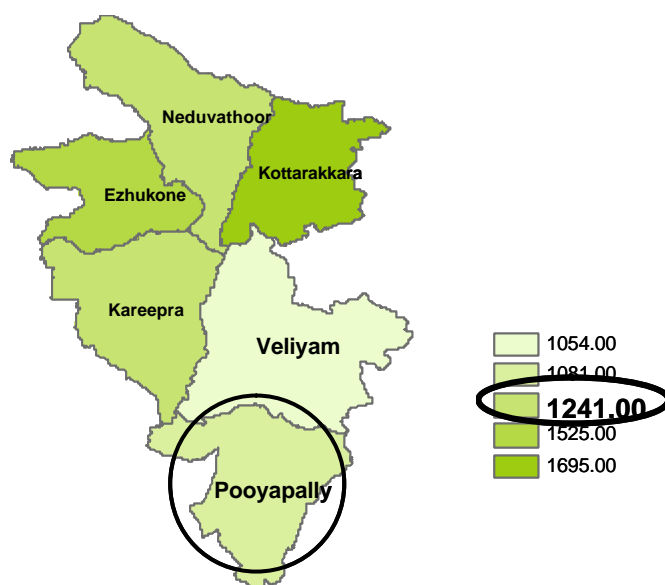


Figure 3.5 Density of population in various grama panchayats in Kottarakkara Block

Variation of the densities of population between wards of Pooyapally is shown in figure 3.6. Wards having highest density are Maruthaman pally and Pooyapally town. It can be noted that these two are mostly the central wards of the Panchayat lying close to the major roads. Wards along the periphery have relatively lower densities.

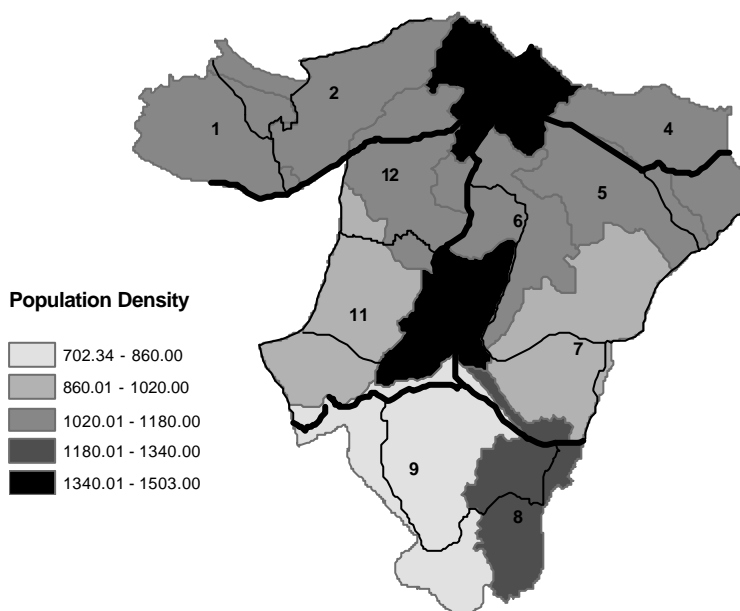


Figure 3.6 Density of population - wardwise variation in Pooyapally

Ward No	Population Density (Persons/Sq.km)
1	1099
2	1144
3	1502
4	1138
5	1110
6	1067
7	884
8	1215
9	702
10	1461
11	1013
12	1022

The density of population is the highest in Maruthamon Pally ward and the lowest in Chenkulam ward.

3.3. Sex Ratio

As per 2001 Census the sex ratio of this panchayat is 1099. The corresponding figure for Kollam district is 1069. The sex ratio of children in the age group 0-6 is 1037.

Table 3.1 Comparison of sex ratio - Pooyapally and surrounding panchayats

Serial No	Name of Grama Panchayat	Sex ratio
1	Adichanallur	1132
2	Chathannur	1105
3	Elamad	1099
4	Kalluvathukal	1095
5	Nedumpana	1045
6	Pooyapally	1099
7	Velinalloor	1075
8	Veliyam	1075
9	Kareepra	1091

Table 3.1 compares the sex ratio of Pooyapally with the neighbouring Panchayats

3.4. Population distribution

The population of Pooyapally Grama Panchayat as per 2001 census is 23,924. The distribution of this population among wards of the Panchayat is shown in fig. 3.8. The most populated wards are Pooyapally town, Venkode, Payyakkode and Maruthamon Pally.

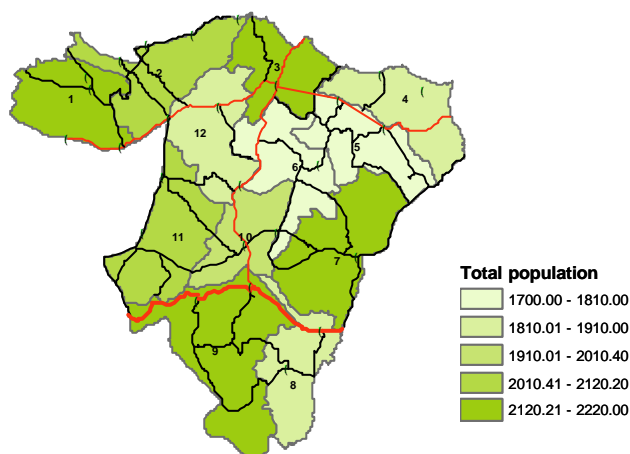


Figure 3.7 Wardwise distribution of population - Pooyapally

3.5. Conclusion

The density of population of Pooyapally grama panchayat is less compared to that of the neighbouring Panchayats and the Panchayats in Kottarakkara block as well. Mean while, it can be seen that growth rate of population of this Panchayat is high compared to the growth rates of the block panchayat and Kollam district.

CHAPTER 4

Occupational Structure

This chapter analyses the existing occupational structure of Pooyapally panchayat after studying the periodical changes occurred in occupational structure including strength and structure of workforce.

4.1 Workforce participation rate

The workforce participation rate of Pooyapally panchayat as per 2001 Census is 35.04% . In other words 35.04% of people in this panchayat are workers. (See fig. 4.1). This, when compared to the workforce participation rate of Kollam district (33%) is on the higher side.

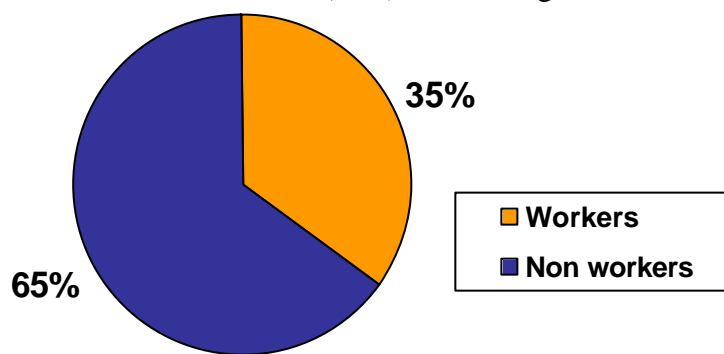


Figure 4.1 Workforce Participation rate in Pooyapally

The temporal variation of work participation rate in the Panchayat is shown graphically in figure 4.2.

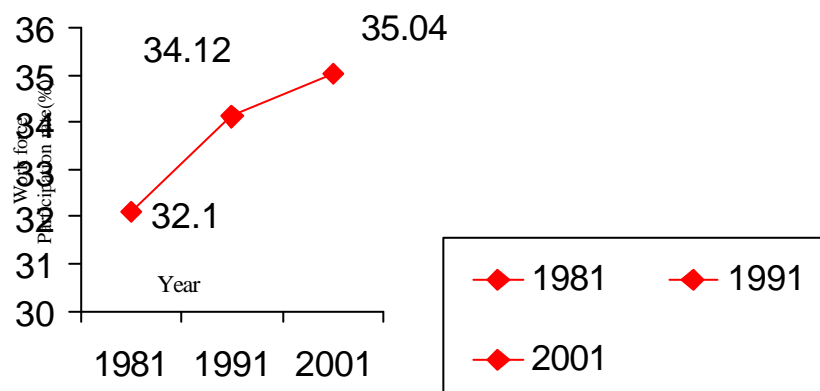


Figure 4.2 Workforce participation rate - temporal variation

The comparatively higher work participation rate indicates that the economic base of the Panchayat is fairly strong. Even though, the workforce participation rate shows an increasing trend over the past two decades, the increase in number of workers is not on par with the increase in population. Among the workforce of the Panchayat 5670 are males and 2715 are females.

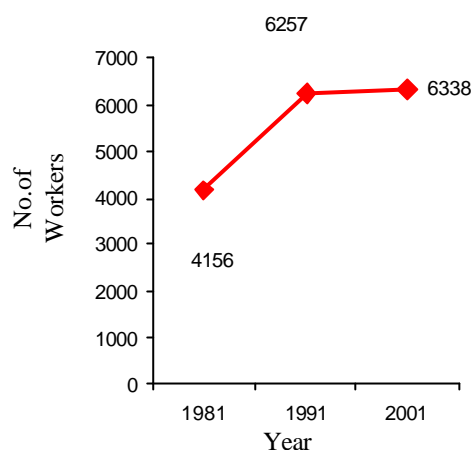


Figure 4.3 Increase in workers - Pooyapally panchayat

The work participation rate of females is only 22% in the Panchayat which is relatively low in comparison with that of the district.

4.2 Occupational Structure

The occupational structure means labour force engaged in different sectors. The Census of India classifies workers into marginal workers and main workers. The marginal workers are workers who are engaged for less than 180 days in a year. The total work force in Pooyapally panchayat is 8385 (35.4%) out of which 6338 (75%) are main workers and 2747 (25%) are marginal workers (figure 4.4).

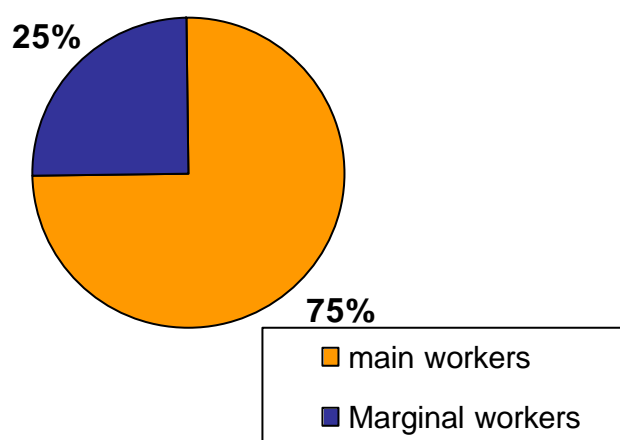


Figure 4.4 Main - Marginal workers

The main workers are again categorised into (1)cultivators (2)agricultural labourers (3)workers in cottage industries and (4)other workers. The number of workers in each category with percentage to total work force is given in figure 4.5.

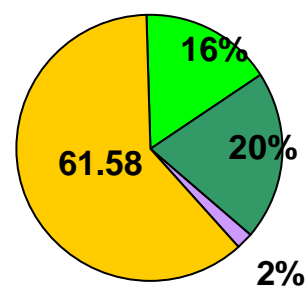


Figure 4.5 Category of main workers

36% of the main workers are engaged in agricultural sector. The corresponding figure for the district is 21.51%. The increased share of cultivators and agricultural labourers in the workforce compared to the district indicates the strong position of agricultural sector in the Panchayat. It is seen that 5375 persons are engaged in cashew industry, and about 25 persons in handloom industry. About 100 people are engaged in mining and quarrying.

Wardwise distribution of workers in Pooyapally is given in figure 4.6

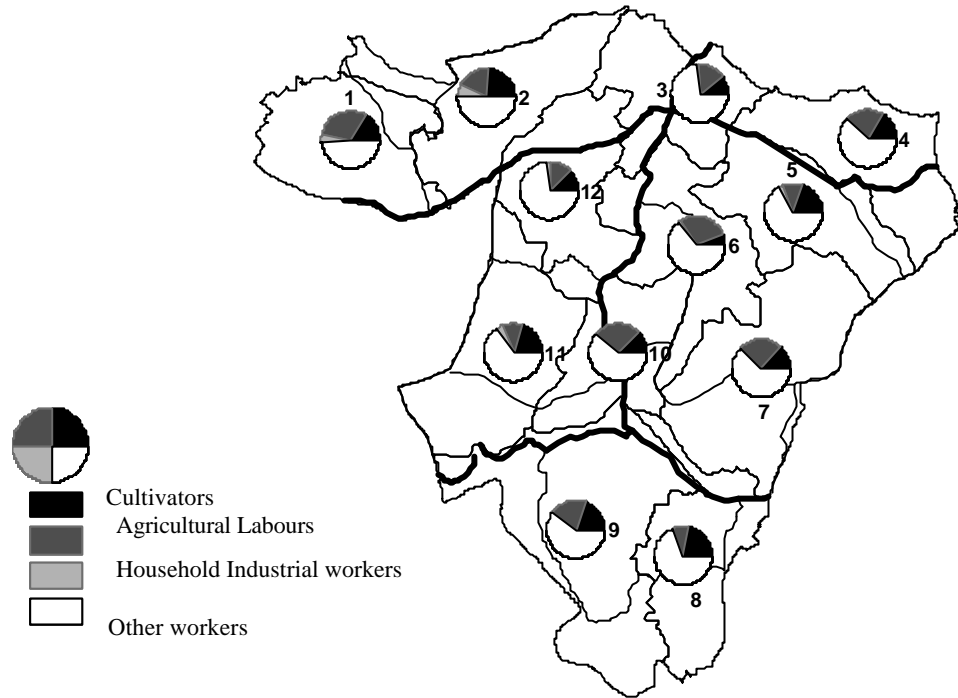


Figure 4.6 Wardwise distribution of Workers

Ward No	Cultivators	Agricultural Labourers	Household Industrial workers	Other workers
1	15.49	32.02	3.94	48.54
2	23.73	18.78	7.07	50.42
3	9.93	15.50	1.46	73.11
4	16.61	22.09	0.00	61.30
5	19.69	10.99	2.14	67.18
6	5.54	28.30	2.10	64.05
7	13.34	24.82	0.14	61.69
8	21.44	9.98	0.21	68.37
9	19.55	20.48	0.26	59.71
10	11.56	27.93	0.16	60.35
11	19.88	11.66	2.69	65.77
12	11.45	13.55	2.10	72.90

A concentration of cultivators is observed in the wards of Pooyapally town, Punnacode, Chenkulam and Payyakode. Agricultural labourers are concentrated in the wards of Pooyapally East, Venkode, Maruthamon Pally and Kozhikode wards. The concentration pattern of cultivators and agricultural labourers is shown in figure 4.7.

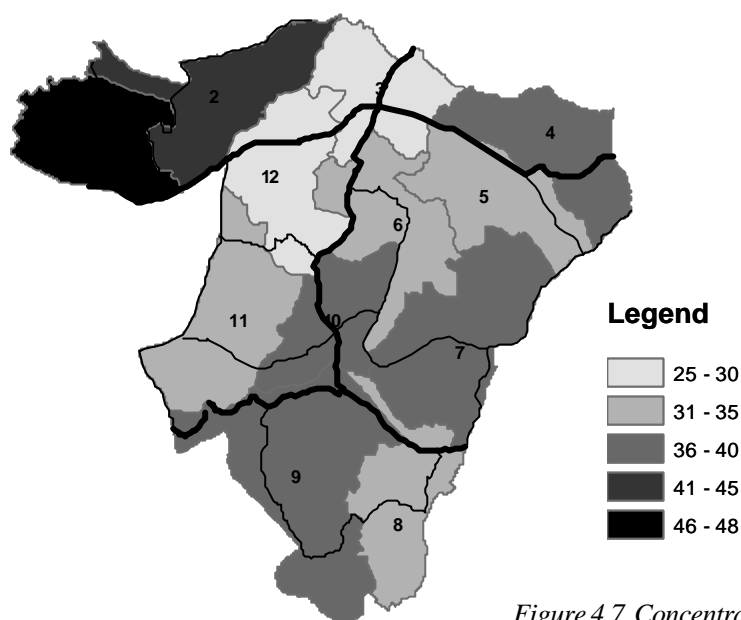


Figure 4.7 Concentration pattern of cultivators and agricultural labours

People who are engaged in household industries are concentrated in the wards of Kottara and Thachakkode. The number of people engaged in household industries in Pooyapally is only 157, which is 2% of the total main workers.

The occupational structure and rate of work participation shows the predominance of agricultural sector in the Panchayat.

4.3 Conclusion

In Pooyapally panchayat the work participation rate is relatively high. Agricultural sector is an important economic base of the Panchayat. Cultivators and agricultural labourers constitute 36% of the total number of main workers.

CHAPTER 5

Agriculture and Allied Sectors

Pooyappally panchayat falls in the agro development zone of Kollam district . This chapter briefs the outcomes of analysis of agriculture and allied sectors of the Panchayat.

Extent of land under agricultural use in Kottarakkara block is 52% of total area. A comparative study of the panchayats in Kottarakkara block, is given in figure 5.1 below. Pooyappally, where 55 % of the land is utilised for agricultural purpose, ranks 3rd in the share of land put to agricultural use.

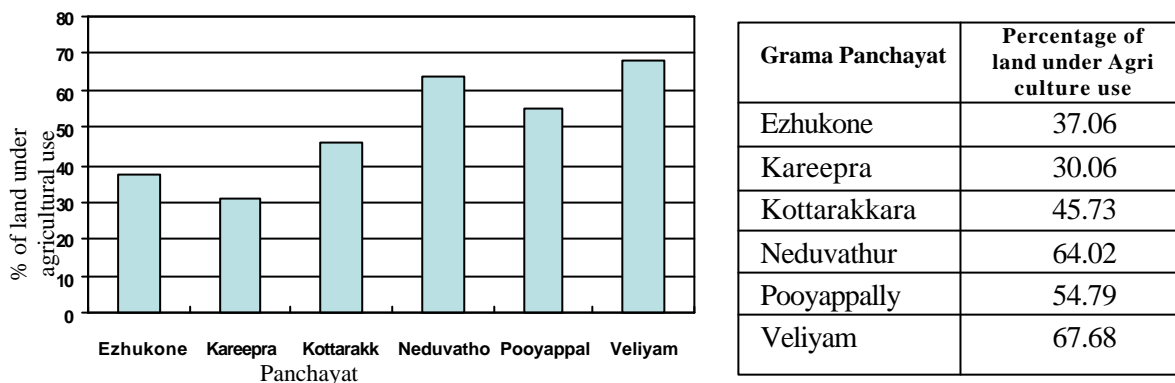


Figure 5.1 Comparison of Percentage share of agricultural land in the Panchayats of Kottarakkara Block

Many households of this Panchayat are depending on agricultural activities for their livelihood . Study on occupation structure revealed that 36% of the workforce is engaged in agriculture and allied activities. A comparison with other panchayats in the block shows that agricultural and allied activities are more in Pooyappally panchayat as the share of cultivators and agricultural labourers in the total workforce is the highest in Pooyappally among the panchayats in the block.

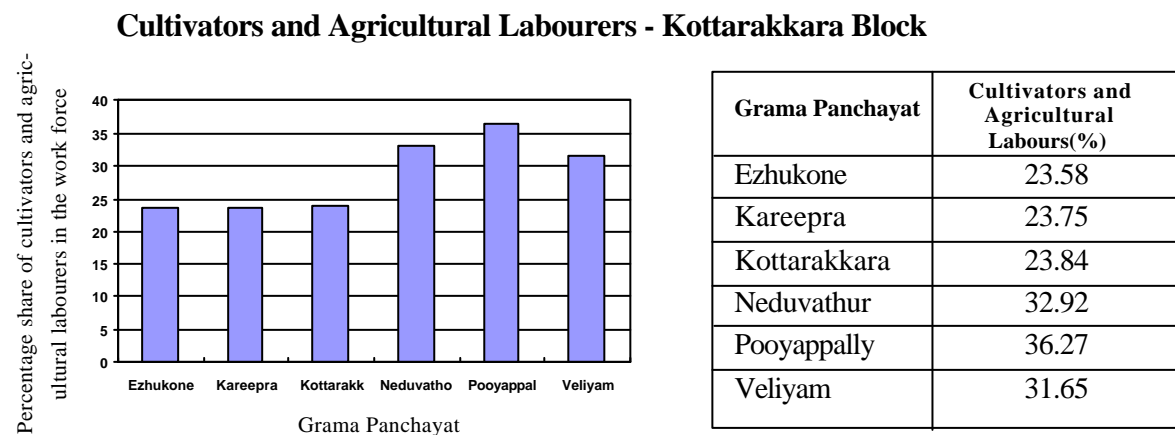


Figure 5.2 Share of cultivators and agricultural labourers in the workforce-Kottarakkara block

Seasonal rainfall, water from Ithikkara river, canals of Kallada Irrigation project and the ponds existing are the major sources of water for irrigation in this panchayat.

5.1. Agriculture - Past Scenario

Paddy and cashew were the predominant crops of Pooyapally. Nowadays the cashew plantations are being slowly replaced by rubber plantations. Agriculture sector had important role in all the five year plans implemented. However the sector could not show the desired progress during the period. The draw-backs in the implementation of the five year plans, lack of opportunity for direct participation of cultivators etc might have led to such a situation. Lack of market facilities for sale of agricultural produces, absence of reasonable price system, non availability of agricultural labourers etc were major problems in the agricultural sector.

5.2. Agriculture - Existing Scenario

The major crops in Pooyapally Grama Panchayat are paddy, coconut, rubber, tapioca, plantain etc. Coconut, constituting 36% the agricultural area, including area under homestead cultivation is the principal crop. Rubber is cultivated in 34% of the land. Only 16% of agricultural lands are paddy fields. Tapioca is cultivated in 10% of the agricultural area and other crops in remaining 4% of the area. Table 5.1 and 5.2 and figure 5.3 depict the details of major crops of Pooyapally.

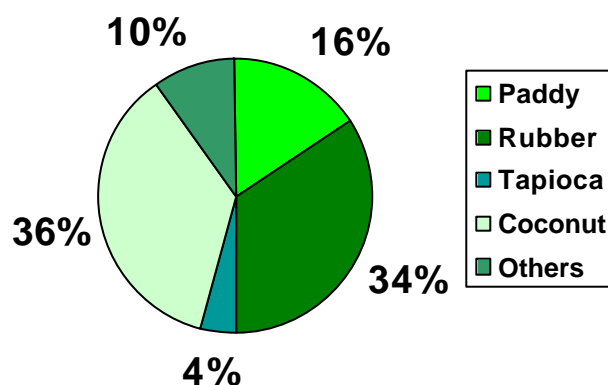


Table 5.1 Area under different crops

Crops	Percental to total Agricultural area
Paddy	16
Coconut	36
Rubber	34
Tapioca	10
Others	4

Figure 5.3 Major crops of Pooyapally - % share of total agricultural area

Crop	Area in Hectors	Production (Tonnes)	Productivity kg/hectares
Paddy	210	483	2300
Coconut	780	7332	9400
Rubber	200	240	1200
Tapioca	190	2565	13500

Table 5.2 Area, Production and productivity of major crops

5.2.1. Paddy cultivation

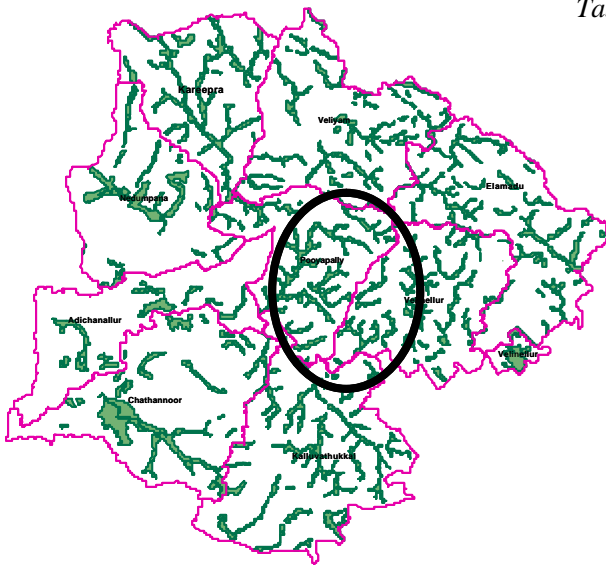
Pooyapally is one among those panchayats of Kollam district where paddy cultivation is widespread. It is one out of the 25 Panchayats where production of paddy is relatively high. 2.6% of the total paddy production in Kollam district is from this Panchayat. Considering the extent of land under paddy cultivation, Pooyapally where 210 hectares of land is under paddy, ranks 17th in the district with 2.2% of paddy lands of Kollam district.



Figure 5.4 Paddy cultivation - Kollam District, Panchayatwise distribution

Comparing the extent of land under paddy in Pooyapally and neighbouring panchayats it can be seen that Kareepra, Nedumpana, Kalluvathukkal and Velium Grama Panchayats have more land under paddy than Pooyappally. In fact 24% of the paddy cultivation in Kollam district is seen in Pooyappally and neighbouring Grama Panchayats. The chain of paddy fields that are existing in this area forms parts of paddy lands of the panchayats of Adichanallur, Chathannoor etc. Total extent of land under paddy in all these panchayats is 2292 hectere . The extent of land under Paddy in Pooyapally and surrounding panchayats is given in table 5.3 and figure 5.5 depicts the chains of paddy fields in this locality. Kareepra Grama Panchayat where 960 hectares of land is under paddy ranks first among these Grama Panchayats with respect to extent of land under paddy.

Table 5.3 Paddy cultivation - extent of land under paddy, Pooyapally and surrounding Panchayats



Grama Panchayat	Area (Hector)
Adichanallur	68
Velinallur	165
Elamad	180
Chathannur	180
Pooyappally	210
Veliyam	229
Kalluvathukkal	400
Nedumpana	460
Kareepra	960
Total	2292

Figure 5.5 Paddyfields in Pooyapally and neighbouring Gramapanchayats

All the 13 'Elas' of Pooyapally are cultivated with paddy two times a year. Out of the total extent of 2228 hectares of Pooyapally 2000 ha. is agricultural land. The 13 Elas altogether have an extent of 300 hectare out of which 210 ha. is currently cultivated. The remaining area is either kept fallow or filled for other types of crops.

This estimated number of paddy cultivators in this panchayat is around 900. The average extent of land per cultivator is less than 50 cents. Approximately 100 hectare area is sown with first crop in May-June. Almost the entire paddy lands are cultivated during the second crop (September- October). Paddy lands here are not put to cultivation during the third crop. The irrigation ponds attached to old paddy fields are existing even now. But these are not being used properly. As stated earlier, the seasonal rainfall and irrigation canals of KIP are the major sources of water for irrigation.

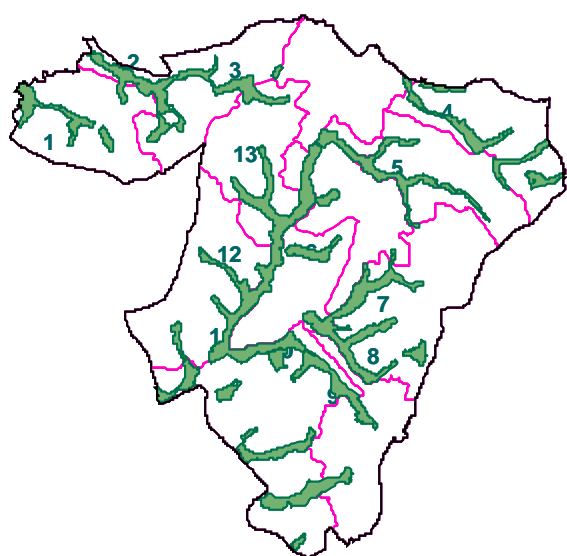


Figure 5.6 Paddy fields in Pooyapally

Name of the field (Ela)	Extent in hectare	Number of cultivators
Chekkod	20	76
Kottara	15	75
Chembakassery	14	36
Ilavankonam	14	44
Nellipparambu	14	60
Kallikonam	27	88
Kozhikode	10	34
Mathiyod	12	48
Parandode	10	47
Chenkulam	16	73
Punnakkod	10	48
Madavana	14	60
Maruthamanpally	34	100

The annual production of paddy is about 483 tonnes. From figure above, it can be observed that paddy lands are spread throughout the valley portion with a slight concentration near the central area. The productivity of paddy in Pooyapally panchayat is 2300 kg/hect. When compared with the area cultivated production of paddy is low here.



Chenkulam Ela



Chekkode Ela

On the initiative of Agriculture Department, Basmathi rice is being successfully cultivated in this panchayat. Due to the absence of rice mills, Basmathi cultivation is not becoming popular. The extent of paddy lands are getting reduced due to mining of clay, filling of paddy lands for dry cultivation etc. In Pooyappally Grama Panchayat paddy cultivation is the livelihood for a lot of households. However, there is a trend of cultivators moving away from paddy cultivation as it is becoming non profitable. The major problems faced by cultivators are non availability of agricultural labourers and the hike in wages. Cultivators are switching over to other remunerative crops like plantain, tapioca etc.

5.2.2 Coconut.

Coconut is the second major crop in Pooyappally Grama Panchayat. Pooyappally is one of those panchayats in Kollam district where coconut cultivation is predominant. Pooyappally ranks 7th in production of coconut in the district.

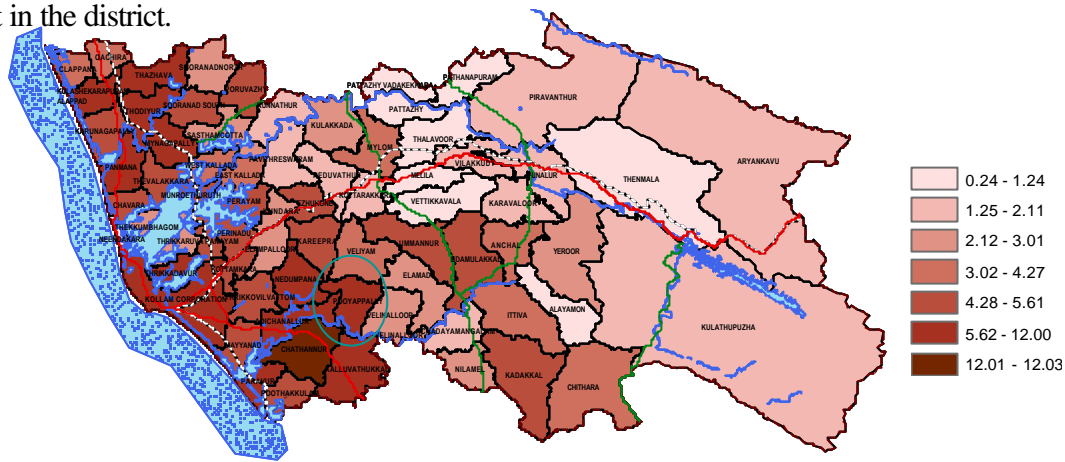


Figure 5.7 Production of Coconut in Kollam District - LSGI wise

About 780 hectares of land is under coconut cultivation in Pooyappally which is 1.5% of the total area under coconut cultivation in Kollam district. The production of coconut in Pooyappally is 7332 tonnes, which is only 1.07% of the total production of coconut in the district.

Details of coconut cultivation in Panchayats neighbouring Pooyappally is given in Table 5.4. Among them Pooyappally ranks first in coconut production. The productivity of coconut here is 9400 kg/hect. Coconut cultivation is seen mainly as a garden land crop and coconut plantations are less.

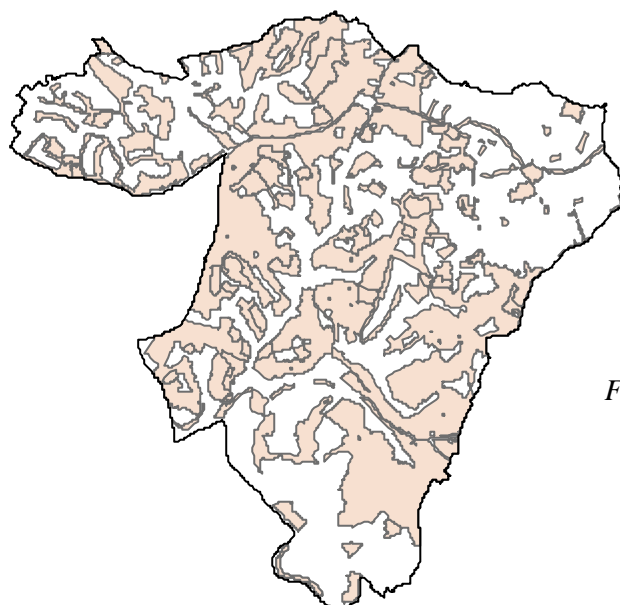
Table 5.4 Extent of agricultural land under coconut cultivation Pooyappally and neighbouring Grama Panchayats.

Grama Panchayat	Area (hectare)	Production (tonnes)	Productivity tonnes/hect
Kareepra	1520	5320	3500
Nedumbana	1600	8830	5520
Veliyam	1050	3670	3500
Adichanallur	1284	6420	5000
Chathannur	2010	1202	5985
Velinalloor	500	2180	4375
Kalluvathukkal	1105	6090	5520
Elamad	500	2475	4950
Pooyappally	780	7332	9400

The distribution of area under coconut cultivation in Pooyappally panchayat is shown in fig. 5.8. The coconut plantations are seen in Kottara, Pooyappally East and Mylode wards.



Coconut cultivation -Pooyappally



*Figure 5.8 Area under coconut cultivation
Pooyappally panchayat.*

Now coconut cultivation is facing acute problems. Diseases like rootwilt, bud rot and leaf rot are common, which has effected the productivity of coconut. Effective intervention for preventing diseases and increasing productivity are essential to promote coconut cultivation.

5.2.3 Rubber.

Extent of land under rubber cultivation in Pooyappally is around 200 hectares, which forms 1.2% of the total land under rubber cultivation in the district. This can be viewed as a beginning of the diffusion of rubber cultivation, common in the eastern highland regions of the district towards the fairly flat lands towards the west. The production of rubber in the Panchayat is about 240 tonnes. Figure 5.9 depicts the panchayatwise distribution of area under rubber cultivation in Kollam district.

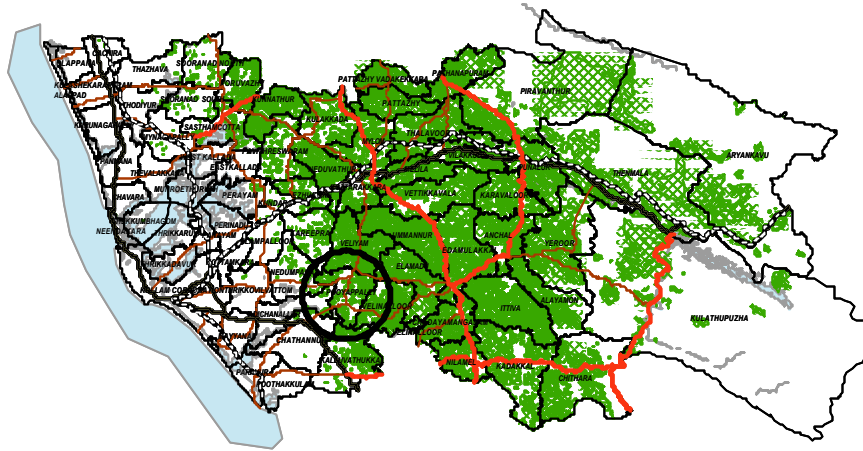


Figure 5.9 Rubber cultivation, Kollam district - Local Self Government wise

The distribution of areas under rubber cultivation in the Panchayat is shown in Figure 5.10. A spatial concentration of rubber cultivation is seen in the valleys and slopes along the boundary of the Panchayat. The wards in which rubber cultivation is concentrated are Kottara, Thatchakkode, Pooyapally East, Mylode and Chenkulam. The eastern portion of the Panchayat where the terrain is generally sloping is suitable for rubber cultivation.

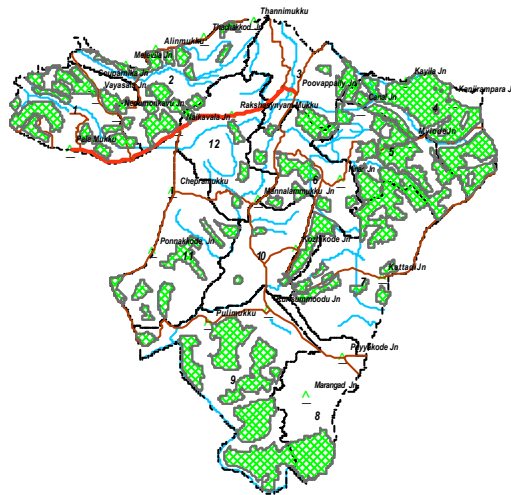


Figure 5.10 Distribution of areas under rubber cultivation - Pooyapally Grama Panchayat

Due to high production and productivity of rubber, garden lands around residences and under other crops are slowly getting converted for rubber cultivation. A rubber collection and processing co-operative society is functioning in kozhikode ward. This society collects rubber latex from cultivators. Private sector is also actively involved in the marketing of rubber. Proposals of getting more income and easily available marketing facilities makes rubber cultivation more and more popular.

In Kollam district Pooyapally occupies 15th place with reference to both the extent of land under tapioca cultivation and its production. Approximately 10% of the area of the panchayat is cultivated with tapioca which is about 2.4% of the land under tapioca cultivation in Kollam district. 1.9% of the total production of tapioca of the district is from Pooyappally Panchayat, amounting to 2565 tonnes from 190 hectares of land. Tapioca is a major garden land crop in Pooyapally. Figure 5.11 depicts the comparative study of local self governments of Kollam with reference to extent of land under tapioca cultivation.



5.2.5. Other crops

- 40



Cultivation of vegetables in Pooyappally Panchayat.

The Krishi Bhavan in Pooyappally Panchayat is situated at Maruthampally. It is not conveniently located for the farmers to avail services. The market facilities for horticultural products of the Panchayat are quite inadequate. Efforts for value addition of agricultural produces are also at a minimum. Veliam market in the adjacent Panchayat, is the trading centre of crops of Pooyapally also.

5.3 Irrigation

Except for areas, irrigated through the KIP canal network, agriculture in Pooyapally is generally rainfed. The system of irrigation ponds attached to elas (Thalakkulam) is not functional now. The KIP canal supply water for irrigation for two crops only. Besides all elas are not covered through this network. Hence substantial increase in irrigation facilities is required.

5.4 Storage and marketing facilities

For the improvement of agricultural sector marketing facilities are an essential prerequisite, which are at present lacking in Pooyapally. Pooyapally is dependent on the Veliyam market for sale of its agricultural produces.

5.5 Problems.

1. Non availability of agricultural labourers is a major problem faced by cultivators especially for planting and harvesting of paddy. The wages are also prohibitively high.
2. Absence of effective measures to control pests and crop diseases.
3. Optimum level of mechanisation is not so far achieved except for tractors, power tillers etc occasionally being utilised in the elas.
4. Absence of measures for ensuring fair price for agricultural produces and lack of marketing facilities are also problems faced by cultivators.
5. Absence of adequate processing facilities for agricultural produces.

5.6 Potentials.

1. Possibility of bettering the prospects of agricultural sector through appropriate interventions.
2. Presence of KIP canal, Ithikkara river etc. as sources of water for irrigation increases the potentials of agricultural production.

5.7 Conclusion

Cultivation of paddy, coconut and rubber has very good prospects in Pooyapally. But the productivity of all these need to be improved utilising the existing facilities available.

CHAPTER 6

Industries

In this chapter the study of the industrial sector of Pooyapally Grama Panchayat is included. Cashew sector, which was very active till the recent past is in a state of decline now. Even the units that are functioning are not in a rosy state.

In the case of industrial sector, Pooyapally Grama Panchayat is in a backward position. Large scale industries are absent in the Panchayat. Those traditional industries and small scale industries of the panchayat, together occupy an extent of only 0.07 hectares which is 0.32% of the total area of the panchayat. On analysis of the location of industries, a concentration is seen in wards 1, 6 and 12. (See figure 6.1).

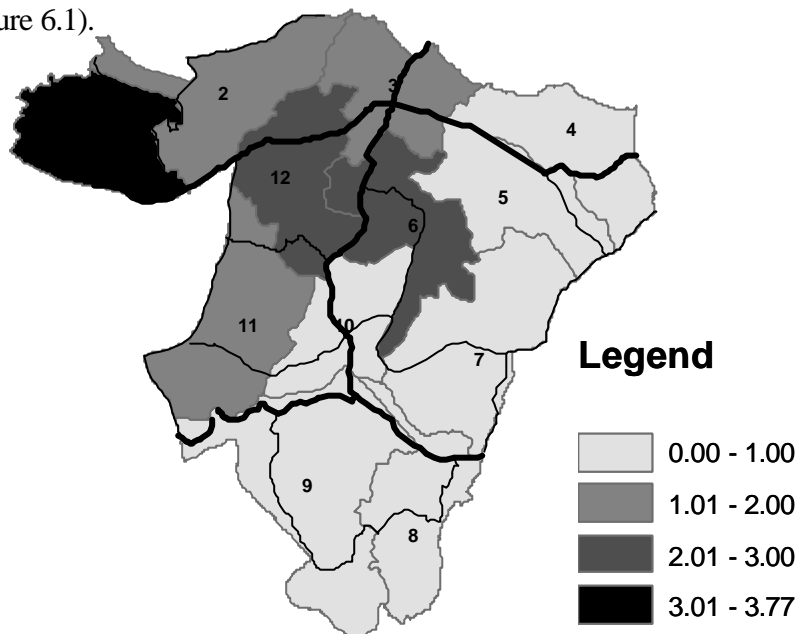


Figure 6.1 Concentration of industrial area

The mini industrial estate established at Nalkavala ward in 40 cents of land - a project of Jilla Panchayat is a noteworthy event in the industrial sector of Pooyapally. In this industrial estate, facilities are provided for 10 industrial units, with parking facilities, electricity, water availability etc. However, actual functioning of units in this industrial estate is yet to begin.



Mini industrial estate - Pooyapally

6.1 Traditional industries

The traditional industries of this panchayat include few cashew factories and handloom units. There are 11 cashew factories in this panchayat, out of which only 7 are functional now, employing approximately 5375 workers. Majority of the cashew workers are women hailing from BPL families. Due to non availability of cashew nuts, the cashew factories are working on a seasonal basis. Many of these units utilise imported cashewnuts as raw material.



Cashew factory-in Pooyapally

Two handloom units are functioning actively in this Grama Panchayat, viz the Desabhimani co-operative society and Harijan Co-operative society, both in Kottara ward. The number of workers in these two units together is around 25.



Handloom Industry

6.2 Small scale industries.

Five hollow brick making units, a rubber co-operative society in Kozhikkode ward and few rock quarries are functioning in this panchayat.

The high altitude areas like Ayiravally hills is the area where quarries are functioning. There are five licensed units employing about 100 labourers.

The MVM Cough syrup- making venture under the brand name Krishna Thulasi-is a major SSI unit here. Medicinal plants required as raw material for the unit is currently brought from Tamil Nadu.



Hollow brick making unit



Rock Quarrying

Problems

1. Even though agricultural sector is dominant in the panchayat only few agro based industries are existing here.
2. Traditional industries are not promoted.
3. Apathy of young generation to traditional industries.
4. Absence of large scale industries.
5. Absence of facilities to guide industrial entrepreneurs.
6. Eventhough paddy is one of the main agricultural produce, there is a felt shortage of collection, processing and trading facilities for paddy.
7. Absence of an investor friendly atmosphere distract industrial entrepreneurs.

Potentials.

1. There is high potential for starting agro based industries.
2. The mini industrial estate with all supporting infrastructure, in a ready to occupy state, is another potential in this sector.

6.3 Conclusion.

Pooyapally Grama Panchayat does not have a strong industrial base. Whatever traditional and small scale industry existing in the panchayat are also not in a rosy state. Even the fully equipped mini industrial estate, could not attract investors so far. Value addition of agricultural produces and utilisation of natural resources like extensive rock deposits need to be suitably utilised for strengthening the secondary sector of the panchayat.

CHAPTER 7

Animal Husbandry Sector

Animal Husbandary sector has very good potential for development in Pooyapally even though at present this sector has not developed to the desired level. This chapter discusses the existing status and development prospects of animal husbandry sector in the panchayat.

7.1 Existing scenario

As in the case of agricultural sector, animal husbandary sector is another major area having potential to strengthen the economic base of the panchayat. Generally, animal husbandary sector has potential for development where agricultural sector has importance in the economic base as it is one of the ancillary sectors of agricultural sector. Average plot size here is 70 cents or more. This is also a development potential for animal husbandary sector.

The Integrated District Development Plan for Kollam district identifies that there is small scale milk production/processing activities in the Panchayat. Milk collection and distribution centres are actively functioning here. Fig. 7.1 gives details of milk production in panchayats of Kollam district.



Figure 7.1 Production of milk – Kollam District

Three Milk societies (at Kottara, Maruthamonpally and Mylode) are currently engaged in collection and distribution of milk in this Panchayat. These milk societies together collect 30000 to 45000 litres of milk per month. In Pooyapally panchayat the annual milk production is 2460000 litres, out of which only 40-50% is collected through these societies. Balance milk is distributed locally to various houses. A dairy development office is functioning at Kottarakkara, and a veterinary hospital is functioning at Maruthaman pally. Service of a veterinary surgeon and a Livestock Inspector is available from the veterinary hospital. As per 2003 Livestock Census, the details regarding the domestic animals of Pooyapally is given in table 7.1

Table- 7.1 Live stock population 2003 - Pooyappally

Cow-1883	Goat-1168	Dog-1841	Duck-234
Bufello-13	Hen-63	Cat-226	Rabbit-25

Source: Live stock Census 2003

Two goat rearing farms are functioning in the Panchayat at Thachakkonath in Kozhikode ward. Poultry farms are not existing in this panchayat. The monthly consumption of milk and milk products, egg, meat and vegetables in the Panchayat, worked out based on the details from the outcomes of the survey conducted by national sample survey organization in urban areas of Kerala on consumption pattern of such produces is given in Table 7.2

Table 7-2. Monthly consumption of milk, egg, meat etc.

Category	Consumption per month
Milk and milk products	73950 litre
Egg	119620 Nos.
Meat	5981 kg.
Vegetables	62896 kg.

As in the case of agricultural sector, the animal husbandary sector is also facing lots of problems. High yield variety milch cows are being reared in many households (in the panchayat). However, largescale efforts like dairy farms are absent.

In the panchayat market a meat stall is functioning. Modern slaughter houses are absent and unauthorised slaughtering is practised in the panchayat. Modern facilities for production, processing and sale of meat products is a necessity for the panchayat.



7.2.1 Problems.

1. Scarcity and high price of good quality cattle feeds
2. Absence of fodder cultivation.
3. Absence of adequate sub centres.
4. Unscientific methods in production, processing and sale of meat products.
5. Unscientific pricing pattern. For example present price of milk is insufficient to meet the production cost.

7.2.2 Potentials

The average plot size in this panchayat is more than 70 cents. This situation is favourable for promoting animal husbandary sector.

7.3 Conclusion

From the study of land use pattern, it is observed that the average plot size of the panchayat is suitable for promoting animal husbandary sector. Suitable measures for utilising this potential to the optimum level need to be taken in this panchayat.

CHAPTER 8

Water Bodies and Watersheds

A watershed is an extent of land where water from rain drains down hill into a body of water, such as a channel, river, lake, reservoir, estuary or sea. The watershed includes both the streams and rivers that convey the water as well as the land surfaces from which water drains into those channels and is separated from adjacent watersheds, by a drainage divide. In Pooyappally Panchayat four small water sheds are seen. This chapter describes the water sheds and the water bodies in Pooyapally.

8.1 Watersheds

Out of 26 watersheds in Kottarakkara block there are 4 watersheds in Pooyappally panchayat. The micro watersheds in Pooyapally area are derived from the topo sheets of Kollam district, having contour lines.

8.1.1 Important watersheds in Pooyappally Grama Panchayat

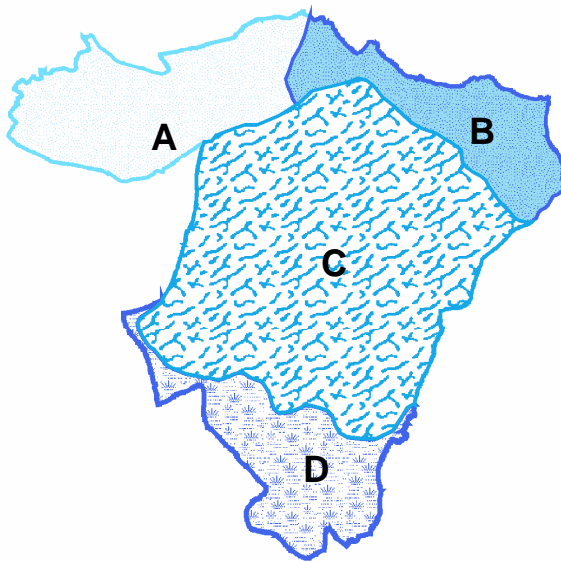


Figure 8.1 Important water sheds in Pooyapally grama panchayat

The watersheds in Pooyapally are shown in figure 8.1. The details are given in table 8.1.

Table 8.1. Important water sheds in Pooyappally panchayat

Sl no	Water sheds	Area in Hectare	Wards
1	A	417	1, 2, 12 Part
2	B	271	4 and Parts of 3 & 5
3	C	1217	6, 7, 10, 11 and parts of 8,9 &12
4	D	318	8 & 9 Part

8.1.2 General information about watersheds

1. Watershed A

This watershed is situated in the north - western portion of Pooyappally panchayat comprising Kottara, Thachakkode and parts of Nalkavala wards and is generally the low altitude areas of the Panchayat. The extent of this watershed is 417 hectares. The important land use here is agriculture 20.48% of the agricultural area of Pooyapally is in this watershed which forms 61% of the total area of the watershed (14% paddy and 47% dry agricultural). Land use break up of the water shed is given in fig. 8.2.

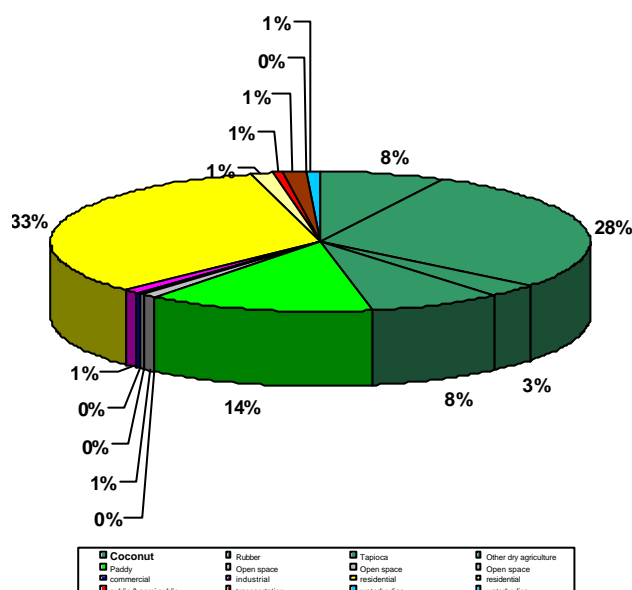


Figure 8.2 Land use breakup - Water shed A

Sub-canals of KIP and the ponds existing in the watershed are the water sources for irrigation here.

2. Water shed B

This watershed, situated at the north east boundary of the panchayat, comprises parts of Mylode and Pooyappally wards. This is comparatively high altitude portion of the panchayat. The extent of this water shed is 271 hectares. The major land use here is agriculture. 77% of this watershed is under agricultural use which forms 17.01% of the agricultural area of Pooyapally. Dry cultivation constitutes 67% and paddy 10%. Rubber, coconut and tapioca are the major crops. Land use breakup of this watershed is given in figure 8.3. Despite the fairly good water availability, this area faces water scarcity in summer.

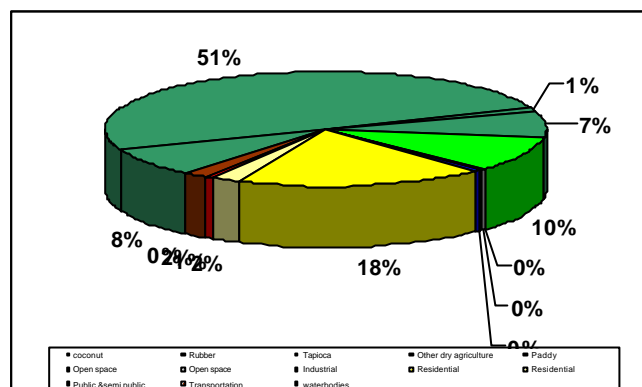


Figure 8.3 Land use break up - water shed B

When the social status of this area is examined, it can be seen that 11% of the people are engaged in quarrying, cement based industry and cashew factories.

3. Watershed C

The water shed C is located in the middle portion of the panchayat and it constitutes the wards of 6,7,10,11 and parts of 2,3,5,8,9,12 wards. This is the largest watershed in Pooyappally panchayat and its extent is 1217 hectares. The terrain here comprises of slopes, plain lands and hilly areas. Considering the land use, agricultural and residential uses are of equal importance. Out of 47% of land under agricultural use 15% is under paddy and the remaining area is under dry cultivation mainly of rubber, coconut and vegetables. 46.32% the agricultural areas of Pooyappally belong to this watershed. Land use break up of this watershed is given in figure 8.4.

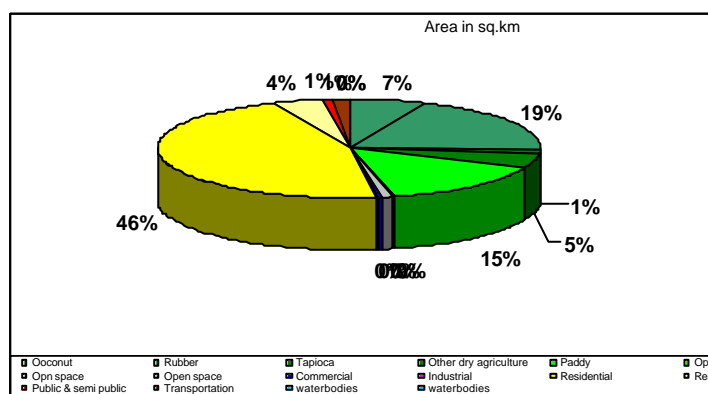


Figure 8.4 Land use break up - Water shed C

When the social status of the area is examined it is seen that 48% workforce is engaged in agricultural activity. Cashew and handloom workers constitute a small percentage in the workforce.

4. Watershed D

This watershed is in the Southern area of the panchayat and parts of Payyakkode and Chenkulam wards are included in it. Extent of the watershed is 318 hectares only. Terrain here comprises of small

hillocks and slopes. 16.19% of the agricultural lands of Pooyappally belong to this watershed. 62% of the area of this watershed is under agricultural use out of which 11% is under paddy and the remaining area under dry agriculture (rubber constitutes 43% of the agricultural area). Figure 8.5 below depicts the land use breakup of this watershed.

Considering the occupation structure only 10% of the work force is engaged in agricultural sector. Large share of workers are engaged in sandmining and quarrying.

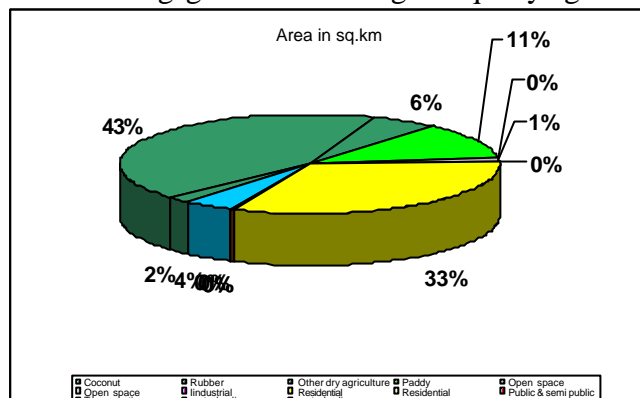


Figure 8.5 Land use break up - Water shed D

8.2. Agricultural Labourers in Watersheds

The share of agricultural labourers among the watersheds is shown in fig.8.6. From this it is observed that 48% of the agricultural labours are in water shed C.

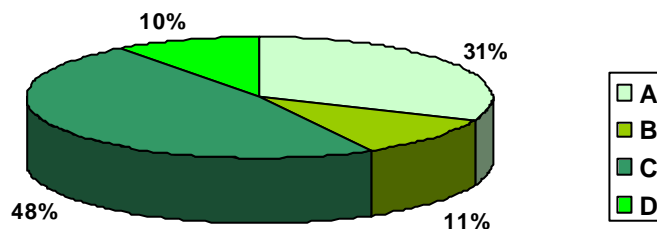


Figure 8.6 Share of agricultural labourers in the watersheds

8.3. Major Water courses and Ponds

1. Neithodu- Kolamath -Alummoodu - Moozhiyil kadavu Thodu

This thodu connects the elas of Neithodu, Kolakkode, Mannakkodu and, Kottara. This stream joins the Nedumoncavu river near Moozhiyil Kadavu bridge. This thodu is the source of water for irrigation of the elas mentioned above. The thode is maintained in a satisfactory manner.

2. Nelliparamb - Venkode - Maruthamon Pally - Chenkulam Thodu.

This is the longest thodu in the Panchayat irrigating Nelliparamb, Panayam, Pooyappally, Maruthamon Pally and Chenkulam elas. This thodu becomes dry in summer season. Encroachment along the banks has reduced the width of the thodu considerably.

3. Mylode - Ilavankonam - Thazhemoozhy - Veliamthodu

This channel, passing along the head end of the Elavankonam 'ela' is the source of water for the irrigation of this ela. It becomes dry during summer season.

4. Ottumala - Kozhikkode - Kurumanmoola - Chenkulam thodu

This thodu is the source of water for irrigation of Kozhikkode, Mathyode and Chenkulam elas. It becomes dry during summer. Maintenance is not done periodically and there is reduction in width due to encroachments.

Water Bodies

Kakkad Chira:- This chira is located in Kottara ward. It is used for irrigation of Kakkadu Ela in this ward. All the four sides of the chira are protected with side walls.

Mnakkottu Chira:- Mnakkode ela is irrigated by this chira. It is a perennial water body having fresh water.

Pooyappally Chira:- Pooyappally ela was irrigated by this chira. This ela is not cultivated now. This chira is protected well and the water is free from pollution.

'Macriyillakkulam' :- It is located in Maruthamonpally ward. This pond is used for irrigating the surrounding garden lands. Agriculture Department has put up energising pumps for pumping water for irrigation.

Eniyoor Madom Chira:- An important water source in Kozhikkodu ward, the Eniyoor Madom chira, is maintained well by removing weeds and by constructing side walls. It is used for the irrigation of Kozhikkode Ela which is nearby.

List of water courses and ponds

Water Channels	Ponds
1. Mudiorkkonam thodu	1. Kakkodu Chira
2. Mathyodu Ela thodu	2. Matathil Vathukkal Chira
3. Ottumala Kozhikkodu - Kurumanmoola - Chenkulam thodu	3. Kulakkodu Chira
4. Nellipparamb - Maruthaman pally - Chenkulam thodu	4. Mnakkodu Chira
5. Pongodu - Alummoodu - Moozhiyil Kadavu thodu	5. Palurkkonam Chira
6. Palamkonam - Minnukkulam thodu	6. Pooyappally Chira
7. Mylodu - Elavankonam - Thazhemoozhi - Veliam thodu	7. Eniyoormatam Chira
	8. Chenkulam Chira
	9. Macriyillakkulam

8.4. Conclusion

Paddy cultivation is predominant in watershed C, while rubber, coconut etc are predominant in other three watersheds. The number of cultivators and agricultural labourers are the highest in the area coming under watershed C.

CHAPTER 9

Transportation

For any development an efficient transportation network is a prerequisite. In this chapter, the analysis of the transportation sector of Pooyappally Grama Panchayat is included.

9.1. Regional Road Network.

The major means of transportation in Pooyappally Grama Panchayat is roads. The panchayat has a fairly good network of roads. Interior parts of the panchayat are connected to major roads by a network of local roads. The length of roads in Pooyappally panchayat is 138.68 kms. There are seven PWD roads running through the Panchayat, six of them bus routes.

Three major roads, connecting various parts of the district, passes through the panchayat. The road connecting Kollam town and Ayoor viz the Kollam town - Kannanalloor - Pooyappally - Ayoor road is one among them. The Ithikkara - Kurisummoodu - Ayoor road connecting NH.47 and MC Road and the Ithikkara Pooyappally - Kottarakkara roads connecting NH.47 and NH.208 are the other two major regional roads. The road connecting Chathannoor and Ayoor, passing through Kurisummoodu junction in Pooyappally which has a proposal for widening to 21 m (four lane carriage way) in the IDDP is another major road passing through the panchayat. The Kannanalloor - Pooyappally - Ayoor road and the Kottarakkara - Pooyappally - Oyoor roads with proposal for widening to 12 meter in IDDP for the district also passes through this panchayat.

These roads connect Pooyappally panchayat with nearby higher order settlements. For example Pooyappally is well connected to major centres like Chathannoor, Velinalloor, Kottarakkara and Kollam by these roads. People of Pooyappally depend on these centres for all important facilities. The regional road network in this area is depicted in Figure 9.1.

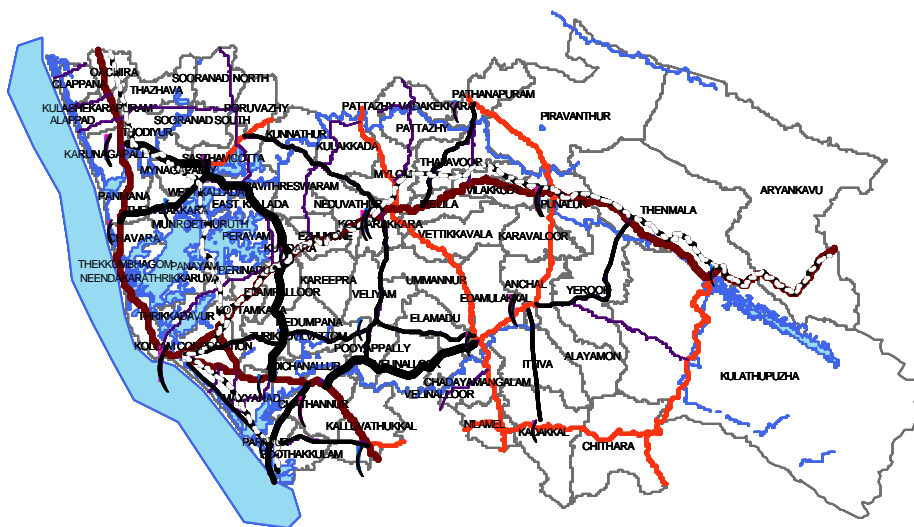


Figure 9.1 Regional road network - Pooyappally

Following stretches of roads in the regional network pass through Pooyappally Panchayat.

1. Meeyanoor - Pooyappally - Ayoor
2. Pulimukku - Kurisumoodu - Payyakkodu - Ayoor
3. Kurisumoodu - Maruthaman pally - Pooyappally - Kottarakkara

Figure 9.2 depicts the structures of regional roads in Pooyappally.

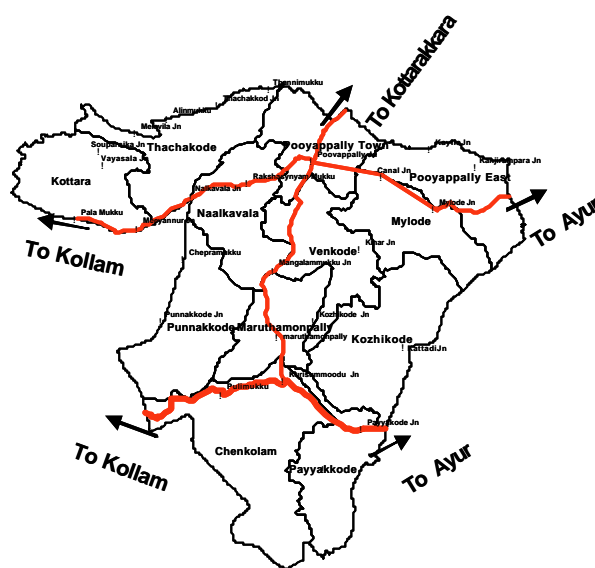


Figure 9.2 Network of Regional roads in Pooyappally Panchayat

9.2. Road Network - Pooyappally Panchayat

The local road network within Pooyappally Panchayat provides good connectivity to the interior areas of the panchayat.

The major roads included in the regional road network are Kollam - Pooyappally - Ayoor road, Kollam - Kurisunada -Ayoor road and Kottarakkara Oyoor road. Major roads in the local road network of the Panchyat include Meeyanoor - Vayanasala - Souparnika - Nedumonkavu road, Payyakkodu - Kattady - Ambalam kunnu road, Mylode - Velinalloor road, (passing through the western boundary of the Panchayat) Punakkode - Chepramukku - Nalkkavala road etc. Maruthamon pally - Kozhikkode - Kattady road, Pulimukku - Marangadu - Payyakkode, Meeyannoer - Nedumankavu road, Alimukku -Thannimukku road connecting Kozhikkodu junction and the Kottarakkara - Oyoor road etc constitute the secondary roads in internal road network of Pooyappally panchayat.

Table.9.1. Important roads in the intra network of Pooyappally Grama Panchayat.

Sl.No.	Road	Approximate Width	Category of Road
1	Meeyanoor - Vayanasala - Neduman kavu	4 meter	Tar
2	Payyakkodu - Kattady - Ambalam Kunnu	4 meter	Tar
3	Mylode - Velinalloor	5 meter	Tar
4	Punnakkode - Nalkavala	5 meter	Tar
5	Maruthamon pally - Kozhikkode - Kattady	4 meter	Tar
6	Pulimukku - Marangadu - Payyakkodu	4 meter	Tar
7	Meeyanoor Nedumonkavu Road to Alimukku - Thannimoodu Road	4 meter	Tar
8	Link road connecting Kottarakkara - Ayoor road & Kozhikkodu Junction	3 meter	Tar

The existing road network map of Pooyapally is given in figure 9.3

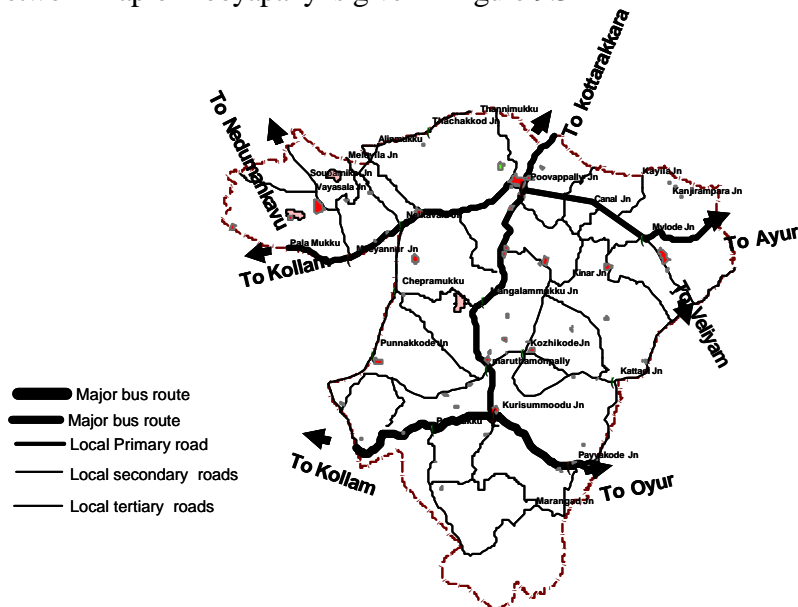


Figure 9.3 Pooyapally Grama Panchayat - Existing road network

Even though all these roads are tarred, due to poor surface conditions and narrow width they are

not currently motorable. There is no bus stand in the Panchayat. Since buses plying through the panchayat do not start or terminate in this panchayat, a bus stand is not inevitable here. Waiting sheds need to be provided at convenient points. Having no approved auto/taxi stand is a problem. Parking of vehicle is a very acute problem.

9.3. Water Transportation

In Pooyappally panchayat, except for the Marakkulam kadavu maintained by P.W.D where country boats are used for transportation of people to neighbouring panchayats like Adichanalloor, water transport is not much utilised.

9.4. Problems.

1. The existing stretches of the proposed 21m road (proposed in IDDP) passing through Kurisum moodu junction and Pulimukk junction have bends and sharp turnings.
2. Pooyappally and Kurisumoodu junctions are not properly planned.
3. Bus stops at Meeyanoor, Maruthamonpally, Kurisummoodu and Payyakkode need renovation.
4. The roads are not maintained properly.
5. In Pooyappally junction there is no auto or taxi parking facility. This creates congestion of traffic here.
6. In the District Panchayat road of Maruthamon pally - Ambalamkunnu, night services are not adequate.

9.5. Conclusion.

There is a good network of roads connecting this panchayat to the other parts of the district. But considering the future requirements there is need for qualitative improvement of roads in a time-bound manner.

CHAPTER 10

Educational Sector

This chapter discusses the availability and distribution of educational institutions in the Grama panchayat and assesses the educational status of the panchayat.

10.1 Past Situation.

People of this panchayat realised the importance of education from the beginning itself. L.M.S Primary School Chenkulam, Pooyappally Govt. Primary School & Kottara Primary School were the first among the schools established in the panchayat. The leading role in education here was taken by the London Mission.

The Mylode School, established in M.E. 1117 had set the beginning of English education here. Mylode U.P School was started in memory of the Temple Entry Proclamation. This school, elevated to the status of a high school in 1951 paved way for the progress of Pooyappally panchayat. Now a V.H.S.C. is also functioning in this school.

Subsequent to establishment of Mylode School, L.P. Schools at Oottumala, Kottara, Malayil, Kozhikkode, Punnackal & Kanjirathingal and U.P. schools at Chengulam, Kottara, Pooyappally and Maruthamon pally were also started.

10.2. Educational status.

The literacy rate of Pooyappally panchayat as per 2001 Census is 93.48%. In other words 22387 persons out of the total population of 23924 persons in the panchayat are literate. When compared with the corresponding figure of 80.86% of Kollam district the literacy rate here is high. The literacy rate of Kottarakkara block is 94.25%.

The percentage share of people having different levels of education is given in the figure 10.1. When this chart is examined it is seen that 64% of the people have education upto 12th standard. 11% of the people have only primary education. Graduates constitute 17% of the total population and professionals constitute 8%. The female literacy rate is 90.69% for Pooyappally grama panchayat which is also high compared to the corresponding figure of 86.73% for Kollam district.

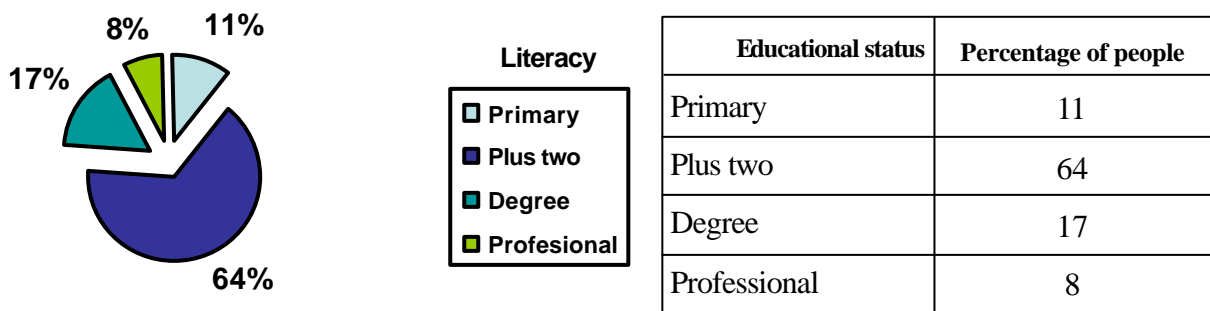


Fig. 10.1. Categorisation of educated people based on level of education

10.3. The category of educational institutions and their numbers

In Pooyappally panchayat there are 14 educational institutions under LP, UP, High School Sections. The student strength of all these schools together is 6098. The number of students in different sections are given below.

Table 10.1. Number of students - Section wise

Sl. No.	Catagory	Number of students
1	L P School	1144
2	UP School	305
3	High School	3173
4	Higher Secondary School	1476

Table 10.2. Educational Institutions in Pooyappally

Sl.No.	Name of the Institution
1	L.M.S.L.P.S. Chenkulam
2	Govt. H.S.Pooyappally
3	Malayil L.P.S
4	Kozhikkode L.P.S
5	Oottumala L.P.S
6	St. Thomas H.S. Punnakkode
7	Govt. L.P.S. Kottara
8	S.K.V. L.P.S. Kottara
9	Sankaramangalam H.S.S. Kottara
10	M.G.M.L.P.S Punnakkode
11	M.I.M U.P.S Chenkulam
12	Welfare L.P.S. Oottumala
13	S.N.V U.P.S. Maruthaman pally
14	T.E.M. V.H.S.S Mylode

The spatial distribution of educational institutions in Pooyappally panchayat is shown in figure 10.2.

10.4. Physical Infrastructure available in schools.

The physical infrastructure of the following major schools are in a very bad condition. The major problems are given in the Table 10.3.

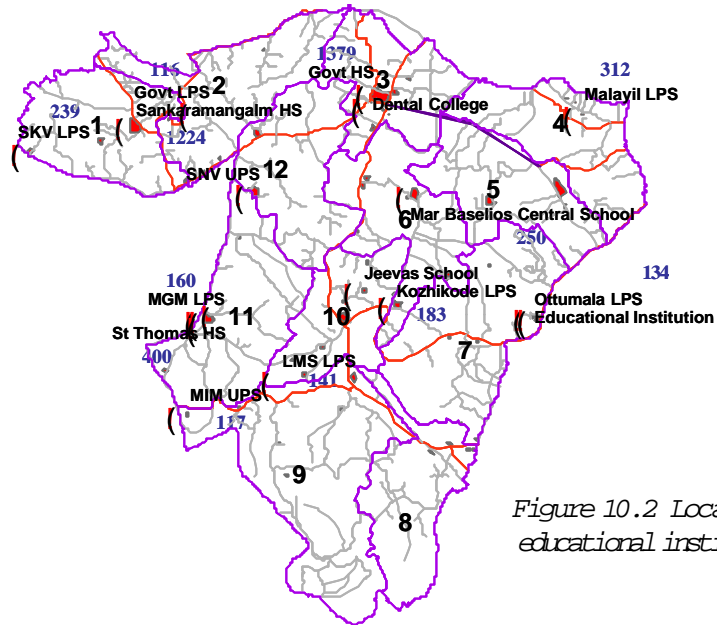


Figure 10.2 Location of educational institutions

Table 10.3. Infrastructural deficiency in schools

Sl. No.	Name	Problems.
1	L.M.S.L.P.S. Chenkulam	Semi Pucca School building
2	Govt. H.S.Pooyappally	Semi Pucca School building
3	Malayil L.P.S	Semi Pucca School building
4	Kozhikkode L.P.S	Lack of sanitary facility
5	Oottumala L.P.S	Lack of play ground
6	St. Thomas H.S. Punnaikkode	Semi Pucca School building
7	Govt. L.P.S. Kottara	Lack of play ground



Govt. High School-Pooyappally



T.E.M.V.H.S.S-Mylode

10.5. Higher educational facilities

No higher educational facilities are existing in Pooyappally panchayat. For higher educational facility the people in Pooyappally panchayat are depending on nearby centres like Chathanoor, Velinalloor, Kottarakkara, Kollam Corporation etc. All these facilities are available within 15 km radius. The spatial distribution of the higher educational institutions around Pooyappally is given in figure 10.3 and their details are given in table 10.4.

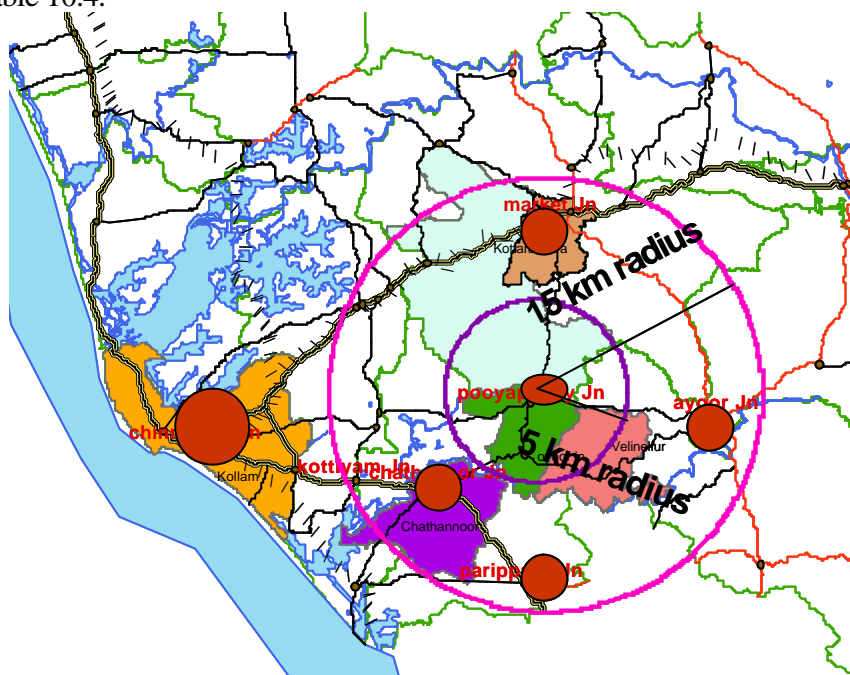


Figure 10.3 The distribution of higher educational facilities around Pooyappally

Table 10.4. Details of higher educational facilities in surrounding centres of Pooyappally

Sl No.	Name of the Institution	Location
1	S.N.College	Chathanoor
2	Engineering college	Velinalloor
3	T.T.I	Velinalloor
4.	Arts and Science College	Kottarakkara
5.	B.Ed College	Kottarakkara
6.	T.T.C	Kottarakkara
7.	Nursing School (3Numbers)	Kottarakkara

10.6. Educational facilities - Planning standards.

Requirement of educational facilities, based on planning standards is given in Table 10.5.

Figure 10.5 Planning standards for educational facilities

Sl. No.	Catagory	No. of Pupil	Indicators
1	High School	700 pupil	One high school for 13000 people
2	Higher Secondary School	400 pupil	One Higher secondary school for 13000 people
3	Arts And Science College	500 pupil	One arts and science college for 80000 people
4	Technical College	250 pupil	One Professional College for 250000 people
5	Poly Technic	150 pupil	One Polytechnic for 36000 people
6	ITC/ITI	300 pupil	One ITI/ITC for 35000 people.
7	TTC	120 pupil	One TTC for 120000 people.

Courtesy :- The above standards are derived in connection with preparation of I.D.D.P and L.D.P for Kollam.

Pooyappally Panchayat is a fourth order settlement. The educational facilities existng here are sufficient as per the norms mentioned above.

10.7. Problems

In most of the schools physical environment is not satisfactory, major among them are the bad condition of buildings and lack of toilet facilities.

10.8. Conclusion

In Pooyappally Panchayat basic educational facilities availabe are sufficient when compared to planning standards. Eventhough higher educational facilites are not avialable in the panchayat they are available within 15 km radius. The infrastructure and physical environment of the educational institutions need improvement.

CHAPTER 11

Health Sector

The existing status of health sector in Pooyappally panchayat is analysed in this chapter.

11.1. Health Sector - Existing Situation.

With respect to availability of public health institutions Pooyappally panchayat is relatively in a poor state. In the public sector, one primary health centre is functioning in Maruthamonpally where no inpatient facilities are available. Service of only one doctor is available in this Primary health centre. Sub centres are functioning at Kottara, Pooyappally & Chenkulam. Lab facilities are not available in the primary health centre. Service of the doctor is not available round the clock. The details of staff in the primary health centre is given in table 11.1

Table 11.1. Staff strength in the Primary Health centre

Sl. No.	Staff	Nos.
1	Doctor	1
2	Junior P.H.N	4
3	Junior Health Inspector	5
4	L.H	1
5	Health Inspector	1
6	Staff Nurse	1
7	Clerk	1
8	Peon	1
9	Hospital Attender	1
10	Pharmacist	1
11	Part- time Sweeper	1

In addition to the PHC one ESI hospital is also functioning in this Panchayat. No inpatient facility is provided in this hospital.

In private sector, there are five health institutions. They are Rajageel Hospital, Payyakkode, Lekshmi Nursing Home, Star Hospital and Kizhakkeveetil Nursing Home at Pooyappally. Except for

Kizhakkeveetil Nursing Home, inpatient facility is available in all the other institutions. Lab, ECG facilities are available in these hospitals. The spatial distribution of health facilities is given in map 11.1. The bed strength in hospitals is given in table 11.2.

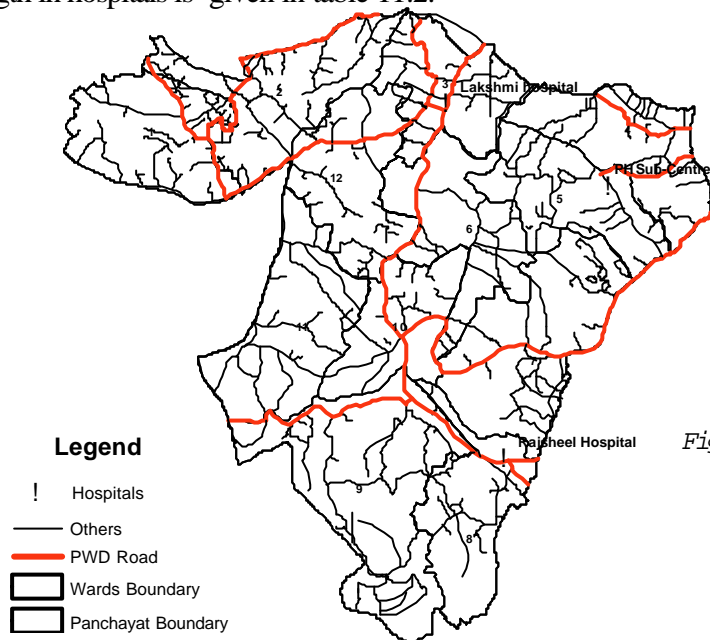


Figure 11.1 The spatial distribution of health institutions

Table 11.2. Bed strength in hospitals in private sector

Sl.No.	Name of Hospital	Number of beds
1	Mother and Child care centre	1
2	Star Hospital	
3	Lekshmi Nursing Home	20
4	Rajageel Hospital	8
5	Kizhakkeveetil Nursing Home	-

One Ayurveda Hospital in the private sector, is also functioning in this panchayat. (Manivaidyan Memorial Ayurveda hospital) which also has no inpatient facility.

In the public sector, there is lack of Ayurveda and homeo dispensaries.

11.2 Higher order medical facilities.

The people of this panchayat are depending on surrounding panchayats, for higher order medical facilities which are available within 15 km radius of the Panchayat. Azeeziya Hospital at Meeyanoor, Safa Hospital at Chathanoor, Royal hospital, Kottiyam Holly Cross Hospital etc. are major hospitals in the region. Super speciality facilities are available in Kollam corporation. Out of these the Azeeziya institute of medical sciences, the first medical college in Kollam with nearly 500 bed capacity

located at Meeyannoor in Nedumpana Grama Panchayat is the nearest one. The distribution of higher order medical facilities is shown in fig. 11.2.

According to planning standards one PHC is sufficient for a population of 20,000 - 25,000. Likewise, for 10,000 population a hospital with four beds is sufficient. From the above it is seen that in Pooyappally Panchayat the existing primary health centre is sufficient with qualitative improvement.

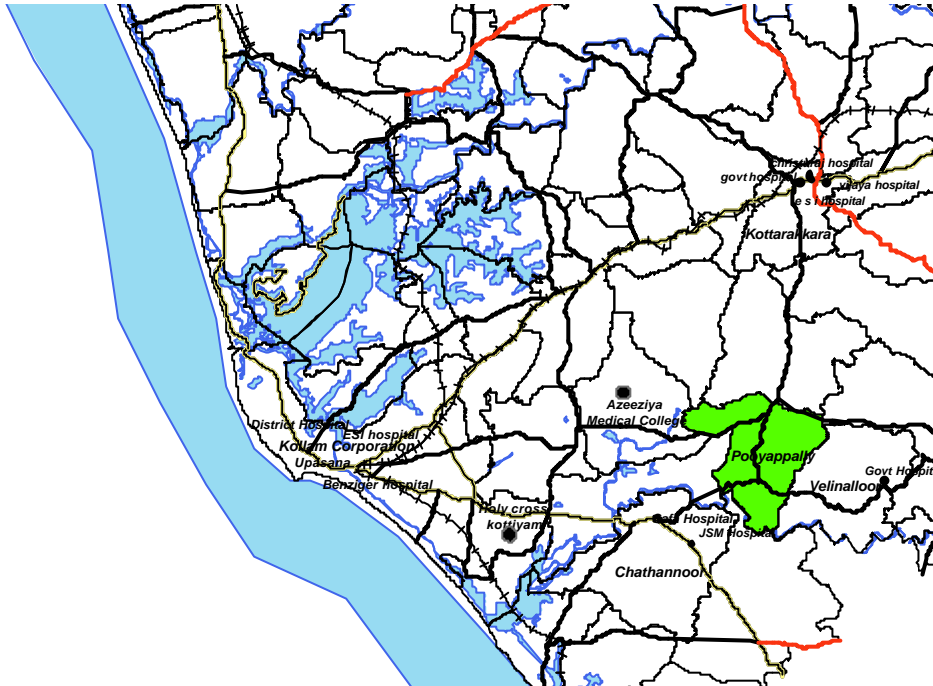


Figure 11.2 Hospitals in neighbouring panchayats

11.3. Problems.

1. The primary health centre needs improvement in respect of facilities and supply of needy medicines.
2. There are no facilities for conducting awareness creation programmes, taking preventive measures and medical examinations even in emergency situations such as events of viral fever attacks etc.
3. There are no speciality medical facilities in the Panchayat.
4. There are no maternity and child welfare centre.
5. The ESI hospital is not functioning satisfactorily.
6. Homoeo and Ayurveda dispensaries are not available.

11.4. Conclusion

In Pooyappally Panchayat medical facilities are available as per standards. Higher order facilities are available within reach in nearby panchayats. There is need for increasing the facilities and services available in the primary health centre to the desired level.

CHAPTER 12

Drinking water, Sanitation and Solid Waste Disposal

For the survival of life the most important component is pure water. Pooyappally Grama Panchayat in general and the elevated areas in particular faces scarcity of drinking water especially during summer. In this chapter, the details like sources of drinking water, existing scenario on the supply of drinking water etc of Pooyappally is discussed.

12.1 Existing situation

In Pooyappally Grama Panchayat major source of drinking water is wells. According to the development report of the Grama Panchayat 8070 wells are existing in the Panchayat in which 2028 are perennial. Almost all the wards in the Panchayat depend on wells as source of drinking water (94.85%). Figure below shows the wardwise details of drinking water sources in Pooyappally.

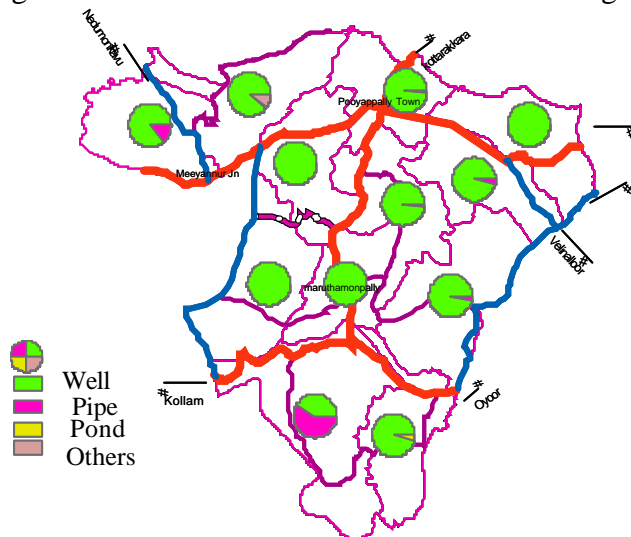
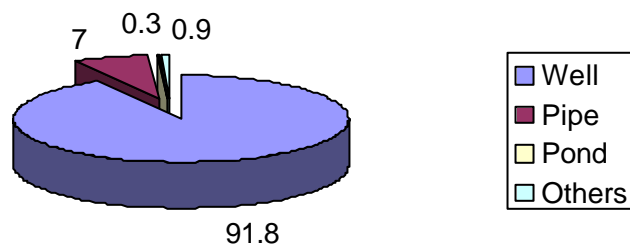


Figure 12.1 Wardwise details of sources of drinking water

Sources of drinking water -
Pooyappally



Kottara and Chenkulam are the wards where piped water supply is available at least partially. The canals of K.I.P help in recharging the wells in this area. Therefore there is no acute shortage of water in this area. A number of ponds are also available in the panchayat. The distribution of ponds is given in Figure 12.2 and table 12.1.

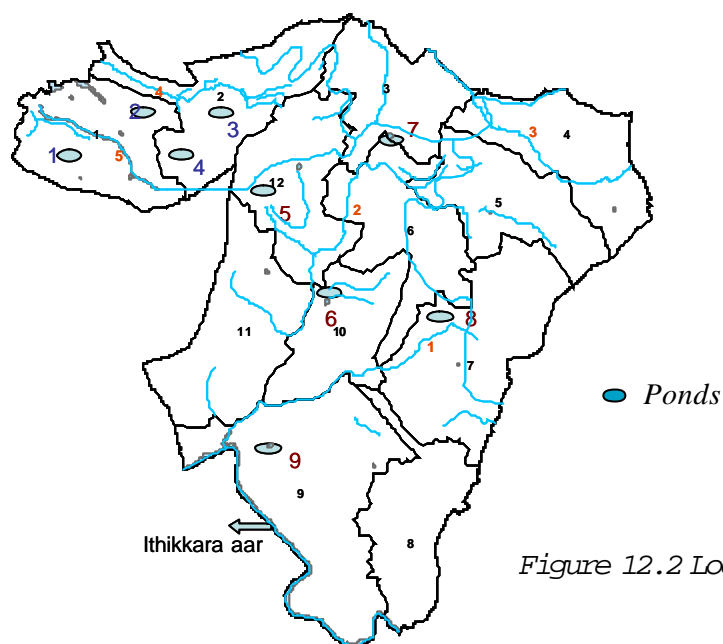


Figure 12.2 Location of ponds in Pooyapally panchayat

Table 12.1. The location of ponds in Pooyapally panchayat

Sl. No.	Location of ponds	Ward No.
1	Kakkad chira	1
2	Madathil vathukkal chira	1
3	Kulakkode chira	2
4	Mnakkode chira	2
5	Paloorkonam chira	12
6	Macriyillakulam	10
7	Pooyappally chira	3
8	Eniyoormatam chira	7
9	Chenkulam chira	9

12.2. Water Supply Projects

Pooyapally Grama Panchayat is benefited by two small scale drinking water projects of the Water Authority, viz the Pallimon project and the Oottumala project. From Pallimon project three wards are benefitted partially; 12 public taps and 20 house connections are given under this scheme. From Oottumala scheme the following wards are benefitted viz Pooyapally East, Mylode, Vengodu and Kozhikkodu, fig: 12.3. shows areas of Pooyapally benefitted by these two schemes.

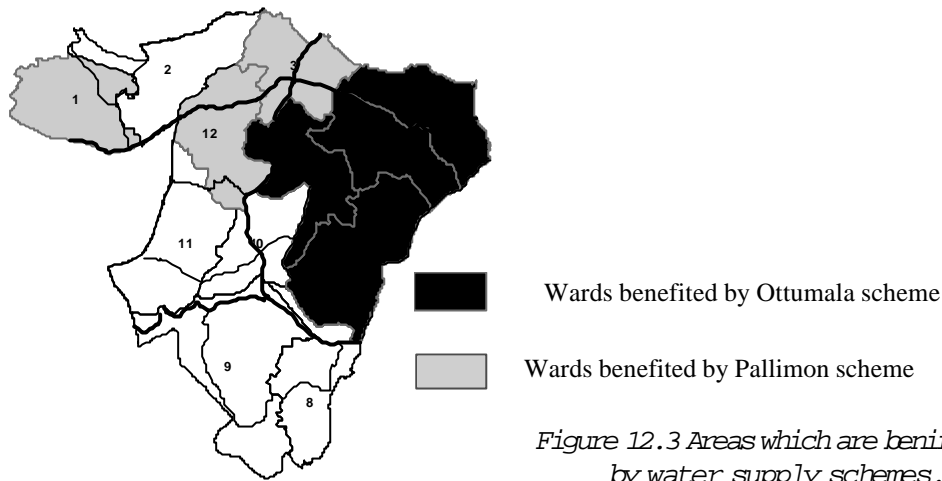
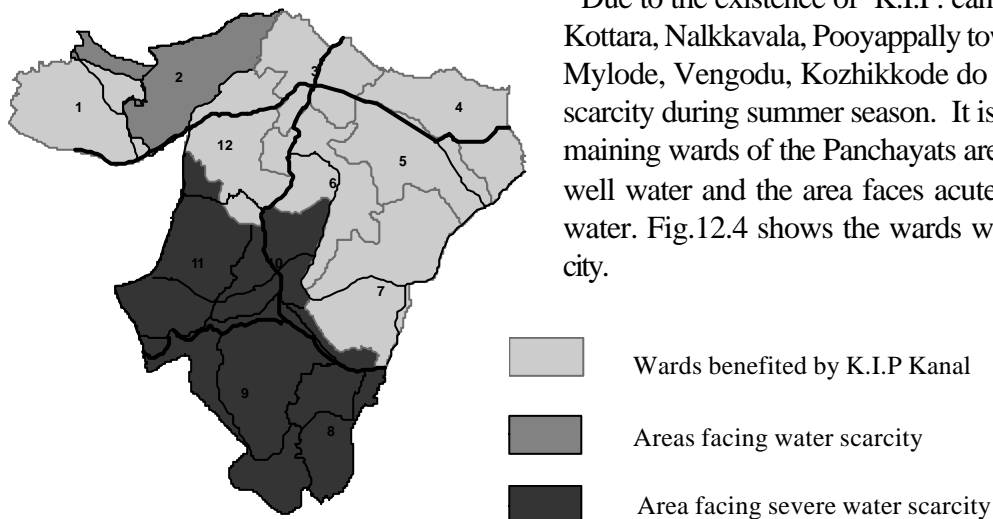


Figure 12.3 Areas which are benefited by water supply schemes.

Oottumala drinking water scheme is located in ward no.5. The water is pumped from the well situated near the pump house. The capacity of the pump house is 25,000 litres and pumping takes place from 8 AM to 3 PM. 35 public taps are connected to this scheme and 70 house connection are provided.

Ottumala drinking water scheme



Due to the existence of K.I.P. canals the wards namely Kottara, Nalkkavala, Pooyappally town, Pooyappally East, Mylode, Vengodu, Kozhikkode do not face severe water scarcity during summer season. It is observed that the remaining wards of the Panchayats are depending solely on well water and the area faces acute shortage of ground water. Fig.12.4 shows the wards which face water scarcity.

Source : Socio economic survey 2006

Figure 12.3 Areas which face water scarcity.

12.3 Solid waste disposal

For a healthy living, in addition to prevention of diseases, nutritious food and a clean environment are also important. In the case of sanitation, sanitary latrines are commonly used. In Pooyappally panchayat 32% of the total number of families have sanitary latrines. Various residential colonies of the panchayat face inadequate measures for sanitation. Jayanthi colony in ward 4, Konathu colony in ward 3, Vedar colony & Mudiyoorkonam colony in ward 9 and Kunnuvilakam colony in ward 10 face sanitation problems.

Pooyappally Town ward in which, Pooyappally market is located and the Maruthamon pally ward where plot sizes are relatively small and due to which inside solid waste disposal is not practical also face problems in solid waste disposal. In the above wards population density is comparatively high. Also these are the wards where the commercial activities of the panchayat are concentrated. Therefore solid waste disposal is one of the major problems in this area. The existing panchayat market is situated beneath the KIP aquaduct and the disposal of the solid waste is the major problem in market days also.

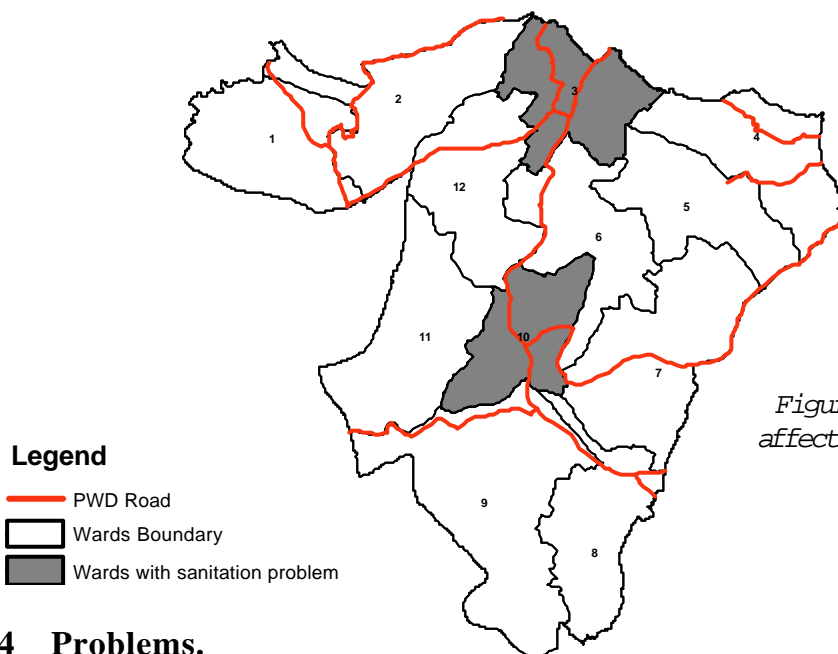


Figure 12.5 Wards which are affected by sanitation problems

12.4 Problems.

1. In summer season, the following wards of the panchayat, viz Thachakkode, Payyakkode, Chenkulam, Maruthaman pally, Punnakkode etc faces water scarcity.
2. Public wells are mostly in a neglected stage.
3. The absense of a good solid waste management system.

12.5. Conclusion

In Pooyappally panchayat, there are various sources of drinking water including the Ithikkara river. The spatial distribution of these sources are shown in the figure 12.1. These may be utilised optimally as drinking water sources for the panchayat.

CHAPTER 13

Commercial Sector

As per the I.D.D.P for Kollam District, Pooyappally panchayat is a fourth order settlement in the district. The existing commercial activities of the panchayat are explained in this chapter.

13.1 Existing situation.

Under land utilization scenario of Pooyappally panchayat, the extent of land under commercial use is found to be only 1.3%. Pooyappally panchayat is ranked as a fourth order settlement in the district. The higher order settlements near Pooyappally panchayat are:

Kollam Corporation (First Order).

Kottarakkara, Parippally (Second order).

Oyoor (third order). This is shown in figure - 13.1.

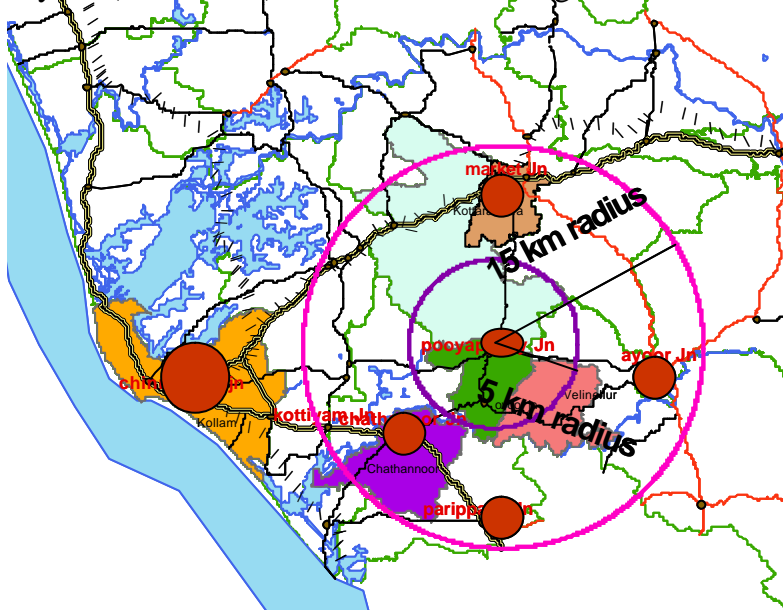


Figure 13.1 Higher order settlements near Pooyappally

Important commercial centres.

According to I.D.D.P for Kollam district, Pooyappally panchayat is ranked as fourth order settlement. Hence the service area of the settlement is confined to the panchayat itself. The first order commercial centre in Pooyappally Panchayat is Pooyappally junction. The second order commercial centres are Maruthamonpally, Meeyannoor and Payyakkode. The Commercial demand of people of the panchayat are served by these three centres. The centres are located along the main arterial roads of the panchayat. On examination of the facilities available in the panchayat, it is seen that the commercial activities are sufficient to meet local demand. The facilities available in these three centres are listed in table 13.1. The commercial centres of the panchayat are shown in figure 13.2.

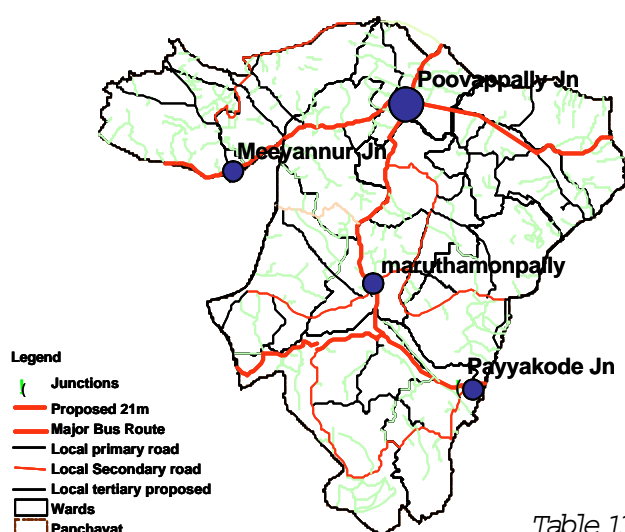


Figure 13.2 Important commercial centres

Table 13.1. Facilities available in the commercial centres

a. Meeyannur



Maruthamonnally



Meeyannur



Pooyappally

Sl.No.	Facility /Category	Nos.
1	Fancy shop	1
2	Lintel shop	10
3	Vegetable shop	2
4	Provisional shop	2
5	Tailoring shop	4
6	Tea shop	5
7	Rice mill	1
8	Textiles	1
9	Finance	1
10	Footwear shop	1
11	Rubber society	2
12	Work shop	1
13	Furniture shop	1
14	Studio	2
15	Ayurvedic medicine shop	1
16	Book stall	2
17	Stationery	4
18	Ayurvedic medicine shop	1
19	Hardwares	1
20	Barber shop	3
21	Bakery	3
22	Medical shop	2
23	Cattlefeed shop	1
24	Telephone booth	2
25	Hotel	2
26	Civil Supplies Centre	2
27	Neethi store	1
28	Jewellery	1

b. Maruthanmon pally		
Sl. No.	Facility/Category	Nos.
1	Tea shop	4
2	Stationery	1
3	Bakery	2
4	Lintel shop	2
5	Timber depot	1
6	Super Market	2
7	Laboratory	1
8	Tailoring shop	1
9	Studio	1
10	Medical shop	1
11	Waiting shed	1

c. Pooyapally

Sl. No.	Facility/Category	Nos.
1	Registrar Office	1
2	Bakery	6
3	Barber shop	3
4	Textile shops	3
5	Hotels	2
6	Rubber shop	2
7	Book stall	2
8	Manorama agency	1
9	Telephone booth	3
10	Electronic shop	1
11	Ayurvedic medicines	1
12	Tea shop	4
13	Lintel shop	8
14	Glass shop	1
15	Maveli store	2
16	Jewellery	2
17	Lottery	1
18	Neethi store	1
19	Watch shop	1
20	Bus stop and waiting shed	1

Sl. No.	Facility/Category	Nos.
21	Provision store	3
22	Rice mill	2
23	Fancy shop	6
24	Tailoring shop	1
25	Institute	1
26	Furniture shop	1
27	Press	1
28	Medical shop	4
29	Kottakkal Arya Vaidyasala	1
30	Bus travels	1
31	Air travels and photostat	1
32	Grocery shop	1
33	Flower store	1
34	Market	2
35	Studio	1
36	Finance	2
37	Stationery	1
38	Post Office	1
39	Laboratory	1

The main commercial centre in Pooyappally panchayat is Pooyappally junction. This area has no organised parking space and faces parking problems.

The panchayat market is at Pooyappally. Eventhough adequate parking spaces and basic infrastructures are provided in this area, the market is not utilised properly. The only meat stall functioning in the market is in an unhygienic situation. There is no proper solid waste management system in this market. Eventhough this market has sufficient facilities, it is not optimally utilized. People are depending more on Veliam market in Veliyam panchayat. This situation needs to be changed.

13.3 Conclusion.

Pooyappally Grama Panchayat is identified as a fourth order settlement of the Kollam district. The available facilities in the commercial centres of Pooyappally Grama Panchayat are fairly sufficient for a fourth order settlement. The market in Pooyappally Grama Panchayat has to be renovated providing modern facilities for solid waste disposal, adequate parking spaces etc.

CHAPTER 14

Social Backwardness

The social backwardness of Pooyappally Grama Panchayat is assessed in this chapter on the basis of the status of Scheduled Caste and Scheduled Tribe persons and below poverty line people living in the area.

14.1. SC/ST. Index and B.P.L Index.

The social backwardness of the area is analysed based on the share of people who are living below poverty line and also the population of SC/ST of the Panchayat. Two indices taken for study are SC/ST index and BPL index.

The SC/ST index of a ward is obtained by dividing SC/ST population of that ward by the SC/ST population in the Panchayat. The B.P.L index is also calculated in the same way. The value of the indices can be less than one, equal to one or greater than one for a ward. If the index is one, the share of SC/ST population/BPL population can be seen as equal to the share of SC/ST population/BPL population in the whole panchayat. If the index is greater than one it can be seen that the share of SC/ST population/BPL population of that ward is more compared to the panchayat as a whole and hence there is concentration of SC/ST population/BPL population in the ward as the case may be.

14.2. Scheduled Caste and Scheduled Tribe population in Pooyappally

As per 2001 Census 12.4% of the population in Kollam district is under SC category. The percentage share of SC/ST population in Kottarakkara block is 14.48%, and that in Pooyappally Grama Panchayat is 13.12%. In Ezhukavu and Veliam Grama Panchayats of Kottarakkara block the share of SC population is high, compared to other panchayats in the block, hence the increased proportion for Kottarakkara block.

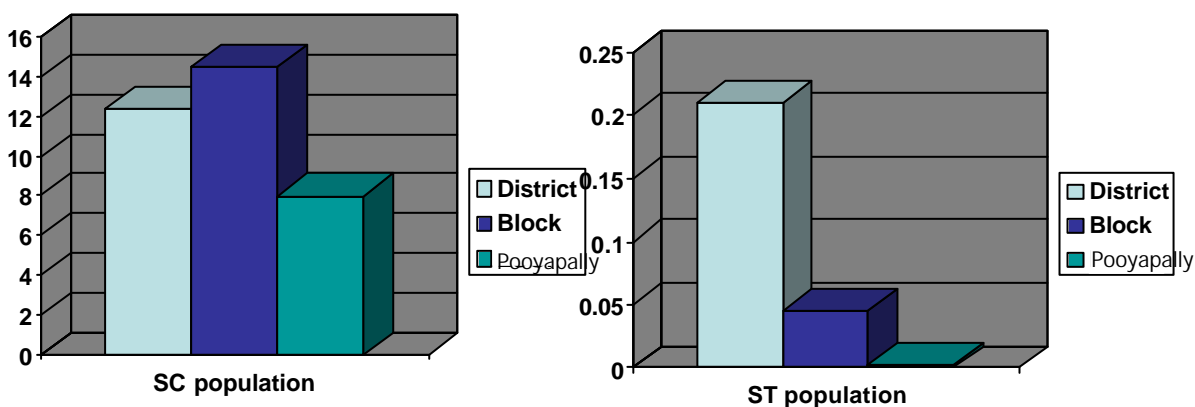


Figure 14.1 Percentage of SC/ST population: District, Block, Pooyappally Grama Panchayat

Only 0.21% of the total population in Kollam district belong to ST category. The corresponding figure of Pooyappally is 0.003%, comprising Kurava, Paraya, Pulaya, Vedan and Vannar castes.

SC/ST index in panchayats of Kottarakkara block is shown in figure 14.2.

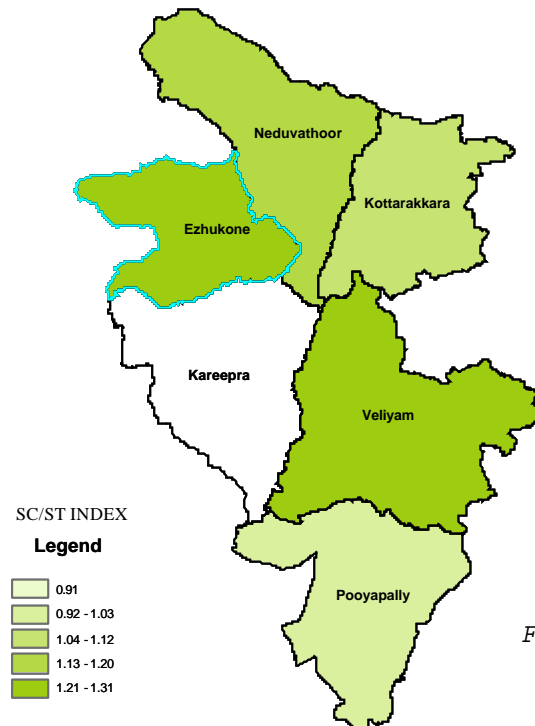


Figure 14.2 SC/ST Index - Kottarakkara Block

A comparative study of the SC/ST population in neighbouring grama panchayats shows that concentration of SC/ST population in Pooyappally Grama Panchayat is less compared to other grama panchayats in the block like Veliyam and Ezhukone.

Comparison of SC/ST population of Pooyappally with surrounding panchayats is given in Figure 14.3. 13% of total population in Pooyappally is under to SC/ST category.

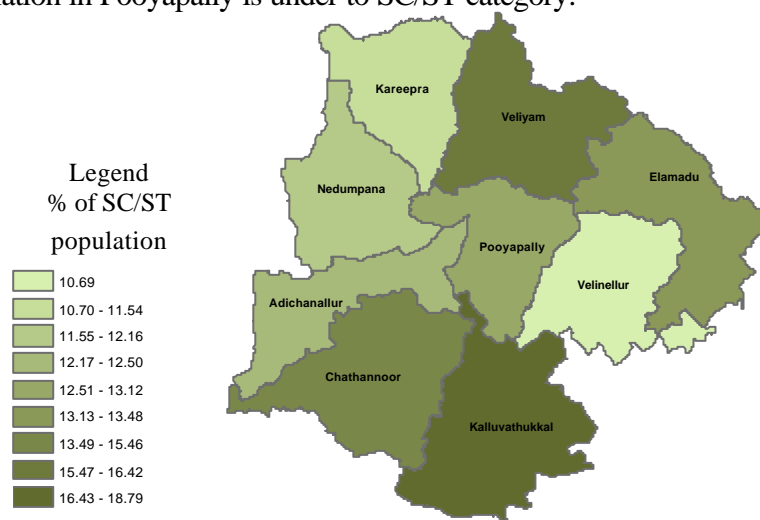


Figure 14.3 SC/ST population - Neighbouring panchayats

The ward wise distribution of SC/ST population in Pooyappally is given in figure 14.4.

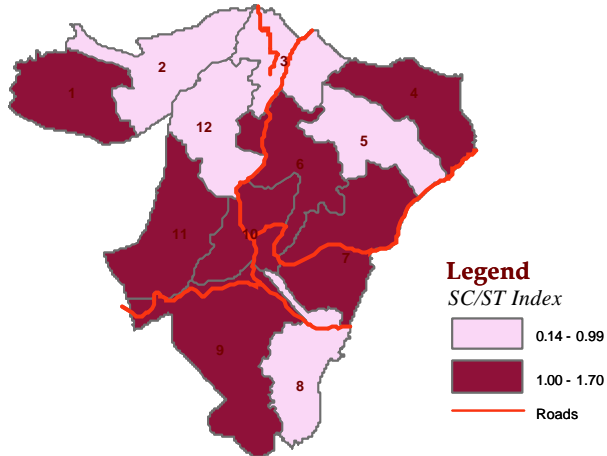


Figure 14.4 SC/ST Index Pooyappally-
Ward level comparison

The concentration of SC/ST population is seen in Kottara, Pooyappally east, Vengodu, Kozhikkode, Chenkulam, Maruthamon pally and Punakkode wards.

14.3. B. P. L. Families.

Based on 2001 Census, 10% of the people of Pooyappally are living below poverty line. The corresponding figures for Kollam district and Kottarakkara blocks are 18.40% and 26.33% respectively. The distribution of BPL index of Kottarakkara block is given in figure 14.5.

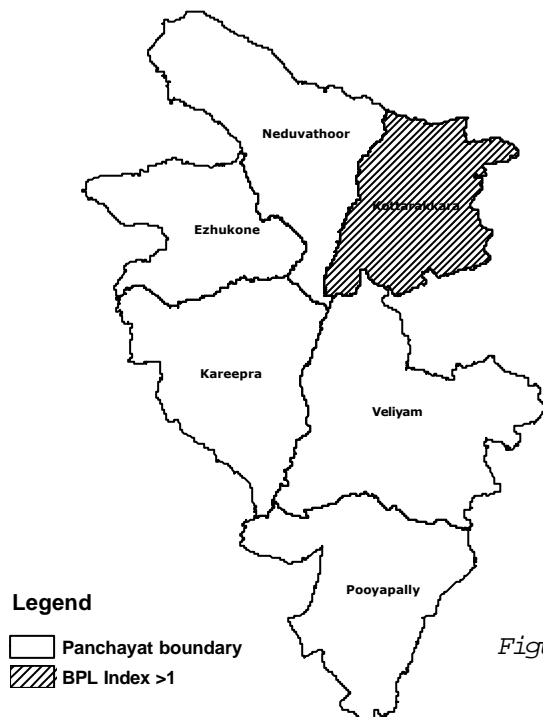


Figure 14.5 BPL Index - Kottarakkara block

A comparative study of BPL population in neighbouring grama panchayats of Pooyappally is shown in figure 14.6. It can be observed that the percentage of people below poverty line in Pooyappally is comparatively low.

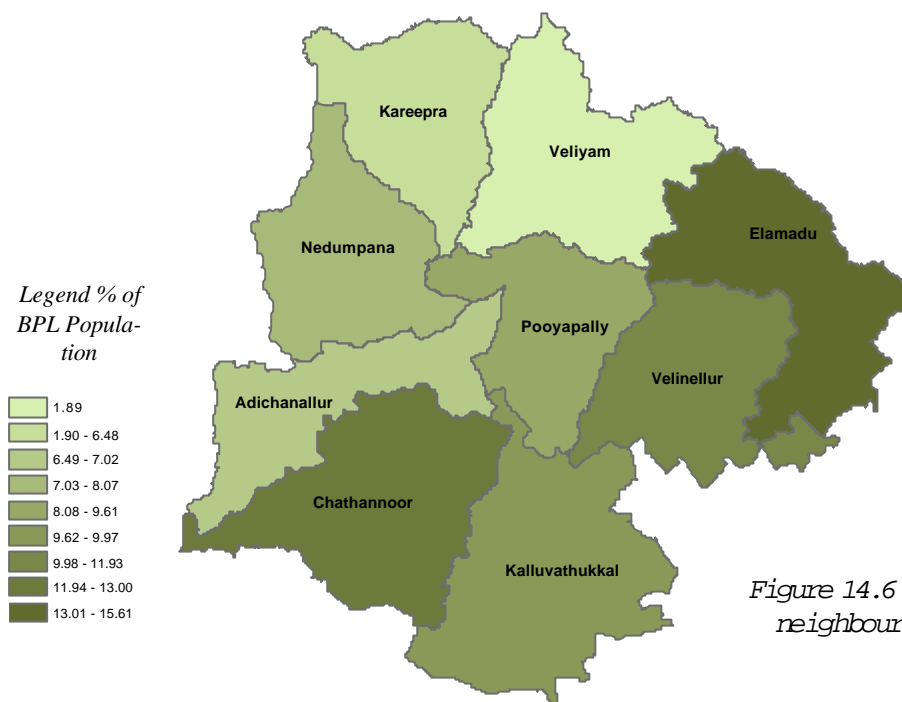


Figure 14.6 BPL population in neighbouring panchayats

The BPL index in the wards of Pooyappally is compared in figure 14.7

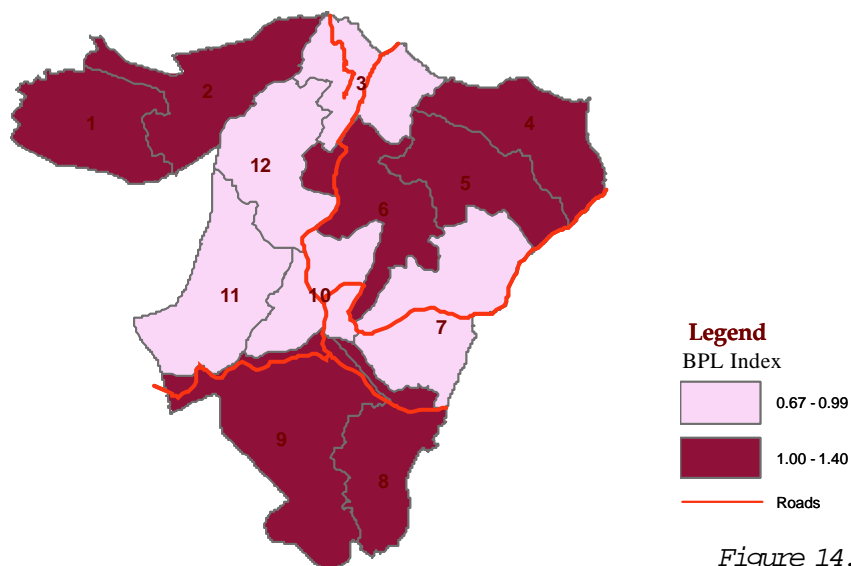


Figure 14.7 BPL index Pooyappally

The wards of Kottara, Thattakkode, Pooyappally East, Mylode, Venkode, Payyakkode and Chenkulam have BPL Index greater than one and thus have a concentration of BPL population. The wards having SC/ST index and BPL index more than one are shown in figure 14.8. It can be seen that Kottara, Pooyappally East, Venkodu and Chenkulam are the wards falling under this category. Hence, these wards are the backward wards based on the above criteria.

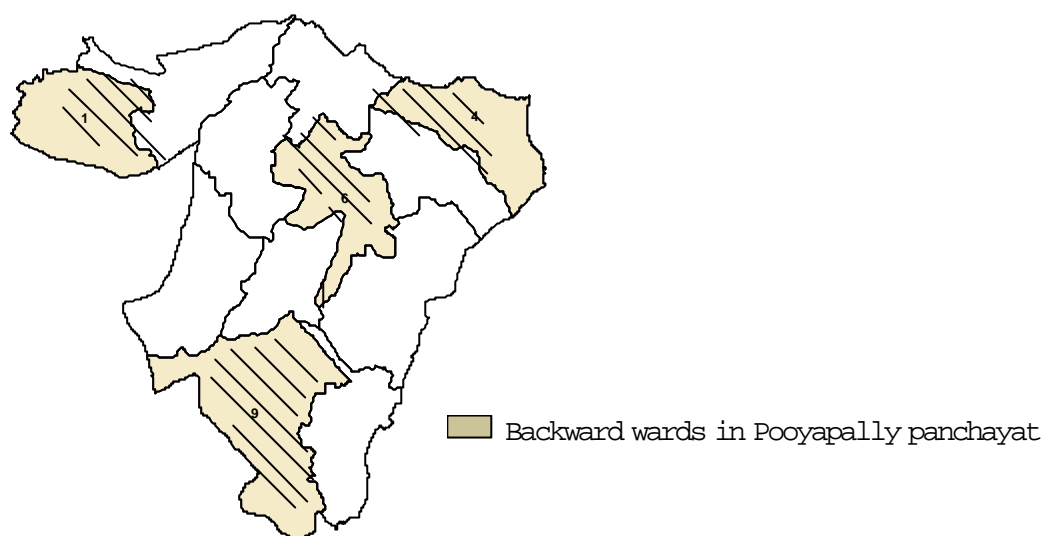


Figure 14.8 Backward wards in Pooyapally panchayat

It can be noted that out of the 23 backward residential colonies of the panchayat, many are located in these four wards

14.4 Conclusion

Based on the studies of SC/ST and BPL population it can be observed that Pooyapally panchayat is not in a much backward state. Some of the wards show a concentration of SC ST and BPL families. These are the wards where the backward residential colonies of the panchayat are concentrated.

CHAPTER - 15

Housing Sector

There are several substandard human settlements mostly occupied by SC/ST and BPL families in Pooyappally Grama Panchayat. This chapter is devoted to the study of the problems of the housing sector in the Grama Panchayat.

15.1. Housing Sector

In Pooyappally Grama Panchayat 98.43% of the people are living in own houses. 56.08% people in the panchayat have pucca houses. The wardwise distribution of houses-category wise-is given in the figure 15.1.

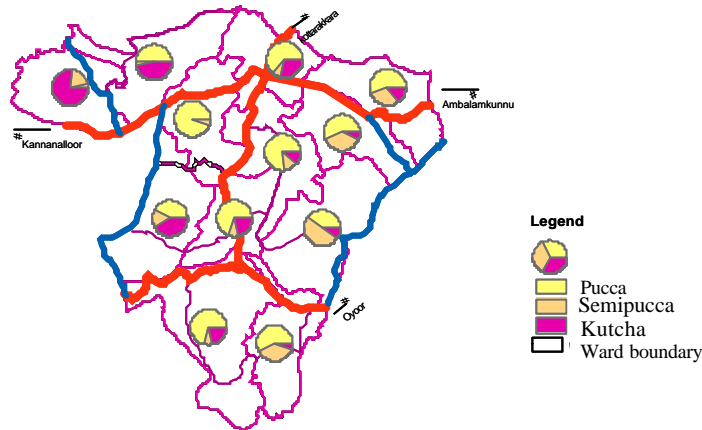


Figure 15.1 Wardwise distribution of houses

In qualitative terms, an imbalance with respect to houses can be seen in the wards of Kottara, Pooyappally East, Venkodu, Payyakkode and Chenkulam. Majority of the backward housing colonies are situated in these wards.

15.2. The backward housing colonies: basic information

On examination of the land use of Pooyappally it can be seen that only 2.7% of the total extent of the panchayat constitutes the backward housing colonies in the panchayat. The spatial distribution of these

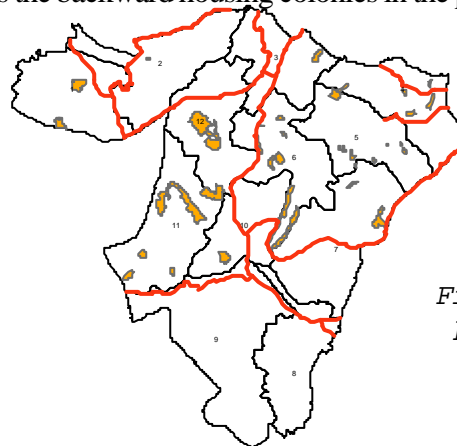


Figure 15.2 Backward housing colonies of Pooyappally

colonies is given in figure.15.2.

Altogether 634 families in 23 colonies, inclusive of one lakh housing colonies Scheduled Caste colonies and Vedar colonies, are living in the panchayat. Details of the colonies are given in table 15.1.

Table 15.1. Backward housing colonies - Pooyappally

Sl.No	Name of the Colony
1	Laksham Veedu colony - Mylode
2	Jayanthi
3	Kappumamvila
4	Kazhila
5	Konathu Colony
6	Parandayil Vedar Colony
7	Laksham Veedu colony Maruthaman Pally
8	Velamconam
9	Mission vila
10	Venkode Ambedkar
11	Kunnuvilakam
12	Parandodu
13	Poikavila
14	Mudiyoorkonam south
15	Mudiyoorkonam North
16	Nellipparambu Vedar colony
17	Oottumala Colony
18	Vachikonam Colony
19	Jayanthi colony - Punnakkodu
20	Kattachal colony - Punnakkodu
21	Nalkavala Paloorkonam Colony
22	Nalkavala Palamukku Colony
23	Kottara Laksham veedu colony

15.3. Categorization of backward housing colonies.

The backward housing colonies are graded according to the structural conditions. Based on the availability of water and electricity, accessibility, sanitation facilities etc the colonies are graded into three - Grade C-very poor state, Grade B- poor - to satisfactory, Grade A - satisfactory state. The grading of housing colonies based on the above criteria is shown in fig. 15.3 and in table 15.2.

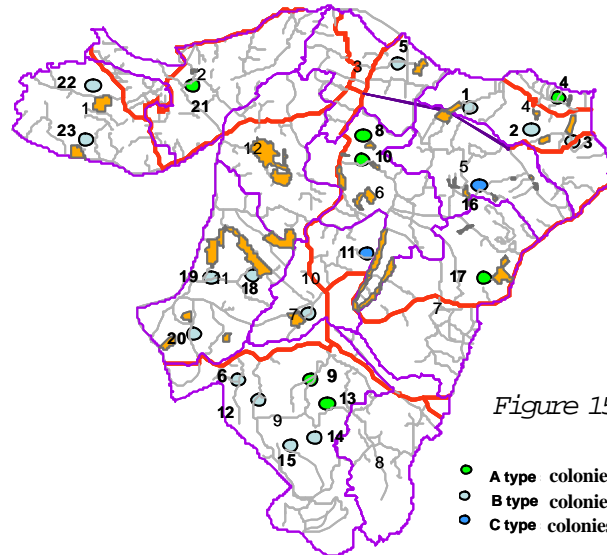


Figure 15.3 Grading of backward colonies

Table 15.2. Grading of housing colonies

Sl. No.	Name of Colony	Grade	Sl. No.	Name of Colony	Grade
1	Laksham veedu colony - Mylode	B	13	Poikavila	A
2	Jayanthi	B	14	Mudiyoorkonam south	B
3	Kappumamvila	B	15	Mudiyoorkonam North	B
4	Kayila	A	16	Nellipparambu Vedar colony	C
5	Konathu Colony	B	17	Oottumala Colony	A
6	Parandayil Vedar Colony	B	18	Vachikonam Colony	B
7	Laksham veedu colony	B	19	Jayanthi colony - Punnakkodu	B
8	Velam Konam	A	20	Kattachal colony - Punnakkodu	B
9	Mission vila	A	21	Nalkavala Paloorkonam Colony	A
10	Venkode Ambedkar	A	22	Nalkavala Palamukku Colony	B
11	Kunnuvilakam	C	23	Kottara Laksham veedu colony	B
12	Parandodu	B			

The criteria for grading of backward housing colonies is given in table 15.3 below.

Table 15.3 Criteria for grading of colonies

Sl. No.	Name of Colony	Category of houses	Available of drinking water	Sanitation	Accessibility	Electricity	No of Houses	Remarks
1	Laksham veedu colony - Mylode	0	0	+	+	0	16	8
2	Jayanthi	0	0	0	+	0	45	9
3	Kappumamvila	0	0	+	+	0	11	8
4	Kayila	+	0	+	+	0	11	7
5	Konathu Colony	0	0	0	+	0		9
6	Parandayil Vedar Colony	0	0	0	+	0	7	9
7	Laksham veedu colony- Maruthaman pally	0	0	0	+	0	35	7
8	Velam Konam	+	0	+	+	0	21	6
9	Mission vila	+	0	+	+	+	31	7
10	Venkode Ambedkar	0	0	+	+	+	31	10
11	Kunnuvilakam	-	0	-	+	0	7	8
12	Parandodu	0	0	+	0	+	20	7
13	Poikavila	+	0	+	+	0	32	8
14	Mudiyoorkonam south	0	0	0	+	+	70	8
15	Mudiyoorkonam North	0	0	0	+	+	25	12
16	Nellipparambu Vedar colony	-	0	-	+	-	4	7
17	Oottumala Colony	0	0	+	+	+	91	8
18	Vachikonam Colony	0	0	+	+	0	16	9
19	Jayanthi colony - Punnakkodu	0	0	+	-	+	19	9
20	Kattachal colony - Punnakkodu	0	0	0	+	0	30	7
21	Nalkaval Paloorkonam Colony	0	0	+	+	+	25	8
22	Nalkavala Palamukku Colony	0	0	+	+	0	60	9
23	Kottara Laksham veedu colony	0	0	0	+	0	14	9

Kayila colony, Ottumala colony, Poloorkonam colony, Velan konam colony, Mission vila colony, Venkode Ambedkar colony and Poikavil colony are the Grade A colonies of Pooyappally. These colonies have all facilities except availability of drinking water.



IHDP Colony Mylode A grade

In grade B colonies, there is absence of any one of the facilities mentioned above. Most of the colonies in grade B are without drinking water or electricity. Laksham veedu colony Mylode, Jayanthi colony, Kappumanvila colony, Konath colony, Parandayil colony, Laksham veedu colony, Maruthamonpally, Parandode colony, Mudiyoorkonam South and Mudiyoorkonam North colonies Vachikonam colony, Jayanthi colony, Punnakkode - Kattachal colony, Palamukku colony and Kottara Laksham veedu colony are the Grade B colonies in Pooyappally panchayat.



*Laksham veedu
colony Mylode - B grade*

Grade C colonies have inadequate facilities for waste management and faces shortage of drinking water and electricity. Kunnuvilakam colony and Nelliparambu vedar colony are Grade C colonies in Pooyappally.



Vedar colony Venkode - C grade

Major problems faced by colonies under each grade is listed in table 15.4

Table 15.4. Major Problems faced by the backward housing colonies

Sl. No	Grade	Name of Colonies	Major problems
1	A	Kayila Velam Konam Mission vila Poikavila Oottumala Colony Nalkkavala Paloorkonam colony Venkode Ambedkar	Drinking water
2	B	One lakh housing scheme colony - Mylode Jayanthy Kappumam vila Konathu colony Parandiyil vedar colony One lakh housing colony - Maruthamon pally - Parandode Mudiyoorkonam South Mudiyoorkonal North Vachikonam colony Jayanthi colony - Punnakkode Kattachal colony - Punnakkode Kottara Palamukku ColonyKottara one lakh housing scheme colony	Drinking water, poor structural condition of houses, partial availability of electricity.
3	C	Kunnuvilakam Nellipparambu vedar colony	Lack of drinking water, lack of sanitation facilities, partial availability of electricity, poor structural condition of houses

15.4. Conclusion

Totally 634 families in the panchayat are facing the problem of lack of one or other facilities. Lack of drinking water is most critical. The poor structural condition of houses, lack of electricity, lack of sanitation facilities etc are the other major problems.

CHAPTER 16

Sacred Groves and Areas of Heritage Importance

Pooyappally Grama Panchayat is rich with the existence of a number of sacred groves and various places of heritage importance. An effort to study the existing status of the sacred groves and heritage sites of the panchayat is made in this chapter.

The sacred groves are unique eco.systems with wide variety of trees, plants and also they are homes for various reptiles, birds and animals. There are about 18 such sacred groves in the grama panchayat either big or small. There are ponds and temples in the panchayat and most of the groves are attached to the temples. Table 16.1 below gives the list of sacred groves in Pooyappally panchayat.

Table 16.1. Sacred groves - Pooyappally

Sl. No.	Name	Place
1	Kulathoor Kavu	Kottara
2	Thachar Kavu	Kottara
3	Kshethrakkara kavu - Nalkavala	Maruthamonpally
4	Paloorkonam Kavu - Nalkavala	Nalkkavala
5	Chirakkal kavu	Maruthamonpally
6	Moorthikavu - Konathu	Pooyappally
7	Mamanar kavu	Kanjirampara
8	Madan kavu - Panayam	Pooyappally
9	Puthan kavu	Maruthamonpally
10	Chundelazhikam kavu	Maruthamonpally
11	Velam Konathu Rektheswary moorthi kavu	
12	Veluthedathu Vathukkal kavu (pygalil kavu)	Kozhikkodu
13	Aniyoor Madom kavu	Kozhikkodu
14	Moorthi kavu	Payyakkodu
15	Thirachan kavu	Payyakkodu
16	Pallathu kavu	Chenkulam
17	Mudiyoorkonam kavu	
18	Iroorthottam kavu	Punnakkodu

Most of these sacred groves are on the verge of destruction and currently have only few trees. Details of major sacred groves are discussed hereunder.

16.1 Major Sacred Groves

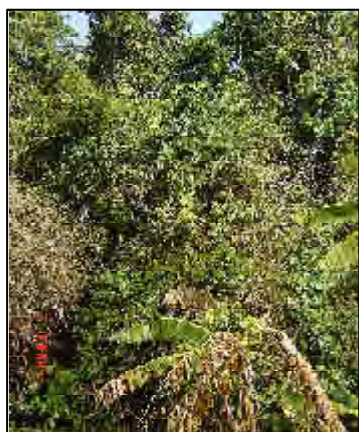
1. Kulathoor Kavu - Kottara.

This well known kavu is centuries old. Extent of the Kavu is about one acre. This is a thick grove of trees and plants including climbers. The roots of these plants and the branches of climbers grown thickly in the grove give the feeling of numerous snakes crawling through the grove. The huge trees here are the abode of bats. This grove is attached to a Devi temple. There is a pond in the temple premises situated on the side of an extensive paddy field. The legend behind the temple is that a Brahmin from Cheppadu, migrated to Southern Travancore for conducting rituals in temples here and after marrying a woman from a Nair family here he settled down in the place. Subsequently the place got the name Chekkode. The Chekkode temple was under the ownership of four major families of Kottara. Now the temple is administered by a registered trust, in which the residents of the locality are also members. Cultivators of the paddy lands in front of the temple, contribute a share of paddy and hay for use of the temple. The temple pond if deepened and its sides protected with side walls, can be used as the water source for irrigating the paddy fields near the temple. Such an action will also support maintaining the ecological balance of this area. The temple premises including the Kavu and ponds, besides being an environmentally sensitive area, has heritage value also and need to be protected listing it as a place of heritage importance.

2. Thatchar Kavu - Kottara

A very old sacred grove - The Thatchar Kavu - was once a thick grove of trees. However now a days, the kavu is in a state of ruin. About 10 years back, this kavu was renovated by constructing a temple - the Komalathu Bhagavathy temple. The temple is administered by a trust viz. the Komalathu Bhagavathy Temple Trust. This temple premise also has a pond. The extent of temple premise is about half an acre. This temple premise has also to be protected by listing under the category of places of heritage importance.

Kulathoor Kavu



Thachar Kavu



3. The Kshethrakkara Kavu - Nalkavala, Maruthamonpally.

The Kshetrakkara Kavu, attached to Perumon Bhagavaty temple, even though not a thick grove, has many very old trees. This Kavu is maintained as the 'Sarpakkavu' attached to the Bhagavathy temple and rituals are performed on a daily basis. The extent of the premises is about 1/2 an acre.

4. Chirakkal kavu - Maruthamon pally.

This 'Kavu' is attached to the Devi Temple at Chirackal and comprises 'Madan Kavuv' 'Sarpakavu' and 'Kshetra Kavuv'. Extent of 'Madan Kavuv' alone is about 1/2 an acre and that of 'Sarpa kavuv' and 'Kshetra Kavuv' together is about 10 cents. The 500 year old 'Sarpa kavuv' has thick grove of trees, plants and climbers. Legend behind the temple is as follows: Chirackal is a place near Pattambi. A Brahmin lady, who migrated to this area and settled at Maruthaman Pally was the founder of this temple. The Goddess of Chirackal temple, is the Goddess who came along with the said Brahmin lady, from her native place of Pattambi. There is a 'Chira' attached to the 'Madan kavuv' which is at present in a state of neglect. If maintained properly the 'Chira' can be utilised as a source of water for irrigating the 'Madavana Pada Sekharam' having an extent of about 100 hectares.

5. Mamanar kavu - Kanjiram Para.

Except for a very old mango tree, there are no other trees in this 'Kavu' having an extent of about 30 cents. The pond beside the 'Kavu' controls the water courses in the immediate surroundings. This 'Kavu' is now known as the 'Mamanar Siva Temple'.

6. Madan kavu - Panayam, Pooyappally.

A huge Banyan tree and 3 or 4 other trees - remains of the thick grove that existed here once - are standing on the premises of this Kavuv having an extent of 90 cents. Daily rituals are limited to lighting of lamps. Special 'Poojas' are performed every Sunday and also on first days of Malayalam months in addition to annual festivals. A temple is under construction in this premise. There is a pond near this Kavuv, under the ownership of the Block Panchayat.

7. Puthattu Kavuv - Maruthamonpally.

Extent of this kavuv is about 50 cents and there is a thick grove of trees and plants. The Kavuv is attached to the 'Puthattu Temple'. The only access available to the Kavuv is through a narrow foot path, which to a certain extent, gives it effective protection. The temple lamp is lit daily and certain 'Poojas' are performed occasionally.

8. Velamkonathu Raktheswary Moorthy Kavuv.

This Kavuv is around 65 years old with number of old trees. It is maintained by the Vedar community and the deity in the Kavuv is worshipped by them. The Kavuv is situated beside a paddy field and a panchayat pond. Total extent of the premises is 40 cents which include 10 cents of wet land. The festive days here are 27th of 'Makom' and Thiruvonam in Chingam.

9. Eniyoormadom kavuv - Kozhikkode

This 'Kavuv', situated in 20 cents of land is owned by the Brahmin family of Eniyoor Madom. There is also a temple and temple pond in this premise. The rituals of the temple is performed by the members of the Eniyoor Madom family.

10. Thirichankavuv - Payyakkode

The extent of the kavuv is 50 cents and it is a thick grove of very old trees, plants and climbers. A Devi temple and pond is situated near the Kavuv along the road side.

11. Pallath Kavu - Chenkulam.

Creepers and plants are grown thickly in this Kavu. The only one tree here is a 'Pala'. Extent of the Kavu is about 30 cents and the 'Kavu' is about 100 years old.



Mahavishnu temple

12. Other major sacred groves in the Panchayat are the Palakonam Kavu - Nalkavala, Moorthy Kavu - Konath Pooyapally, Chundelazhikom Kavu, Veluthedath Vathukkal (Pyngolil) Kavu, Moorthikkavu-Payyakkode, Mudiyoorkonam Kavu and the Eyroorthottam Kavu- Punnaikkode.

In addition, the ancient Maha Vishnu Temple situated in the 11th ward is another heritage monument that needs conservation.

16.2 Conclusion

There are a number of ecologically sensitive sacred groves and temples of heritage importance in Pooyapally Panchayat. Effective measures for their conservation need to be taken.

PART - 3

FINDINGS AND CONCLUSIONS

CHAPTER 17

Findings and Conclusions

The findings and conclusions arrived at based on analysis of various sectors of Pooyappally Grama Panchayat are briefed in this chapter.

17.1. The major role of Pooyappally grama panchayat as per the Integrated District Development Plan for Kollam.

1. As per the Integrated District Development Plan for Kollam Pooyappally grama panchayat is a fourth order settlement.
2. Pooyappally grama panchayat falls in the Agro-Development zone of the district.
3. The identified functional character of Pooyappally grama panchayat is 'rural'.
4. The road connecting Chathanoor and Ayoor, passing through Kurisummoodu junction in Pooyappally which has a proposal for widening to 21 m (four lane carriage way) in the IDDP is another major road passing through the panchayat. The Kannanalloor - Pooyappally - Ayoor road and the Kottarakkara - Pooyappally - Oyoor roads with proposal for widening to 12 meter in IDDP for the district also passes through this panchayat.

17.2. General Findings.

4. From the topographical studies of Pooyappally it is seen that 85% land have a slope of below 30%. So the terrain is suitable for agricultural activities.
5. From the study of land use of Pooyappally it is seen that 55% land is under agricultural use. From a comparative study of land uses in neighbouring panchayats it is observed that agricultural activity is less in the panchayats of Adichanalloor and Chathanoor whereas in the eastern panchayats like Elamad and Velinalloor agricultural activity is more intensive than Pooyappally. So it can be concluded that Pooyappally grama panchayat is predominantly agricultural. When compared with other Grama Panchayats in Kottarakkara block also it is seen that Pooyappally grama panchayat is predominantly agricultural.
6. 29% of the area of the grama panchayat is categorised under residential area having potential for agricultural development.
7. In Pooyappally grama panchayat there are 18 sacred groves which are ecologically sensitive and ancient temples of heritage importance which shall be conserved. There exist 9 chiras (ponds) which do not dry up during summer. The paddy fields of the panchayat form part of chains of paddy fields in the region. These are the water recharge basins in the region.
8. The population of Pooyappally grama panchayat as per 2001 Census is 23924. This is low compared to coastal panchayats of Kollam. In Kottarakkara block Pooyappally panchayat has the lowest population. The density of population of the Panchayat is 1081 persons per sq.km. The decadal growth rate of population is 9.71%. The low density of Pooyappally

panchayat supports agriculture and allied activities.

9. Even though there is an increase in the number of workers, the work participation rate shows a slight decline. A work participation rate as high as 35.04% shows stability in labour. The increased share of agricultural labourers and cultivators in the work force is an indication of a strong agricultural sector in the panchayat.

17.3. Agricultural Sector

10. The major agricultural produces of Pooyappally are paddy, coconut, rubber and tapioca. The percentage of agricultural land under the above crops are 16,36,34 &10 respectively. A comparative analysis of agricultural sector in neighbouring panchayats shows that the crops of coconut and paddy has a concentration in Pooyappally.
11. 2.6.% of land is under paddy cultivation, 1.07% of the land under coconut cultivation of Kollam district is in Pooyappally grama panchayat. Rubber and tapioca are the other major crops of the panchayat.
12. The consumption pattern shows that there is good demand for agricultural produces and animal husbandry products in the panchayat.

17.4. Industrial Sector

13. The industrial sector other than agro based industries is not that strong in Pooyappally. The industrial units here include 11 cashew factories, two handloom units and an Ayurvedic medicine manufacturing unit. A mini industrial estate, ready to occupy, equipped with all essential infrastructure, but not so far started functioning, also exist in this panchayat.

14. Quarrying of rocks is taking place in certain portions of Pooyappally. Five quarries are functioning actively in the panchayat.

17.5. Transport and Commerce.

15. Pooyappally grama panchayat is well connected to various centres in the region through a net work of major roads. The inadequate width of roads and poor maintenance are major problems in the road sector.
16. The commercial centre in Pooyappally grama panchayat is Pooyappally junction. Maruthamonpally, Meeyannoor, Payyakkode etc. are the 2nd order nodes.
17. Sharp bends in the road proposed for widening to 21m in the Integrated District Development Plan.
18. There is need for improvement of junctions, bus stops etc.

19. There is need for detailed junction improvement plans.

20. Pooyappally panchayat has all the facilities which are required for a fourth order settlement. The panchayat market at Pooyappally is not functioning in a satisfactory manner.

17.6. Drinking water and health

21. Nearly 94.85% of the people are depending on wells as source of drinking water. Scarcity of drinking water is a serious problem in many areas of the panchayat.

22. The water supply schemes for Mylode and Pallimon distribute water to certain areas of the panchayat. Presence of KIP canals protect wells in certain areas of the panchayat from drought.

23. The facilities available in the health sector is sufficient to serve the population of the panchayat. Higher order facilities are available within 15 km. radius from the panchayat.

24. There are no Homoeo or Ayurveda dispensaries in the panchayat in public sector.

17.7 Education.

25. Educational institutions available in the grama panchayat are adequate as per planning standards. However most of them do not have adequate infrastructural facilities.

26. Higher order educational facilities are available at Kottarakkara, Chathanoor etc within 15 km. radius of the grama panchayat.

17.8. Infrastructure sector.

27. Essential facilities and services are available in the grama panchayat including Govt. offices.

28. The backward residential colonies of the grama panchayat are facing problems with respect to availability of drinking water, solid waste disposal facilities, accessibility, availability of electricity etc.

29. Cremation grounds available in the grama panchayat are attached to religious institutions. A public cremation ground is not existing.

30. In the high density wards like Pooyappally, Maruthamonpally etc where commercial activities are concentrated absence of solid waste disposal system is a major problem.

31. A park and an organised open space to conduct exhibitions and sale of agriculture products are urgent needs of the grama panchayat. A panchayat auditorium/community hall is also another urgent need of the Grama Panchayat.

17.9 Heritage conservation

32. In veneration of the cultural heritage of the panchayat, the temples namely Kottara Bhagavathi temple, Kulathoor kavu temple and the Maruthamonpally Mahavishnu temple are to be conserved.

PART - 4

*DEVELOPMENT OBJECTIVES AND
DEVELOPMENT CONCEPT*

CHAPTER 18

Development aims and Objectives

In this chapter the development aims and objectives of the panchayat for the plan period (ie upto 2021) are made clear.

18.1. Development Aims.

The development aims of the panchayat are formulated based on the findings and conclusions derived from the analysis of various sectors. As per the proposals of Integrated District Development Plan for Kollam, Pooyappally is a panchayat falling in the agro development zone of the district. Besides, this is an area of transition between the eastern tracks dominated by rubber plantations and the western tracks having domination of cultivation of paddy. Rubber, paddy and other crops like coconut, tapioca etc have almost equal predominance here. Analysis of land use, occupation structure etc reveal that agricultural sector is the predominant sector of economy in the panchayat. However optimum utilisation of land under agricultural use is not achieved here. Through planned interventions agricultural sector can be developed in such a manner that the sector provides a strong economic base for the panchayat. This is one of the major aims of the Development plan for the panchayat.

As per the proposals of Integrated District Development Plan, three major roads through Pooyappally panchayat are proposed to be developed viz the Kollam-Kurisummoodu-Ayoor Road of proposed width 21m, the Kannanallor-Ayoor Road and the Kottarakkara-Oyur Road-both having proposed for widening to 12m. Developing a good network of roads integrating these suggestions of Integrated District Development Plan and the local network of roads of the panchayat is another development aim. Upliftment of agricultural sector through integrated development of infrastructure is aimed at.

The environmentally sensitive areas like sacred groves, ponds, paddy fields etc. are to be conserved. This is another aim of the development plan.

It is aimed to make the panchayat self sufficient in the production sector to the extent possible and to improve the gaps in basic infrastructural facilities. In general, planned development of Pooyappally panchayat, in socio-economic sectors with out harming the environment is aimed at.

The development aims are briefly explained below.

1. Planned development of agriculture sector, agro-allied sectors and small scale industrial sector of the panchayat so as to provide a strong economic base for the panchayat and to provide basic infrastructural facilities on par with a fourth order settlement in the panchayat.
2. Streamlining the land use of the panchayat through conscious efforts so as to improve the agricultural development in the panchayat.
3. Conservation of environmentally sensitive areas and heritage points of the panchayat.
4. To ensure basic amenities to the socially and economically backward area.

18.2. Development Objectives

When optimum utilisation of the resources of Pooyappally is achieved it will lead to strengthening of the economic base of the panchayat. This will ultimately lead to improvement in the quality of life of the people of the panchayat.

From the analysis of agricultural sector it is seen that there is potential for cultivation of horticultural products. Paddy, rubber and coconut cultivation need to be promoted as they being major crops of the panchayat. At the same time cultivation of vegetables, medicinal plants, fodder etc. are also to be promoted. This points to the need for a multi-faceted approach in agricultural sector. Concerted efforts of the panchayat, cultivators and agricultural department is required in this regard.

There is adequate potential for development of animal husbandry sector also. Efforts for integrating agriculture and animal husbandry sectors, so that activities of these two sectors are performed in a complimentary manner by the cultivators to enhance their return from land is required. Value addition of produces under agriculture and animal husbandry sectors is another area that call for immediate attention.

Promoting the small scale industrial sector by making functional the SSI units of the panchayat, promoting cashew processing units etc. calls for attention. Bettering the living conditions of the backward housing colonies, creating a regional road network coping with the suggestions of Integrated District Development Plan, developing the local road network integrating with the regional network etc. are also immediate priorities of the panchayat. Development without adversely affecting the environment is aimed at. Thus conservation of the paddy fields, ecologically sensitive sacred groves etc. are essential. The heritage structures also need conservation.

In the above background the development objectives of Pooyappally are:

1. To promote cultivation of paddy, due attention for rubber and coconut as major crops, due attention for cultivation of vegetables, medicinal plants and fodder as intercrops.
2. To Develop a suitable mechanism for facilitating integrated functioning of cultivators, agriculture department and the panchayat.
3. To Develop animal husbandry and small scale industrial sectors complimentary to agricultural sector so as the diversify and strengthen the economic base of the panchayat.
4. To Ensure availability of basic infrastrure to the socially backward sections.
5. To Develop the local road network of the panchayat properly integrating it to the regional network.
6. To promote adequate measures in the high altitude areas of the panchayat to prevent soil erosion and to reduce water scarcity.

CHAPTER 19

Development Concept

The development concept of a particular area is derived by integration of the spatial peculiarities of the area and the conclusions deriving out of the analysis. The development concept should fulfill the goals and objectives. In this chapter, the development concept evolved for the panchayat is discussed in detail.

As already discussed in previous chapters, the economic base of Pooyappally grama panchayat is based its agriculture and allied activities. Besides, as per the proposals of Integrated District Development Plan for the district, Pooyappally falls in the agro - development zone and the functional character of the panchayat is identified as 'rural'. In this context, the required development here is such that the agriculture and allied sectors are promoted while conserving the environmentally sensitive areas of the panchayat. It is attempted to discuss the development concept of Pooyappally based on the spatial structure of the panchayat.

19.1. Spatial structure.

The spatial structure of an area is determined by the topography existing, spatial distribution of activities, transportation network as well as the environmentally sensitive areas of that area.

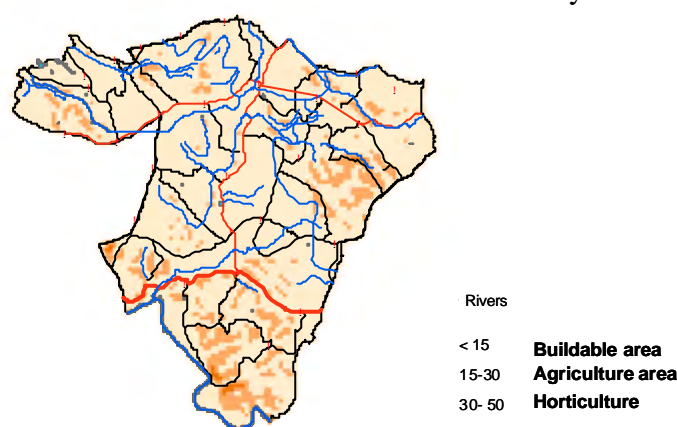


Figure 19.1 Slope of land -Pooyappally

19.1.1 Topography

Map No. 19.1 depicts the slope of different areas of Pooyappally. It can be observed that nearly 85% of the areas have slope in the range of 0-15°. In other words 85% of the area of the panchayat is suitable for human habitation and related development works.

19.1.2. The existing spatial distribution of activities

The study of agricultural land use and residential land use and their distribution shows that the agricultural areas and developed areas including residential areas are situated in a mutually exclusive manner. See Figures.19.2 & 19.3. The commercial areas are seen along the major roads in the panchayat. (Fig.19.4).

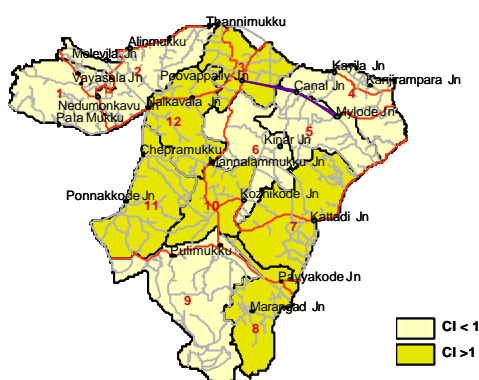


Figure 19.2 Wards having a concentration of residential areas

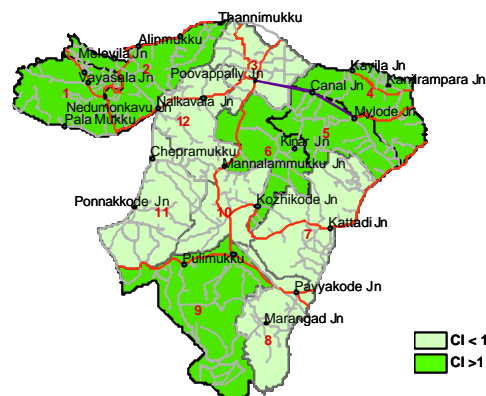


Figure 19.3 Wards having a concentration of agricultural sector

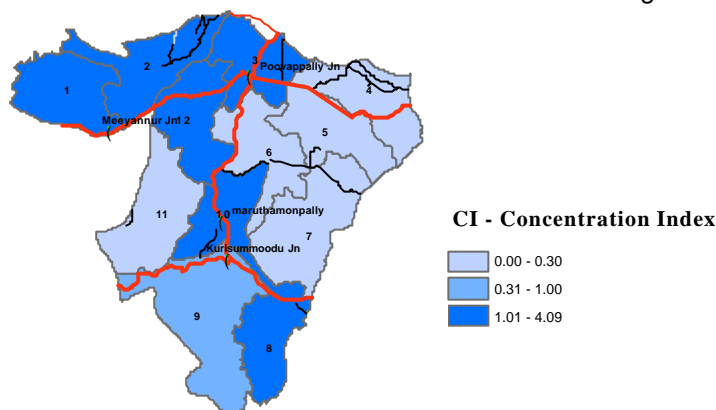


Figure 19.4 Wards where there is concentration of commercial activities

19.1.3. Environmentally sensitive areas and heritage sites.

In Pooyappally panchayat, the environmentally sensitive areas include the chains of paddy fields, waterbodies and sacred groves. The age old temples of the panchayat are identified as the heritage sites of the panchayat. The chains of paddy fields may be retained with intensive agricultural activity by respective schemes for the above purpose. The chains of paddy fields of Pooyappally are shown in fig. 19.5.

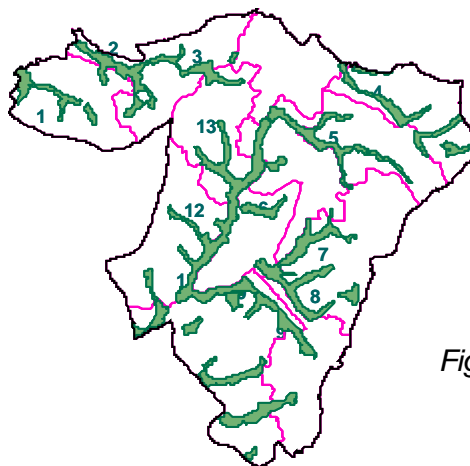


Figure 19.5 Paddy fields of Pooyappally

Location of the above heritage sites and ponds and sacred groves which are ecologically important are shown in Fig 19.6.

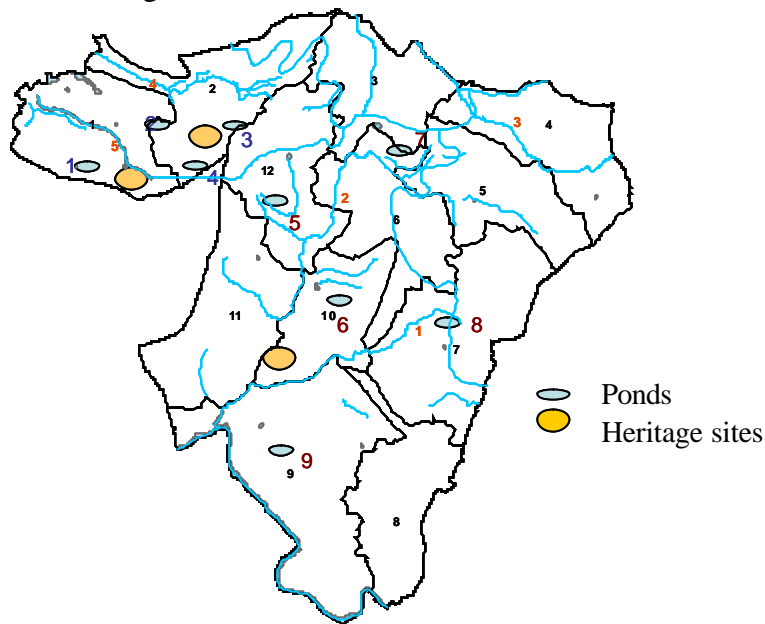


Figure 19.6 Sacred groves, temples & temple ponds-Pooyappally

19.1.4. Distribution of population.

There is a concentration of population in the wards situated along the important roads in Pooyappally panchayat. viz the Kollam, Ayoor, Kollam - Oyoor & Kottarakkara - Oyoor roads. The following are the wards holding the majority of the population namely Kottara, Pooyappally town, Venkode, Payyakkode, Maruthamonpally and Nalkkavala. The wardwise density of population is shown in figure. 19.7.

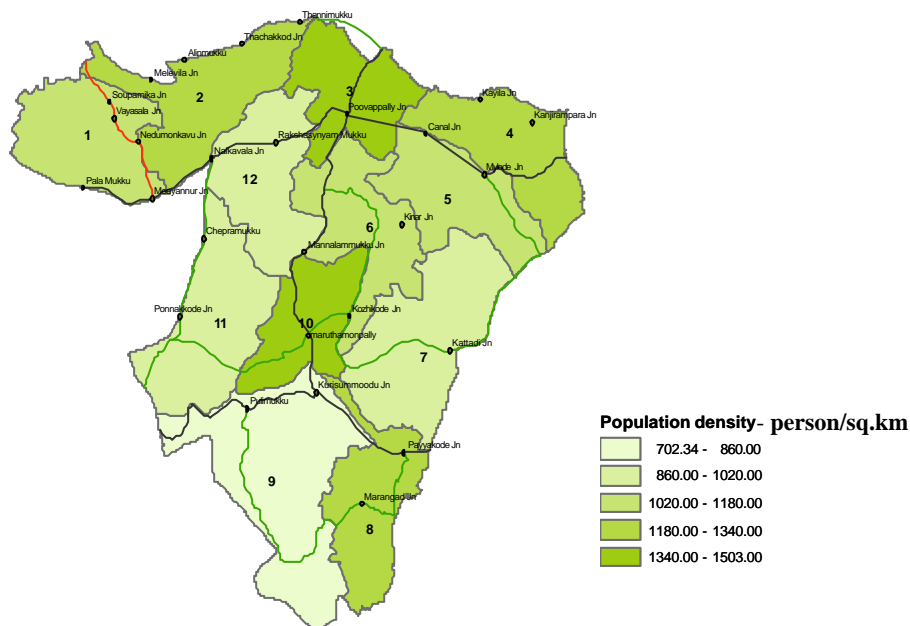


Figure 19.7 Wardwise density of population

19.1.5. Proposed Network of Roads

The proposals for road network are directly related with the spatial distribution of population and proposed development in priorities. The local road network in Pooyappally Grama Panchayat region is proposed complimentary to the road proposals in the Integrated District Development Plan for Kollam. This is shown in fig. 19.8.

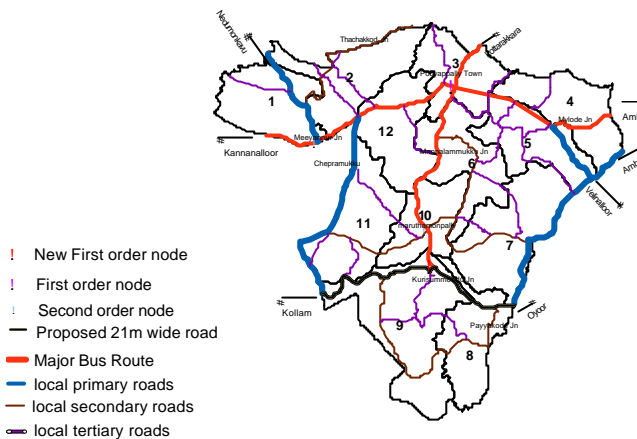


Figure 19.8 Road network in Pooyappally

The roads having development proposals in Integrated District Development Plan for the district are a link road connecting N.H. 47. and M.C. road viz the Ithikkara - Ayoor road having proposed width of 21 m, and the Kannanalloor - Pooyappally - Ayoor road and the Kottarakkara - Ayoor road both having proposal for widening to 12 m.

19.1.6. Spatial structure

By combining all the components described above the spatial structure of Pooyappally Grama Panchayat can be determined. This is shown in fig. 19.9. The spatial structure thus determined outlines the activity pattern of different locations in the panchayat, besides suggesting the proposed road network of the panchayat.

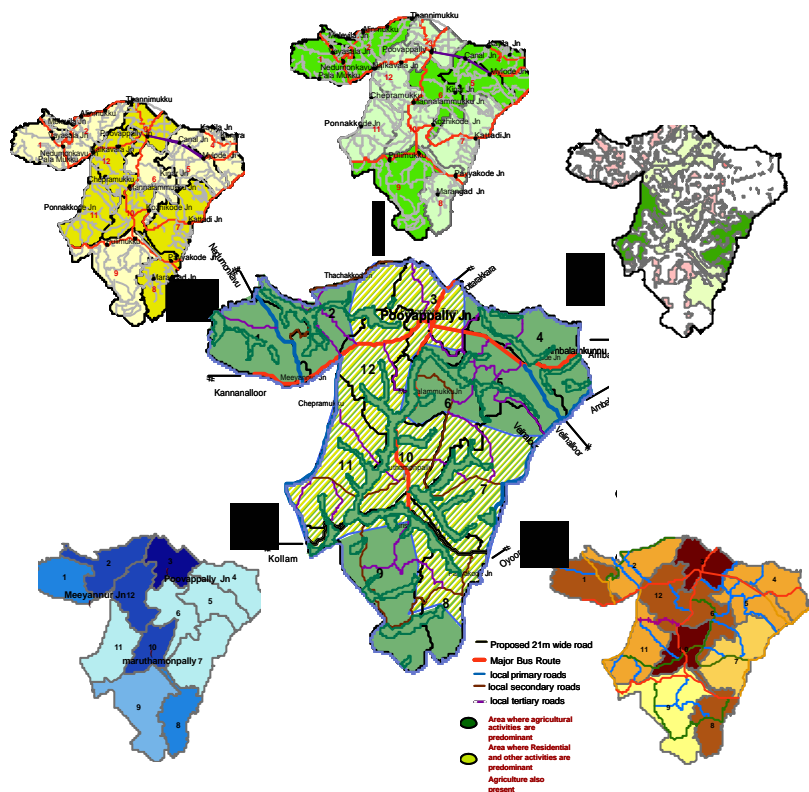


Figure 19.9 Spatial Structure

A concentration of residential use is observed in the wards of Pooyappally town, Nalkkavala, Payyakkodu, Venkode and Maruthamonpally. The wards having concentration of agricultural use are Kottara, Thachakkode, Pooyappally East, Mylode and Chenkulam. The spatial structure is a major determinant of spatial distribution of future activities of the panchayat.

19.2. Evolving the Development Concept.

The Development concept of the panchayat has now to be finalised taking into account the spatial structure evolved along with the aspects of allied sectors which are essentially to be considered in evolving the development concept.

In the case of Pooyappally, agro-allied sectors including animal husbandry, small scale industry etc. are the sectors influencing the development concept. The trade and commerce sector also needs to be given due importance.

As per the spatial structure evolved, the areas suitable for intensive agricultural activities are the areas shown as 1,2 and 3 in figure 19.10



Figure 19.10 Activity zones

Areas, comprising the wards of Pooyappally town, Kozhikode, Payyakkode, Maruthamonpally, Punnaikkode and Nalkavala are having concentrated residential activities and are likely to be concentrated in future also. In addition, studies revealed that this area is suitable for agricultural activities and for promoting animal husbandry. The industrial and commercial activities of the panchayat also have a concentration here. Most of the institutions (educational/health offices etc) are also concentrated here. Hence this area shall be on focus in locating the future development activities also and will continue as a

zone of 'mixed development in future. Figure 19.11 represents this 'mixed development zone'. The potential commercial centres of the panchayat also fall in this zone.

In the spatial structure of Pooyappally, Kurisummoode junction is a meeting point of two major regional roads - ithikkara - Ayoor road (proposed to be widened to 21m) and Kottarakkara-Ayoor road (proposed to be widened to 12m). A meeting point of major roads is a potential area for commercial development. Hence Kurisummoode junction will have all the chances to develop as a commercial centre equivalent to Pooyappally junction in the planning period. The integration of the activity zones with road network gives the development concept of Pooyappally grama panchayat in a spatial platform.

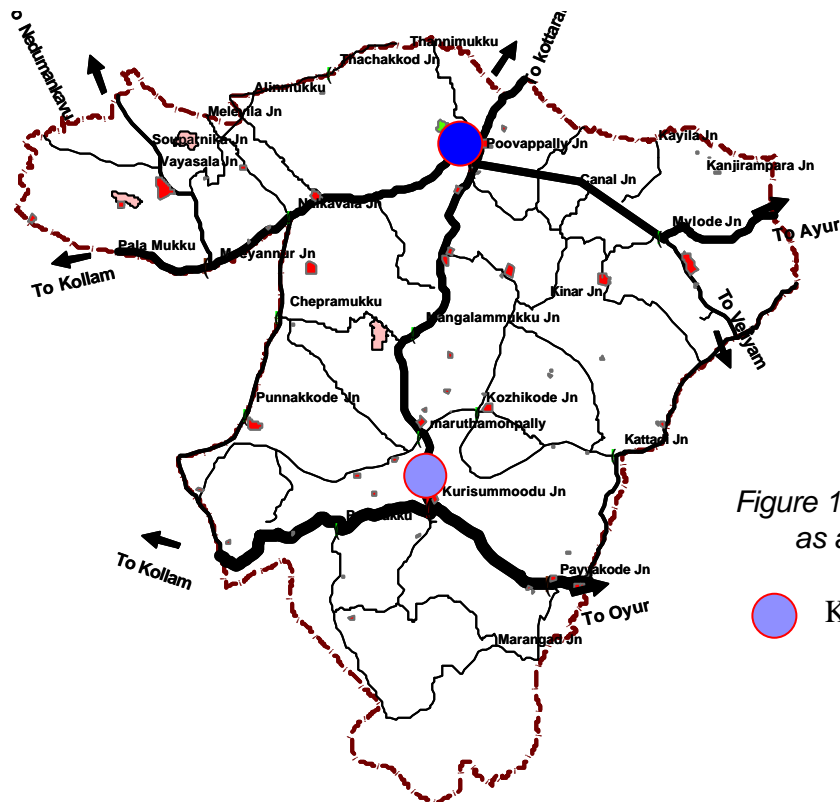



Figure 19.11 Kurisummoode to develop as a major commercial centre

 Kurisummoode junction

19.2 The Development Concept

Figure 19.12 depicts the development concept of Pooyappally grama panchayat evolved.

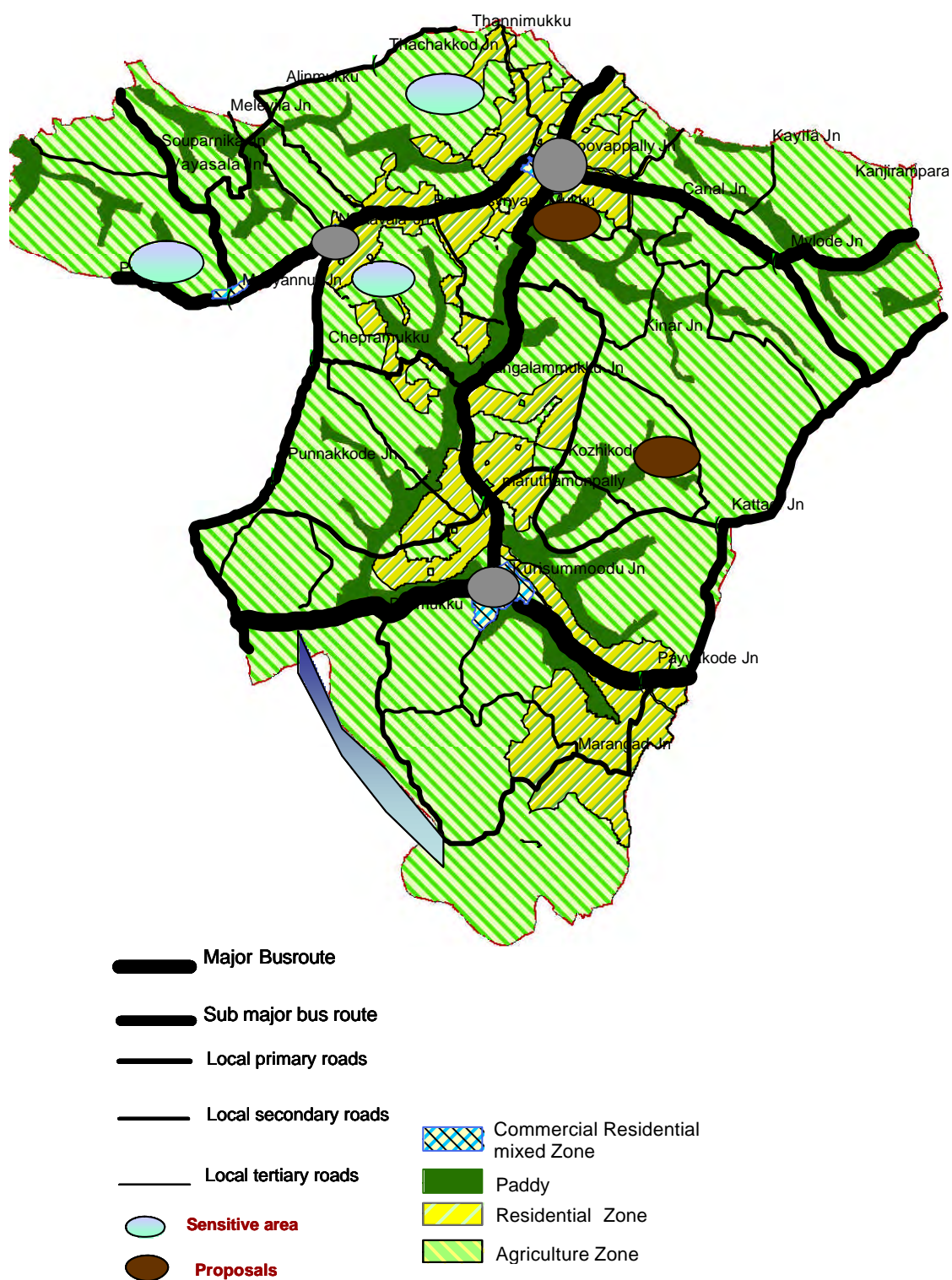


Figure 19.12 Development concept - Pooyapally

As per the development concept, Pooyappally panchayat (i) will have a very good connectivity through improved regional as well as local road networks, (ii) there will be an intense agricultural activity zone and (iii) a mixed zone where the future developments shall be concentrated. The Kurisummoodu junction will be developed as another first order node of the panchayat along with the existing first order node of Pooyappally. The environmentally sensitive paddy fields, the sacred groves and temples of heritage importance, situated in the panchayat will be conserved by including such areas/precincts under conservation zone.

CHAPTER 20

Development Policies and Strategies

20.1 General Development Policy

The general development policy of Pooyappally - a panchayat included in the agro development zone of the district - is to strengthen and enhance the agricultural activities of the panchayat and to promote animal husbandry sector to attain self sufficiency in production of milk and other produces of the sector, to the extent possible.

20.2. Sectoral development policies and strategies

20.2.1. Agricultural sector

Strengthening the economic base of the panchayat through strengthening the agricultural sector is the development policy related to agricultural sector.

The development strategies of the sector are :

- ☞ Adopting suitable agricultural practices to maximise the productivity of the 'elas' of the panchayat.
- ☞☞ Adopting enabling measures to protect and promote coconut cultivation.
- ☞☞ Adopting an integrated approach of promoting other supporting activities in rubber plantations as a measure to increase the income of cultivators.
- ☞☞ Promoting polycrop cultivation

20.2.2. Animal Husbandry Sector

The sectoral development policy is to render animal husbandry profitable and to achieve self sufficiency in production of milk, meat and egg to the extent possible by way of proper integration of agricultural and animal husbandry sectors.

The development strategies of the sector are:

- ☞☞ Establish dairy farms and increase productivity of milk through scientific methods.
- ☞☞ Promote fodder cultivation in the garden lands.
- ☞☞ Promote establishing of poultry farms and goat farms
- ☞☞ Ensure necessary supports from the side of the panchayat and Government departments concerned.

20.2.3. Transport and Commercial Sector.

The development policy related to these sectors is to form the regional and local road net works of the panchayat in accordance with the development concept and to locate the commercial areas of the panchayat so as to compliment the transport sector.

The development strategies in this regard are:

- ☞ Adopting quality improvement measures for the existing road network.
- ☞ To ensure a proper network of roads within the panchayat.
- ☞ To establish a hierarchical order in the road network of Pooyappally.
- ☞ To integrate the road proposals of Pooyappally with the proposals concerned in Integrated District Development Plan for Kollam.
- ☞ To accommodate the anticipated developments in commercial sector along the sides of major arterials and also around the first order nodes.
- ☞ To suggest the future land use for such areas in an enabling manner.

20.2.4 Industrial sector

The development policy is to promote industrial units for value addition of locally available resources. The development strategy in this respect are:

- ☞ Existing industrial units shall be retained and new units to support value addition of agricultural produces (eg. rice mill) shall be promoted.
- ☞ Promote agro based industries and industrial units for value addition of produces of animal husbandry sector in the mini-industrial estate.
- ☞ To ensure proper storage and marketing facilities for the industrial produces.

20.2.5 Other infrastructural facilities

The development policy in this regard is to enhance the quality of life of the residents by way of ensuring availability of facilities to all sections of people of the panchayat and the development strategies are:

- ☞ To renovate existing facilities which are currently in a poor state of maintenance (eg. Market) and to develop essential facilities which are currently lacking (eg. Public cremation ground, proper solid waste management system, commercial centre etc).
- ☞ To improve the living conditions of backward housing colonies.
- ☞ To provide necessary infrastructural facilities which are currently lacking in the educational institutions.

20.2.6 Conservation of Heritage and Environment

The development policy is to conserve the areas of heritage and environmental importance so as to ensure sustainable development.

- ☞ The development strategies are:
 - ☞ To conserve all the major Elavals of the Panchayat
 - ☞ To conserve the heritage buildings/precincts.
 - ☞ To conserve the sacred groves & chiras of the panchayat and to take enabling measures to protect the Ithikkara river stretch bordering the panchayat.

CHAPTER 21

Anticipated changes in Population and Job Opportunities

It is expected that large number of job opportunities will be generated in Pooyappally Panchayat thanks to development of agriculture and animal husbandry sectors. This in turn will lead to changes in occupation structure and population distribution in the panchayat. It is attempted here to quantify such changes in Pooyappally during the plan period.

21.1. Anticipated changes in occupation structure.

Changes in occupation structure will depend mostly on the changes in economic activities of an area. Being a panchayat in the agro-development zone of the district, the predominant economic activities of Pooyappally will continue to be in agricultural and allied spheres. Promotion of animal husbandry sector and induction of agro-allied industries are also envisaged. This will result in creation of more employment opportunities but will not lead to any substantial changes in occupation structure other than slight increase in workforce participation rate. Thanks to increased job opportunities in agricultural sector, the existing marginal workers will become main workers.

21.2. Expected creation of job opportunities

Intensive cultivation of 13 elas in the panchayat is expected to create 504 job opportunities @ 8 mandays per 10 cents of land. Another 300 job opportunities are expected to be generated related to intensifying coconut cultivation.

Once the proposals for intensifying garden land cultivation is materialised, about 1860 new job opportunities can be generated at the rate of 102 man days per 0.25 hectares. Thus a total of 2664 new job opportunities will be generated in agricultural sector. It is assumed that the 717 marginal workers will become main workers and 1947 agricultural labourers will be added to the workforce of Pooyappally during the plan period. Slight increase in number of job opportunities is expected in household industrial sector also owing to establishment of new units for value addition of agricultural produces. Substantial change in number of other workers is not anticipated.

21.3. Work Participation Rate.

Figure 21.1 below depicts the projected work force participation rate (W.P.R) of Pooyappally for 2021. The work force participation rate projected for 2011 is 35.49% and that for 2021 is 35.69%

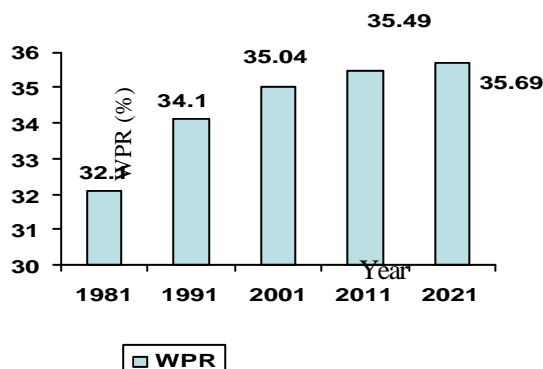


Figure 21.1 Workforce participation rate

The anticipated change in occupation structure of the panchayat is in the proportion of main and marginal workers. The current proportion of 75:25 is expected to become 87:13 by 2021. In other words

87% of the total workers of 2021 will be main workers and the share of marginal workers will be reduced to 13%. Figure 21.2 below depicts the anticipated share of main and marginal workers in the total work force of Pooyappally.

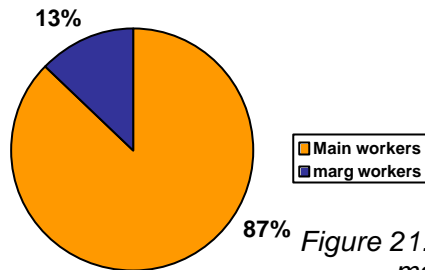


Figure 21.2 Occupation structure - 2021 share of main and marginal workers in the total workforce - 2021)

21.4. Anticipated change in total population

Changes in demography and changes of economy of an area are interrelated. Interventions towards strengthening the economic base of an area will result in creation of more job opportunities. Immigration of workers and their dependents will lead to an increased rate of growth of population compared to the natural increase.

As already stated in para 21.3, the projected work force participation rate of Pooyappally for 2021 is 35.69%. The total number of workers expected in the panchayat in 2021 is 10359 and on working back, the anticipated population of the panchayat by 2021 is 29682. (Figure 21.3).

The future population distribution of the panchayat is arrived at in tune with the development concept. The additional population is expected to be distributed in the wards of 3,7,8,10 and 11. These are the wards along the first order roads and the following major nodes of Pooyappally viz. Kurisummoodu, Punnakkode and Payyakkode are also located in these wards. Further population densification of these wards of the panchayat, which have a concentration of agricultural activities, is not envisaged. Figure 21.4 depicts the population distribution by 2021 in Pooyappally panchayat.

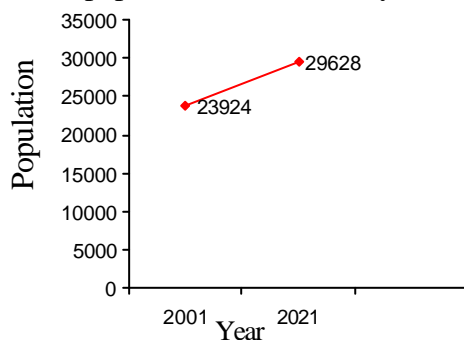


Figure 21.3 Expected population in Pooyappally-2021

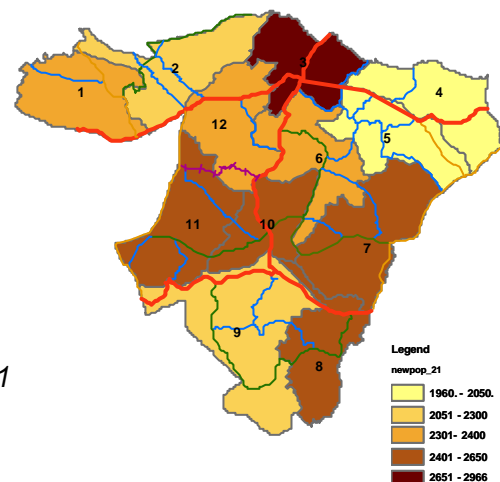


Figure 21.4 Wardwise distribution of population - 2021

21.5. Conclusion

Moderate increase in work participation rate with slight change in the occupation structure is anticipated in Pooyappally grama panchayat with proportionate increase in population.

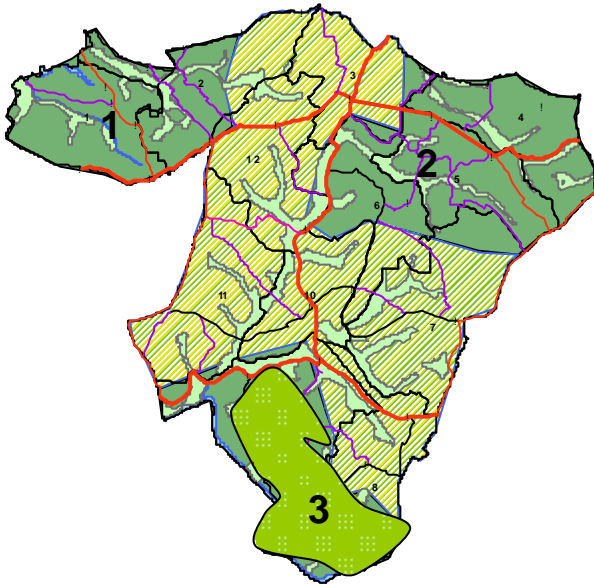
CHAPTER 22

Land Use

Pooyappally panchayat area has been categorised into different zones as per the development concept. The proposed land uses in various zones of the panchayat are described in this chapter.

22.1 Agricultural zone

It is proposed to retain land predominanatly under agricultural use viz. the environmentally sensitive paddy fields (shown in figure 22.3) measuring 210 hectares in area and the rubber plantations measuring 488 hectares in area (shown in figure 22.2) are included under agricultural use zone. Thus the total extent of land under agricultural use is 698 hectares (See figure 22.1).



*Figure 22.1 Proposed agricultural sector
Pooyappally gramapanchayat*

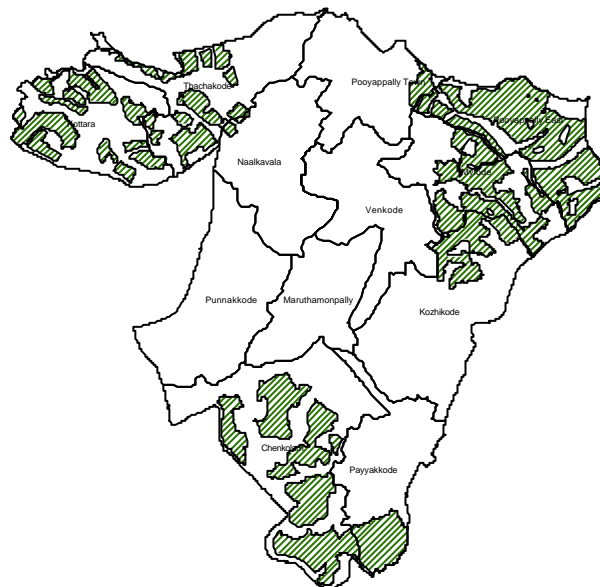


Figure 22.2 Rubber Plantations

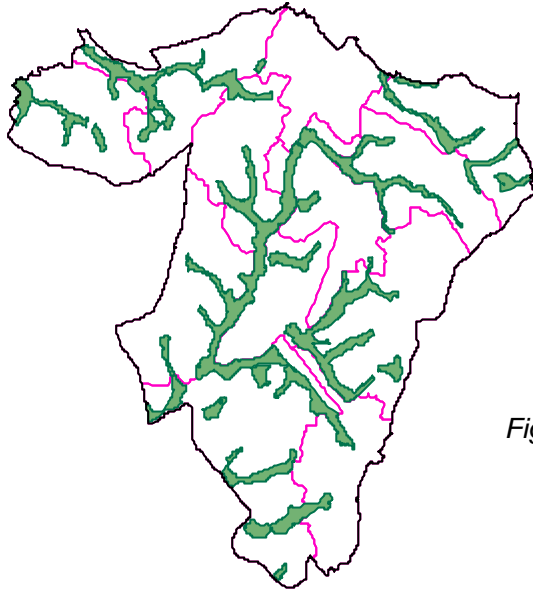


Figure 22.3 Paddy fields

22.2. Public and Semi Public use zone

All existing areas under public and semi public use are proposed to be retained under this zone.

Following projects are proposed to be implemented as part of providing facilities to the public.

(i) Community centre

It is proposed to develop a community centre in ward number 6 (venkode) with facilities for conducting trade fairs, festivals, exhibitions etc. There shall also be an auditorium. Even a panchayat mini civil station housing government offices and facility providing centres (Friends) can be housed at this centre. A community park is also proposed, attached to this centre.

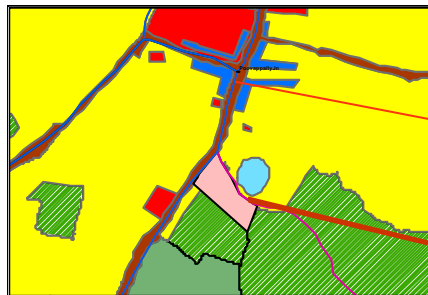
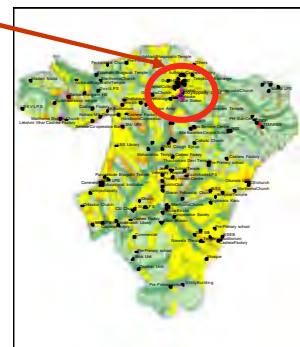


Figure 22.4 Location of community centre



(ii) Public Market

It is proposed to develop the existing Pooyappally public market as a major centre for trade of the produces of agriculture/animal husbandry sector of the Panchayat. The extent of the identified project site is 1.80 hectares.

•

(iii) Public Cremation/Burial Ground

Land admeasuring 1.2 hectares in survey. No. 34/193 of Mylode ward (ward5) situated along the Velinalloor road is identified for the purpose. Access road to the site needs to be developed.

considering the extent of these project sites also, the extent of public and semi public zone will be increased to 15.40 hectares from the present extent of 13.80 hectares.

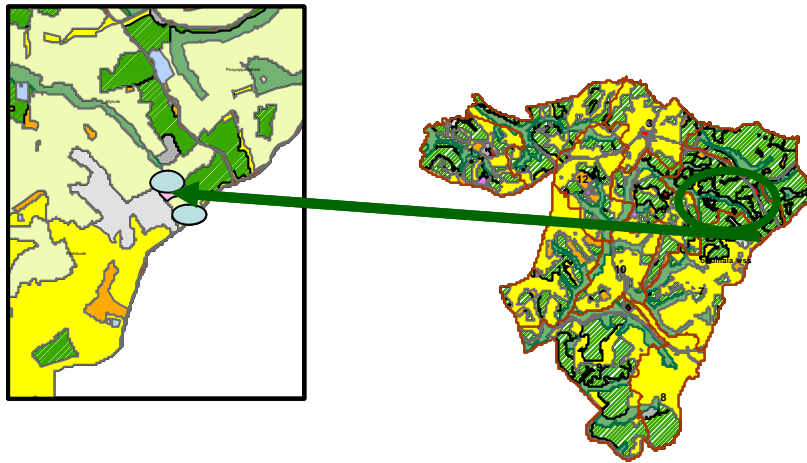


Figure 22.5 Location of public cremation/burial ground

22.3. Heritage Sites

The identified heritage sites in Pooyappally panchayat are the Maha Vishnu Temple at Maruthamonpally, Bhagavathy Temple at Kottara and the Kulathoor Kavu, Kottara. Total extent of these sites is 6.20 hectares.

22.4. Transport Sector.

Considering the proposed width of various roads an extent of 29.045 hectares of land in Pooyappally grama panchayat will be under transport use.

22.5. Commercial - Residential Mixed Zone

Land around the existing major junctions and around those junctions which in future will be raised as major junctions of the panchayat are zoned as commercial - residential mixed zone. (Total extent 10.44 hectares).

22.6. Commerical Zone.

The land currently under commercial use, measuring an extent of 2.95 hectares is proposed to be retained as commercial zone in future also.

22.7. Industrial Zone.

All existing areas under industrial use (measuring 7.25 hectares) will be retained under industrial zone in future also. This includes the mini industrial estate as well.

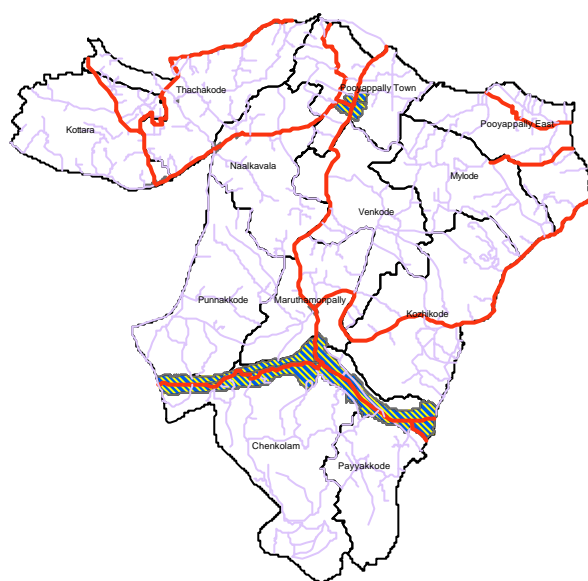


Figure 22.6 Commercial, residential mixed zone

22.8 Water Courses

Existing areas under water bodies as well as the proposed artificial pond for rain water harvesting are included under this zone. Total area under this use is 18.83 hectares.

22.9 Proposed Land Use - 2021

Table 22.1 depicts the proposed land use break up of Pooyappally Grama Panchayat by 2021.

Table 22.1. Proposed land use 2021 - Pooyappally grama panchayat

SI No:	Proposed land use Pattern	Extent in hectares	Percentage
1	Residential use zone	538	24.14
2	Agriculture use zone	1334	59.8
3	Public and Semi public use zone	15.23	0.68
4	Commercial use zone	3	0.13
5	Mixed use zone	103.2	4.63
6	Paddy	210	9.4
7	Heritage	6.2	0.28
8	Waterbodies	19	0.83
	Total	2228	100

The proposed land use map -2021 of Pooyappally grama panchayat is shown in figure 22.7.

PART 5

SECTORAL PROPOSALS

CHAPTER 23

Agriculture Sector

As envisaged in the development concept of the panchayat, Pooyappally is a panchayat where agriculture sector is predominant. Hence the proposals of this sector are oriented towards strengthening the agriculture sector by increasing production and productivity.

It is proposed to retain the existing 'elas' admeasuring 210 hectares of area and to adopt measures to promote coconut cultivation in 780 hectares. The rubber plantations (480 hectares) will be retained and poly crop cultivation will be promoted in the garden lands. Complimentary to this, the proposals for providing processing of agricultural produces and facilities for trading are also included.

Adequate care has been taken to carve out the sectoral proposals in tune with the corresponding proposals of Integrated District Development Plan for the sector. The major development proposals under agriculture sector are given hereunder.

23.1 Paddy cultivation

It is suggested to promote group farming in the elas of Pooyappally so as to make paddy cultivation profitable. An integrated approach is essential in paddy cultivation. Hence it is proposed to introduce such an action plan in the elas in a phased manner. The elas of 'Mathyode' measuring 12 hectares, 'Kottara' measuring 15 hectares and 'Maruthamon pally' measuring 34 hectares are selected in the first phase based on the following criteria.

- * Existing status of cultivation.
- * Possibility of mechanisation
- * Existing availability of irrigation facilities
- * Existence of pada sekharas samitis.
- * Willingness of farmers to engage in group farming.

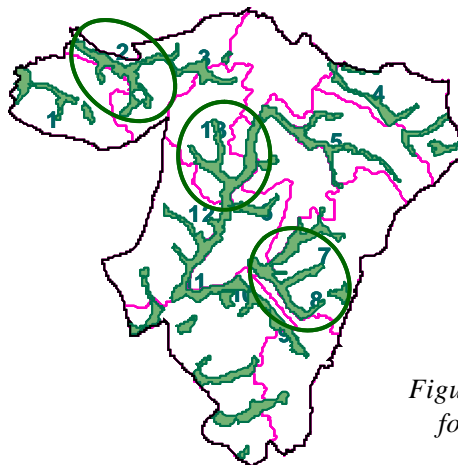


Figure 23.1 Paddy fields selected for intensive paddy cultivation

The spatial location of these 'elas' is shown in figure 23.1

Table 23.1 Paddy field selected

Sl.No.	Name of paddy field	Extent in Hectares	Number of cultivators in each paddy field
1	Maruthamon pally field	34	100
2	Mathyod paddy field	12	48
3	Kottara paddy field	15	75

23.1.1. Intensive paddy Cultivation Scheme - Action Plan

Following plan of action is suggested for intensive paddy cultivation in the elas selected in the first phase.

Sl.No	Activity	Period of action
1	Conducting awareness workshop for cultivators in the elas and formation of group farming samitis.	First week of April
2.	Soil testing	First week of April
3.	Collection of seed	2nd week of April
4.	Preparation of bed and sowing seeds	3rd week of April
5.	Preparation of field	3rd week of April to 2nd week of May
6.	Planting seedlings	2nd week of May
7.	Removing weeds	2nd and 3rd weeks of June
8.	Applying fertiliser	3rd week of June
9.	Harvesting	2nd & 3rd weeks of August

23.1.2. Financial Analysis

Table 23.2 depicts the cost of cultivation per hectare of paddy field under this scheme.

Table 23.2 Cost of cultivation per hectare

Sl. No	Item	Amount Rs.
1	Cost of seed @ Rs. 15/kg for 65 kg.	900.00
2	Ploughing of field (using tractor/tiller)	4000.00
3	Preparation of seedlings	1000.00
4	Planting of seedlings, fertilisation	4000.00
5	Cost of fertiliser	4800.00
6	Bio-fertiliser - 25 kg/hectare	250.00
7.	Removal of weeds	3000.00
8.	Cost of pesticides	1000.00
9.	Harvesting	5000.00
	Total	23950.00

About 25% reduction in expenditure is possible through group farming. Hence cost per hectare is Rs. 19160/-

Income from cultivating one hectare of paddy land as given in table 23.3 below.

Table 23.3 Income expected from cultivating one hectare of paddy

Sl.No	Item	Expected Income Rs.
1	6000 Kg paddy @ Rs.6	36000
2.	Hay	4000
	Total	40,000

Hence, it can be seen that it is possible to gain a profit of Rs. 20,840/- per hectare in four months by cultivating single crop of paddy. Hence a cultivator, who cultivates one hectare of paddy field under this scheme can earn a monthly income of Rs. 5000/-pm.

23.2. Coconut cultivation

A scheme of intensive coconut cultivation, aiming at increasing productivity and production of coconut, is proposed. (Production of 33 lakhs of coconut from the 780 hectares of land under coconut is what is aimed at). Community level and individual level interventions are required in this respect (Coconut gardens of 2.5 to 5 hectares area are included under community level schemes and small coconut gardens upto 2.5 hectares under individual schemes).

During the first phase, 4 wards of the panchayat viz. Mylode, Kottara, Chenkulam and Kozhikode are selected for implementing Intensive Coconut Cultivation Scheme based on the following criteria.

- ☞ Extent of land under coconut cultivation
- ☞ Irrigation facilities
- ☞ Extent of pest attack
- ☞ Role of the area as per development concept.

Map No. 23.2 depicts the wards selected for implementation of intensive coconut cultivation scheme.

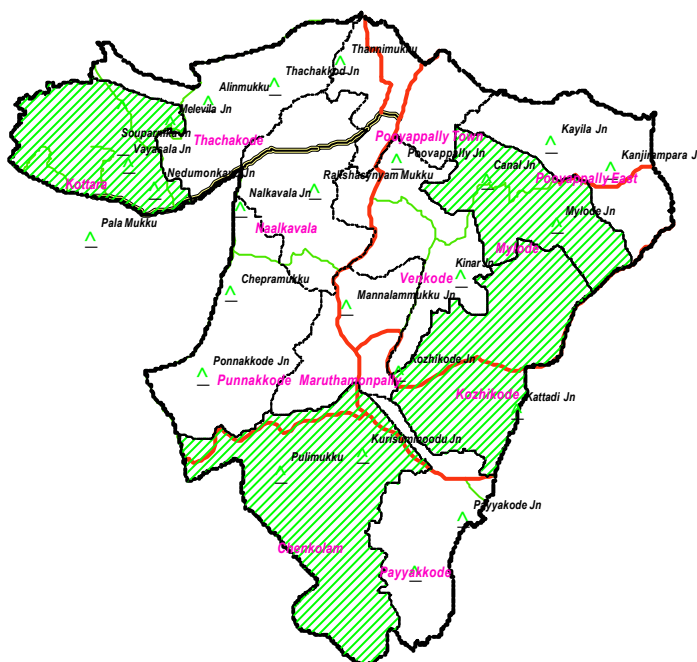


Figure 23.2 Wards selected for intensive coconut cultivation

23.2.1 Action Plan for Implementation of Intensive Coconut Cultivation Scheme

- ☞☞ Convening meetings of coconut cultivators of the selected wards.
- ☞☞ Locate the diseased and non productive coconut trees and remove them.
- ☞☞ Improve irrigation facilities through digging new wells and making use of existing pond.
- ☞☞ Supply saplings, Bio-fertiliser, chemical fertiliser and pesticides to cultivators.
- ☞☞ Promote intercropping
- ☞☞ Ensure timely application of fertilisers/pesticides

23.2.2. Following projects form part of the action plan.

1. Community irrigation projects

Community Irrigation Projects costing Rs. 1.5 lakhs to Rs. 3 lakhs each are proposed to be developed based on common source (wells/ponds) for 2.5-5 hectares of coconut gardens owned by different persons. The income per hectare will be doubled through providing irrigation and other scientific approaches of cultivation of coconut.

Present income (40 x 170 x 5) = Rs. 34000/- per hectare

Expected income due to doubling of

productivity - (80 x 170 x 5) = Rs. 68000/- per hectare.

2. Scheme of providing wells and pumpsets for coconut cultivators (Minimum extent of coconut garden shall be 20 cents)

Item	Total cost (Rs.)	Subsidy (Rs)
Wells	15000/-	7500/-
Pumpset	10000/-	5000/-
Cost of labour, Fertiliser, pesticides etc	100/-per tree	50/- per tree

3. Scheme of subsidising coconut cultivation (For those who own land below 20 cents)

It is proposed to provide a subsidy @ Rs. 50/- per coconut tree for adopting scientific approaches in cultivation.

23.2.4 Irrigation Facilities

The cost of providing community irrigation scheme for 2.5 hectares based on existing sources, is approximately Rs. 5,00,000/-. This includes cleaning charges for the source, pumpset, electrification, pipe lines etc.

Where existing sources are not available, cost of development of source (well/pond) also forms part of the total project cost. In such a case, the approximate project cost (for irrigating 5 hectares) will be as follows:

		<u>Amount.Rs.</u>
✍ Cost of digging of well/pond	-	50,000
✍ Pumpset, pipeline, electric connection	-	<u>4,50,000</u>
Total		<u>5,00,000</u>

In the case of individual schemes, the approximate project cost worked out is Rs. 25,000/- as follows.

✍ Cost of digging well	-	15,000
✍ Pumpset etc	-	<u>10,000</u>
Total Rs.	-	<u>25,000</u>

The coconut cultivation can be made profitable through such interventions.

23.3 Horticulture

An integrated scheme co-ordinated by the Department of Agriculture, for promoting horticulture, is proposed in the garden lands of Pooyappally and also as 3rd crop in the paddy fields.

The wards of Mylode, Thatchakkode and Maruthamonpally are selected for implementation of the scheme in the first phase. Figure 23.3 shows the wards selected for intensive horticulture development.

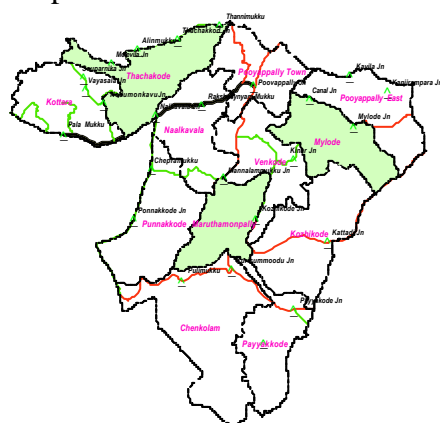


Figure 23.3 Ward selected for vegetable cultivation

All families, willing to earmark at least 5 cents of land for horticulture in these 3 wards are included under this scheme. Seeds will be supplied free of cost to them and fertilisers, pesticides etc at a subsidy of 50% of the cost. Thus the cost of cultivation per 5 cents worked out is as follows:

Item	Amount in Rs.		
	Cost Rs.	Subsidy	Net Cost
Seeds	25	25	0
Chemical Fertilizer	35	20	15
Bio fertilizer	150	75	25
Pesticides	40	20	20
Total	250	140	110

Income from 5 cents with estimated production of 50 kg priced at Rs. 8/Kg = Rs. 400/-

23.4. Infrastructural facilities

For successful implementation of the above mentioned schemes, it is also proposed to provide the following infrastructural facilities.

1. A centre for distribution of seeds and fertilisers at block level.
2. A modern rice mill (suitable for Basmathi rice also)
3. A centre for giving training to cultivators.
4. Facilities for organising agricultural fairs.
5. Following facilities at panchayat level are also proposed
 - a. Storage facilities
 - b. Marketing facilities
 - c. Storage space for keeping agricultural implements.
 - d. Labour bank.

At present S.I.R.D at Kottarakkara is available for imparting training. It is proposed to locate other regional level facilities in nearby Chathanoor panchayat. In I.D.D.P. for Kollam the proposals with respect to agricultural infrastructure in the region are located at Chathanoor, Neduvathoor, Kadakkal, Idamulakkal, Punalur, Ittiva etc. (figure 23.4).

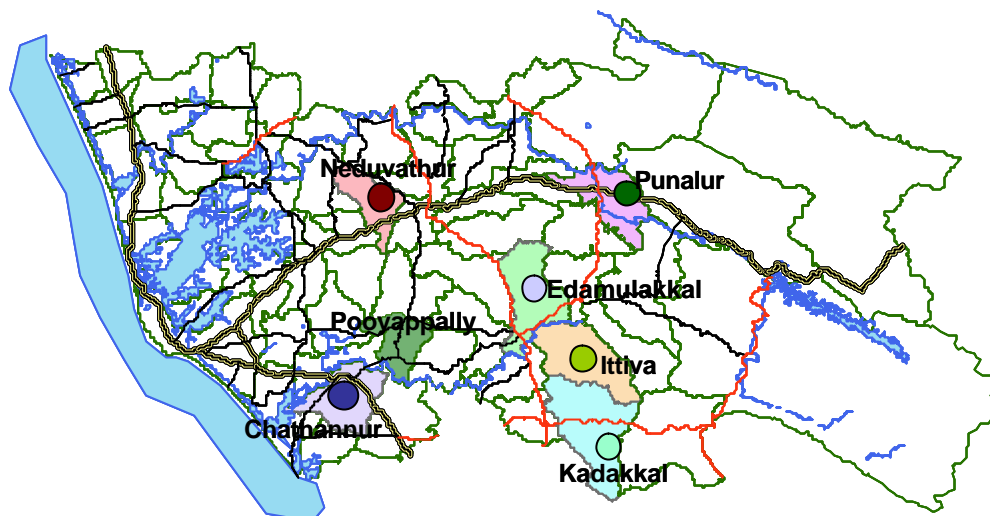


Figure 23.4 Integrated District Development Plan for Kollam
Projects proposed to be implemented in agricultural sector

23.5 Availability of Labourers

The major problems faced by paddy cultivators is non availability of agricultural labourers. The female agricultural labourers are opting for working in the cashew factories and hence acute shortage of labourers is felt during harvesting seasons.

Following suggestions are put forth with respect to ensuring availability of labourers:

1. Creation of a labour bank in consultation with cultivators and trade unions.
2. Establishing resource centres at ward level for timely supply of agricultural implements, seeds, fertilisers etc.

The service of labour bank may be extended to other sectors also, thus ensuring continuous availability of labour for the workers.

23.6 Mechanisation

Optimum level of mechanisation needs to be resorted to in the agricultural sector. Hence the following actions are proposed.

- ✍ Mechanisation of harvesting of the elas through joint effort of the grama panchayat and the Department of Agriculture.
- ✍ Make available mechanical coconut climbers for plugging coconut.

23.7 Other suggestions

Promoting pineapple as intercrop in rubber plantations.

- ✍ Promoting honeybee rearing in rubber plantations
- ✍ Increasing profitability of pepper through usage of more productive species
- ✍ Promoting cultivation of medicinal plants.

23.8 Estimated costs of implementation of various schemes

Table 23.4 below gives the rough cost estimate for various projects suggested under agriculturel sector.

Sl.No	Item	Estimated cost (Amount in Rs.)
1	Agro- development centre	1600000
2.	Irrigation schems for coconut cultivation	400000
3.	Re plantation scheme for coconut	500000
4.	Group farming for paddy	2011800
5.	Horticulturel development scheme	168000

CHAPTER 24

Water Conservation and Irrigation

Pooyappally panchayat is dependent mainly on its agriculture sector and thus the systems of water conservation and irrigation are very important here. In this chapter, proposals with respect to water conservation and irrigation of Pooyappally are discussed.

24.1. Water conservation proposals

Water conservation measures, suitable for the topography of Pooyappally panchayat constituting hills and valleys, may be adopted and implemented here. Measures to be taken include:

- * Construction of contour bunds.
- * Construction of protection walls to chiras and rivers.
- * Developing facilities for rain water harvesting at the areas of lowest contours of the panchayat.
- * Rain water harvesting pits in the dry cultivation areas.

Note: Since the watersheds are not confined within the Pooyappally grama panchayat, the water conservation proposals cant be limited within the boundary of the grama panchayat, but it has to extend to the nearby panchayats also.

24.1.1. Contour bunds

It is proposed to provide contour bunds at 30 m and 40 m contours. This will facilitate harvesting of rainwater falling in watershed C and will reduce soil erosion. The proposed alignment of contour bunds is depicted in Figure 24.1.

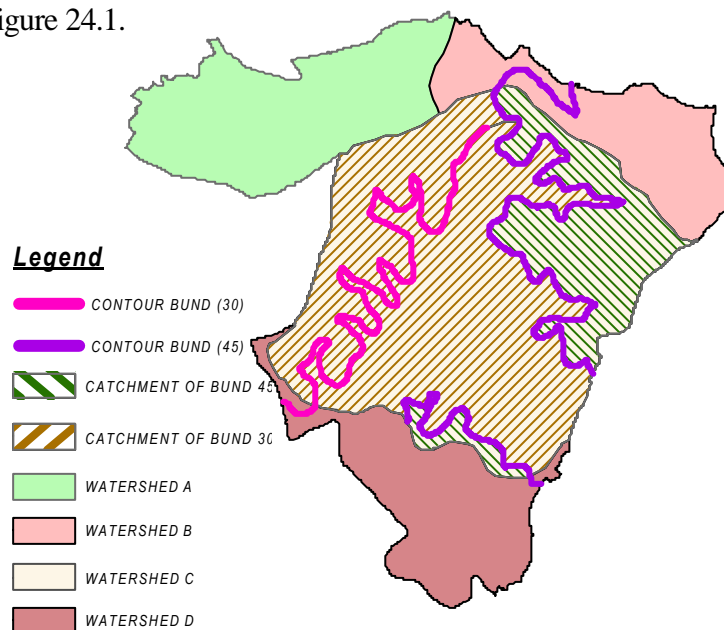


Figure 24.1 Water conservation through contour bunds

Through construction of these contour bunds, it is proposed to harvest rain water falling over an area of 1215 hectares and thus recharge about 40 million litres of ground water every year. The estimated cost of the project is about Rs. 11 lakhs. The details are given in figure 24.2 and table 24.1 below.

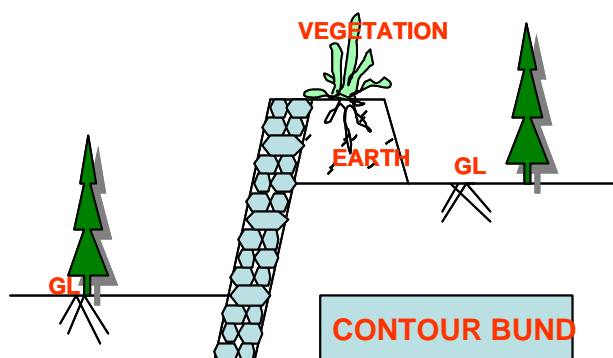


Figure 24.2 Contour bund - Cross section

Table 24.1. Contour bunds - Details

Sl.No.	Contour	Water shed	Length in Km.	Expenditure
1	30 m	Water shed C	12	660000
2	40 m	Water shed B	8	440000

24.1.2. Conservation of Ithikkara river

Ithikkara river flows along the western boundary of the Grama Panchayat. The length of the river flowing within the boundary of the Panchayat is 5.4 km. It is proposed to construct side walls to the river and restrict construction activities to a depth of 50 mt. from the boundary of the river. The alignment of

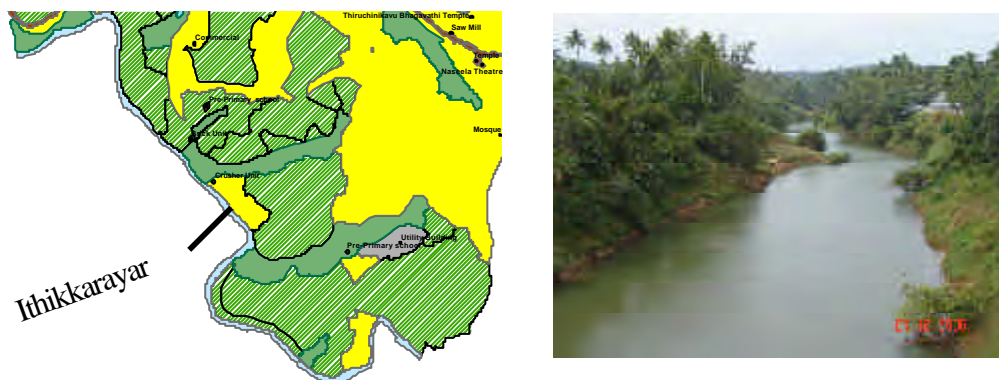
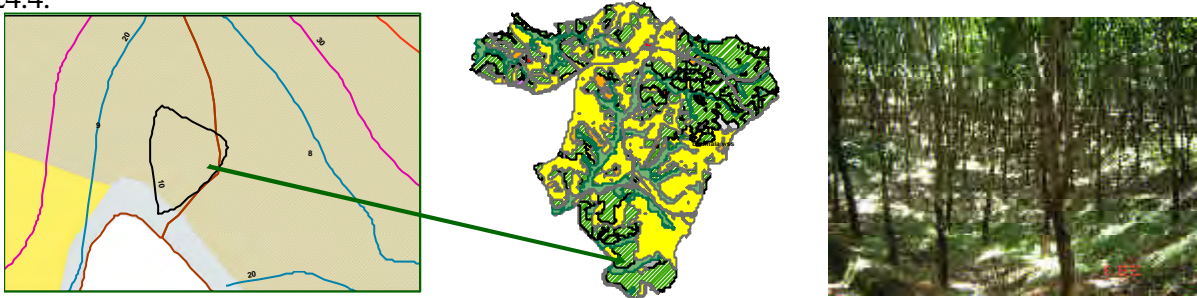


Figure 24.3 Ithikkara river

Ithikkara river along the panchayat boundary is shown in figure 24.3.

24.1.3. Artificial lake

An artificial lake for harvesting of rainwater is proposed, utilising the natural slope of the southern portions of the panchayat, at 10m contour. The site is near to the Ithikkara river. The extent of the lake is 20 cents. The water, stored in the artificial lake can be utilised for the irrigation purpose. The artificial lake can be utilized for community level irrigation in water shed D. The location of the artificial lake is shown in fig.24.4.



24.2. Irrigation *Figure 24.4 Location of artificial lake*

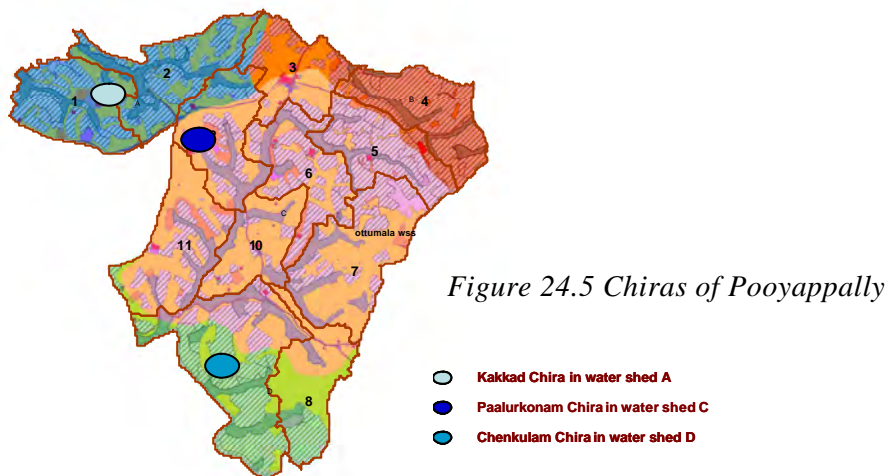


Figure 24.5 Chiras of Pooyappally

The following three chiras of Pooyappally, which are of perennial nature and that can be used as the “head ponds” for the nearby paddy fields can be developed as sources of water for irrigation as well as for domestic uses:

1. Kakkad chira in water shed A
2. Paloorkonam chira in water shed C.
3. Chenkulam chira in water shed D.

These chiras need to be protected by constructing side walls.

24.3. Financial requirements

Table 24.4 below shows the estimated costs for projects proposed with respect to water conservation and irrigation.

Table 24.4 Water conservation, irrigation sector - Projects for implementation

Sl.No.	Item of work	Estimated Costs
1	Construction of contour bunds	1100000
2	Construction of sidewalls to the Ithikkara river	1890000
3	Rain water harvesting	500000
4	Protection of sides of chiras by construction of side walls	900000

CHAPTER 25

Animal Husbandry Sector

Analysis of different sectors reveals the importance of animal husbandry sector including dairy development in Pooyappally. The plot sizes of the panchayat also support developing animal husbandry sector ancillary to agricultural sector.

25.1. Proposals in animal husbandry sector

Promoting dairy farming, goat rearing and poultry by way of suitable interventions is proposed aiming at developing animal husbandry sector as a major supporting sector in the economy of the panchayat.

25.1.1. Dairy farming

Developing small dairy farms of 10 cows each, run by self help groups of 5 cultivators from each ward is proposed in the panchayat. Land required for establishing such farms shall be obtained as beneficiary contribution. For mobilising balance funds, loan facilities through banks may be made available to these SHGS. Additional production of about 3000 litres of milk per day (90000 litres/month) can be achieved provided that 2 such farms are established in each ward. Assuming a production of 100 litres of milk per day, estimated monthly income of a farm unit is around Rs. 36000/-. Expenses towards fodder, cattle feeds etc. per month is estimated to be Rs. 21000/pm per unit. Even after deducting debt servicing charges from the balance amount of Rs. 15000/- the SHG can save a considerable amount every month. Additional income can be generated through sale of manure and calves.

Milk societies are to be formed in the panchayat, for collecting and distributing milk produced by the dairy units in the panchayat itself. These societies also need to be engaged in supply of fodder/other cattle feeds. Another aspect to be covered is introduction of innovative insurance schemes addressing treatment costs of livestock.

Advantages

- ☞ Doubling the production of milk.
- ☞ Monthly income generation of Rs. 36000/pm per unit
- ☞ Generation of new job opportunities
- ☞ Achieving self sufficiency in milk production.

25.1.2 Goat farming

The climate, development scenario etc of the State in general and that of Pooyappally in particular are favourable for promoting small scale goat farming. It is proposed to establish small units each of 10 sheep/goat, one in each ward. Cross-breed varieties may be chosen for rearing in such farms.

Financial Analysis

a.	Establishment cost/unit		
	Cost of sheep/goat	-	Rs. 50,000/-
	Construction of shed	-	Rs. 15,000/-
	Total		Rs. 65,000/-
b.	Income from each unit	-	Rs. 1,05,000/-
c.	Profit		Rs. 40,000/-

25.1.3. Layer farming

It is proposed to promote establishing small farms of 100 hens, initially at the rate of one unit per ward. Estimated establishment cost of the unit is Rs. 8,000/- each and monthly running cost per unit is Rs. 3,000/- approximately. A monthly income of Rs. 5,625/- is expected from each unit. Thus a profit of Rs.2,500/pm is expected. Annual profit per unit is Rs. 30,000/-. Annual increase in production of eggs achieved through this scheme is around 4,05,000 numbers. Self sufficiency in production of eggs can be achieved through such interventions.

25.2. Infrastructure facilities.

Following supportive infrastructural facilities are to be developed either at panchayat level or at block level.

- ☞ Training centres, laboratory, plant/poultry nurseries, cattle feed distribution centres etc at block level.
- ☞ Dispensaries, modern facilities for storage and distribution of produces, facilities for conducting trade fairs etc at panchayat level.

The Integrated District Development Plan for Kollam proposed various infrastructure facilities to be provided in the district in the animal husbandry sector. Those facilities proposed in Pooyappally and surrounding panchayats are shown in figure number 25.1.

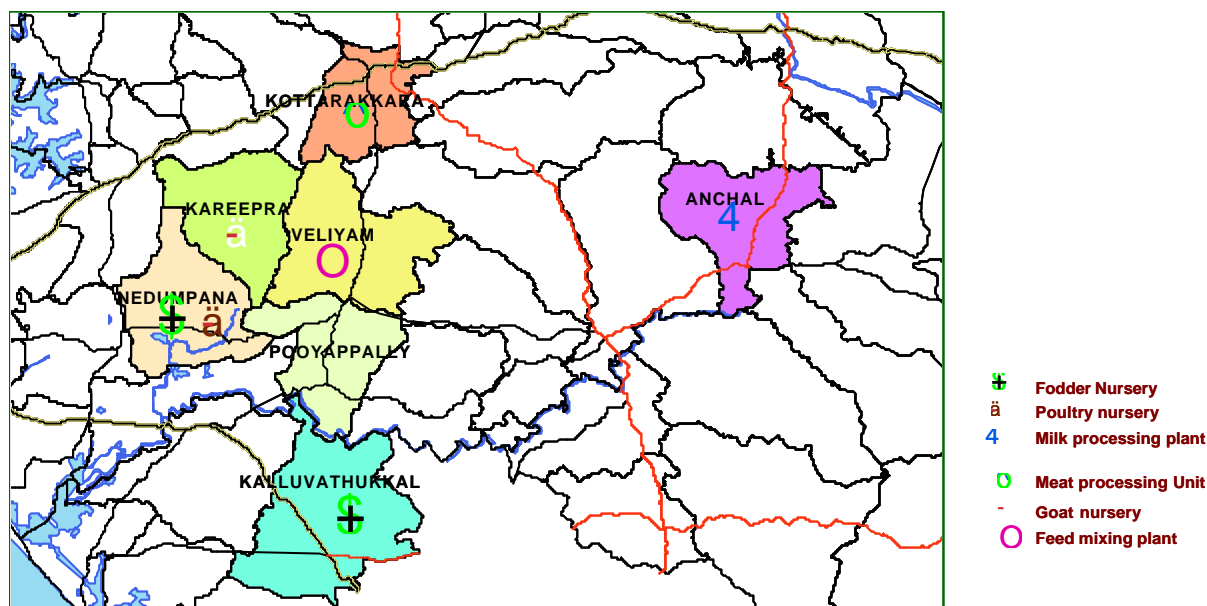


Figure 25.1 Infrastructure facilities in animal husbandry sector -
Integrated District Development Plan for Kollam

The insemination centre proposed in Pooyappally grama panchayat as per the Integrated District Development Plan is proposed to be established in the premises of the Pooyappally veterinary hospital.

25.3 Investment requirements

The anticipated expenditure for implementation of the first phase of the above proposals is as listed in table 25.1 below.

Table 25.1 Projects proposed in the animal husbandry sector

Sl.No.	Item	Expenditure (Amount in Rs.)
1	Dairy farms	9,00,000
2	Goat farms	3,90,000
3	Layer farms	48,000

CHAPTER 26

Industrial Sector

The development policy evolved for industrial sector is to retain existing industries and to promote industrial units for value addition of local resources of Pooyappally.

26.1 Suggested interventions

1. Improve the working conditions in the existing cashew factories and hollow brick units.
2. To promote safer practices in quarrying and to levy a reasonable charge from the quarry operators per each lorry load of rubble removed from the quarry. Income thus generated shall be earmarked exclusively for the welfare of quarry workers.
3. To rejuvenate the handloom units in the panchayat.
4. To make the mini industrial unit at Nalkavala functional through establishing value addition units for agricultural /animal husbandry produces of the area. Following units may be considered.
 - ☞ A modern rice mill
 - ☞ Coconut oil extraction unit
 - ☞ Other value addition units related to coconut including a handicraft unit.
 - ☞ Value addition units for horticultural produces of the locality.

Estimated cost of establishing some of the industrial units mentioned above.

Table 26.1 Plan/Project expenditure proposed in the industrial sector

Sl No.	Item	Estimated Cost (Rs.)
1	Modern rice mill	10,00,000
2	Value addition units for coconut/horticulture produces	10,00,000
3.	Handloom units	5,00,000

CHAPTER 27

Traffic and Transportation

This chapter discusses the proposals related to traffic and transportation sector for implementation in Pooyappally grama panchayat during the plan period .

The regional road network proposals in Integrated District Development Plan for Kollam which have immediate relevance to Pooyappally are shown in figure 27.1

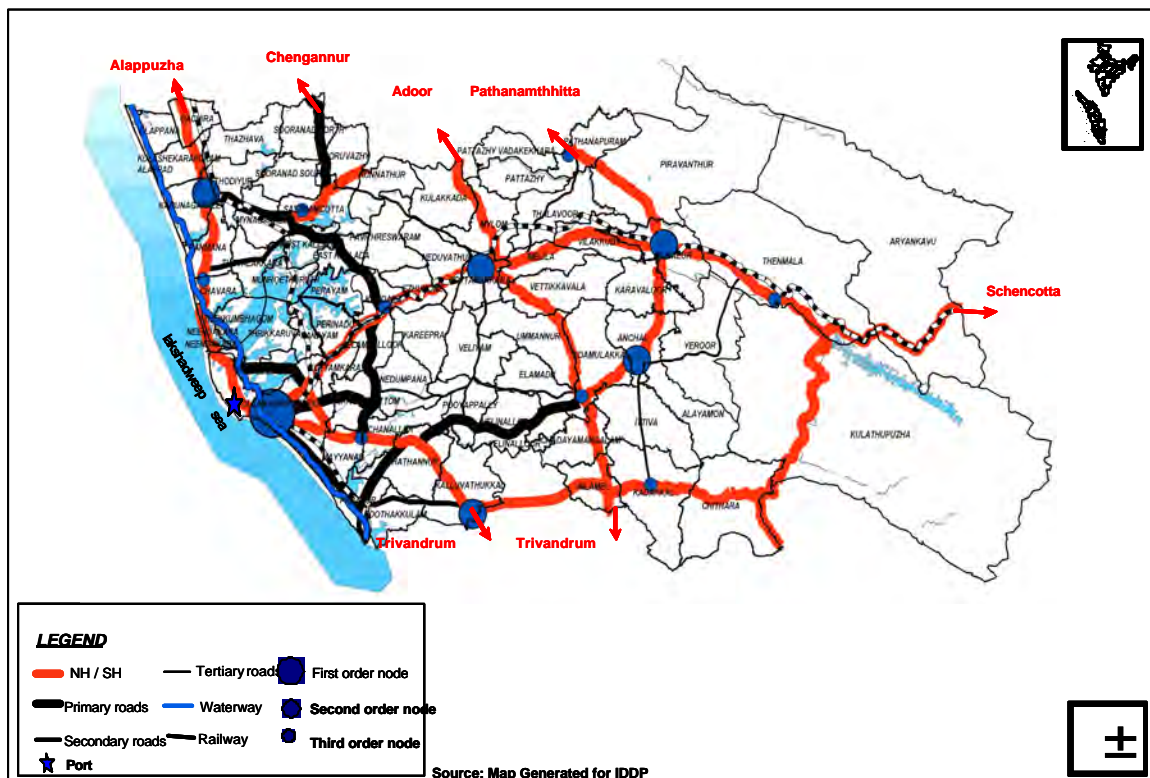


Figure 27.1 Regional network of roads - Integrated District Development Plan, Kollam

Proposed width of Kollam - Ayoor Road via Kurisummoodu is 21 mts. and those of Kannanalloor-Ayoor and Kottarakkara Oyur roads are 12 mts.

In the local road network of Pooyappally, the first order roads are proposed to be developed as local primary roads with a minimum width of 8 metres. The second order roads are proposed to be developed as local secondary roads with a minimum width of 5 metres. It is proposed to widen the link road connecting Mangalathu mukku and Chepra mukku as a local secondary road of 5 metre width .

The proposed road network of Pooyappally is given in figure 27.2

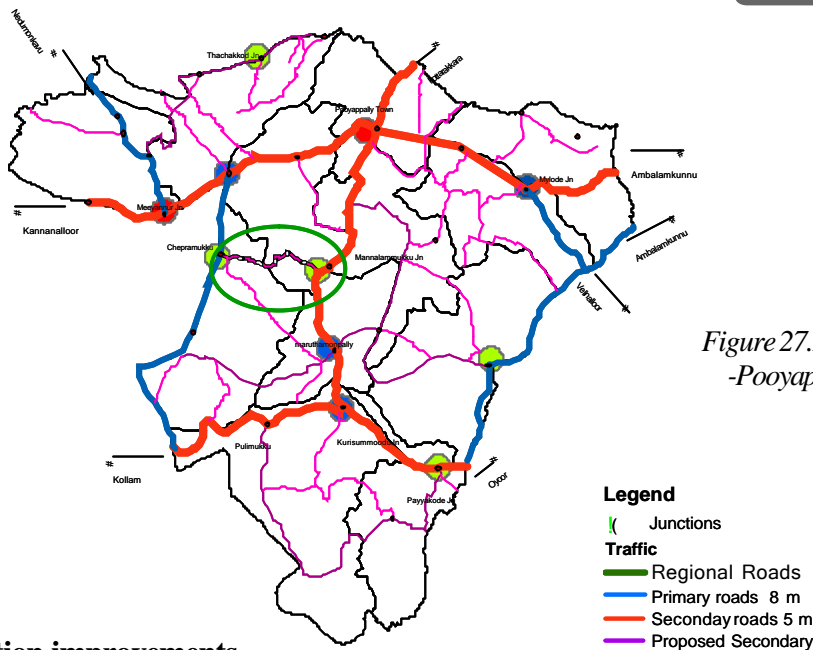


Figure 27.2 Proposed road network
-Pooyapally Grama Panchayat.

Junction improvements

Along with development of the regional and local road networks of the panchayat, following junctions are to be improved namely:

1. Meeyanoor junction
2. Pooyappally junction
3. Mylode junction
4. Maruthamonpally junction
5. Kurisumoodu junction

Financial aspects

The estimated fund requirements of the major proposals in traffic and transportation sector is given in table 27.1.

Table 27.1 Major proposals in transportation sector

Sl. No .	Item	Estimated Fund Requirements Rs.
1	Development of first order roads (local primary roads)	36,445,000
2.	Development of second order roads (local secondary roads)	25,800,000
3.	Junction improvements	1,000,000

CHAPTER 28

Water Supply

This chapter describes the proposals for solving the issue of drinking water scarcity being felt in certain localities of the panchayat, making use of the existing water sources of the panchayat.

28.1. Development suggestions

1. In order to solve the severe water scarcity in Chenkulam and Payyakkode wards, it is proposed to develop a water supply scheme with Ithikkara river as source. The proposed scheme will serve about 8096 people from 4 wards. The storage tank for the scheme (required capacity 15 lakhs litres) can be located at an elevated place in Chenkulam ward.
2. Another scheme, of 6 lakh litre capacity, is proposed for solving the water scarcity faced by Thatchakkode ward. This scheme is intended to serve a population of 2072.

The areas of coverage of these two schemes are shown in figure 28.1



Figure 28.1 Areas of coverage, proposed water supply schemes

28.2 Financial aspects

The estimated costs of implementation of these schemes are as given in table 28.1.

Table 28.1 Estimated cost of water supply schemes

Sl. No.	Item	Estimated Cost (Rs.)
1	Ithikkara water supply scheme	1500000
2	Thachakkode water supply scheme	6000000

CHAPTER 29

Education

The proposals for improvement of physical environment of existing educational institutions of the panchayat are detailed in this chapter.

29.1. Institutions requiring improvement of physical environment

Figure 29.1 locates the educational institutions that require one or other improvements related to their physical environment and table 29.1 lists the problems that are to be solved.

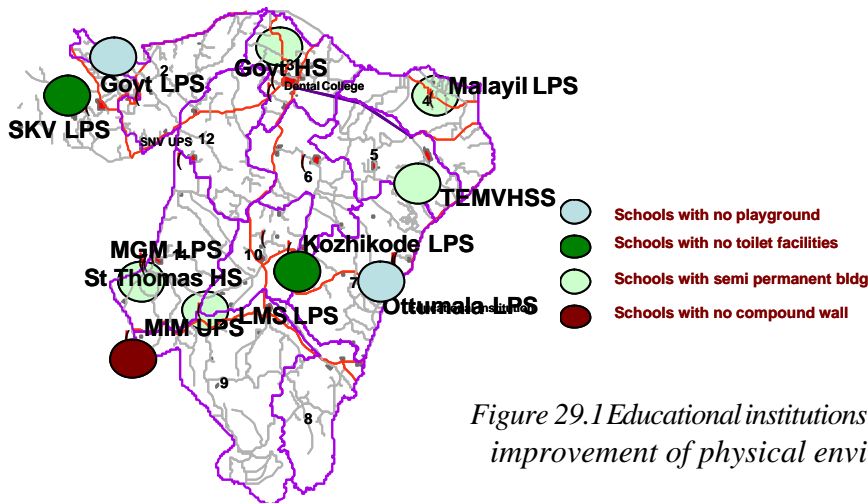


Figure 29.1 Educational institutions selected for improvement of physical environment

Table 29.1 Educational institutions selected for improvement

Sl. No.	Name	Problems
1	L.M.S.L.P.S, Chenkulam	Semi pucca school building
2.	Govt. H.S., Pooyapally	Semi pucca school building
3.	Malayil .L.P.S	Semi pucca school building
4.	Kozhikode L.P.S	The lack of sanitation facility
5.	Ottumal L.P.S	The lack of playground
6.	Saint.Thomas H.S, Punnakkode	Semi pucca school building
7.	G.L.P.S., Kottara	The lack of playground

The interventions required include:

- ☞ Renovation of deteriorated buildings.
- ☞ Providing sanitation facilities (separate facilities for boys and girls)
- ☞ Providing playgrounds
- ☞ Construction of compound walls

29.2 Financial requirements

The estimated cost of implementation of proposals under the sector of education is given in table 29.2 below.

Table 29.2 Estimated expenditure for implementation of proposals

Sl. No.	Item	Expenditure
1	Maintanance works of school buildings	400000
2	Providing sanitation facilities	50000
3	Providing playgrounds	100000
4	Construction of compound walls	50000

CHAPTER 30

Backward Housing Colonies

This chapter discusses the proposals for improving the living conditions in the housing colonies of the panchayat.

30.1. Problems requiring immediate attention in housing colonies

Figure 30.1 represents the location of housing colonies facing problems that need to be solved on priority basis.

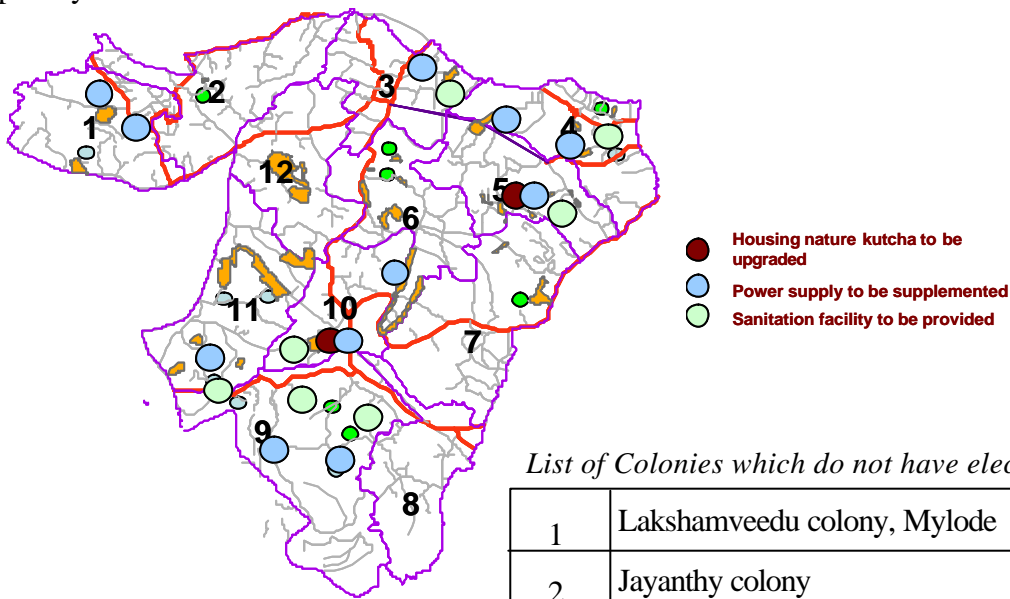


Figure 30.1 Location of backward housing colonies facing major problems

List of Colonies which do not have electricity connection

1	Lakshamvedu colony, Mylode
2	Jayanthi colony
3	Kappamam vila colony
4	Kayila colony
5	Konathu colony
6	Parandayil vedar colony
7	Lakshamvedu colony, Maruthamon pally
8	Kunnuvilakom colony
9	Poikavila colony
10	Nellipparambu vedar colony
11	Pachikkonam colony, Punnakkode
12	Kattachal colony, Punnakkode
13	Kottarulamukku colony

List of colonies having dilapidated housing conditions

1	Kunnuvilakam colony
2	Nellipparamba vedar colony

List of colonies without proper sanitation facilities

1	Mudiyoorkonam South colony
2	Mudiyoorkonam North colony
3	Nelliparamba Vedar colony
4	Kattachal colony, Padannakkode
5	Jayanthi colony
6	Konathu colony
7	Parandayil Vedar colony
8	Laksham veedu colony, Maruthamon pally
9	Kunnuvilakom colony

30.2 General suggestions

- ✍ Develop biogas plants in each colony as energy sources which support waste disposal also.
- ✍✍ Providing rain water harvesting facilities digging bore wells as source of drinking water.
- ✍✍ Providing sanitary latrines attached to each house connected to a common septic tank which will ensure a clean and hygienic environment in colonies.
- ✍✍ Take measures to electrify the unelectrified houses in the colonies and solve the problems of low voltage by providing transformers.

30.3 Proposals - colonywise

Table 30.1 list of the proposals to be implemented in each colony for betterment of the living conditions there:

Table 30.1 Backard housing colonies - measures to improve living conditions

Sl.No	Name of Colony	Proposals
1	Laksham veedu colony Mylode	Dilapidated condition of houses to be rectified, electricity connection to be given.
2	Jayanthi colony	Dilapidated condition of houses to be rectified, electricity connection to be given.
3	Kappumonvila colony	Dilapidated condition of houses to be rectified, electricity connection to be given.
4	Kayila colony	Electrification of unelectrified areas/houses
5	Konathu colony	Dilapidated condition of houses to be rectified, electricity connection to be given, sanitation facilities to be improved.
6	Parandayil vedar colony	Dilapidated condition of houses to be rectified, electricity connection to be given, sanitation facilities to be improved.
7	Laksham veedu colony, Maruthamonpally	Dilapidated condition of houses to be rectified, electricity connection to be given, sanitation facilities to be improved
8	Velamkonam colony	-
9	Mission vila colony	-
10	Venkode Ambedkar colony	Dilapidated condition of houses to be rectified
11	Kunnuvilakam colony	Dilapidated condition of houses to be rectified, electricity connection to be given, sanitation facilities to be improved.
12	Parandode colony	Dilapidated condition of houses to be rectified, electricity connection to be given.
13	Poikavila colony	Electrification of unelectrified areas/houses
14	Mudiyoorkonam South colony	Dilapidated condition of houses to be rectified, sanitation facilities to be improved.
15	Mudiyoorkonam North colony	Dilapidated condition of houses to be rectified, sanitation facilities to be improved.
16	Nellipparambu vedar colony	Dilapidated condition of houses to be rectified, electricity connection to be given, Sanitation facilities to be improved.
17	Oottumala colony	Dilapidated condition of houses to be rectified
18	Vachikkonam colony	Dilapidated condition of houses to be rectified, electricity connection to be given.
19	Jayanthi colony Punnakkode	Dilapidated condition of houses to be rectified

20	Kattachal colony Punnakkode	Dilapidated condition of houses to be rectified electricity connection to be given.
21	Nalkkavala Paloorkkonam colony	Dilapidated condition of houses to be rectified
22	Kottara Palamukku colony	Dilapidated condition of houses to be rectified, electricity connection to be given.
23	Laksham veedu colony, Kottara	Dilapidated condition of houses to be rectified, electricity connection to be given.

30.4. Financial Aspects

The estimated cost of implementation of the above cited projects

Table 30.2 Plan/Project expenditure proposed in the substandard colonies

Sl. No	Item	Estimated Cost (Rs)
1	Providing drinking water	500000
2	Providing sanitation facilities	2100000
3	Electrification of unelectrified areas/houses	53000
4	Renovation of dilapidated houses	1100000

CHAPTER 31

Other Infrastructural Facilities

This chapter discusses some of the major proposals for the improvement of certain other infrastructural facilities, which are found essential in improving the living conditions of the panchayat.

31.1. Proposals

1. Waste disposal project

An extent of 10 cents of land in Kozhikodu ward is set apart as waste management yard where 1000 kgs of waste have to be treated biologically daily. For operationalising this project, the solid waste collection and transportation facilities are to be developed at panchayat level.

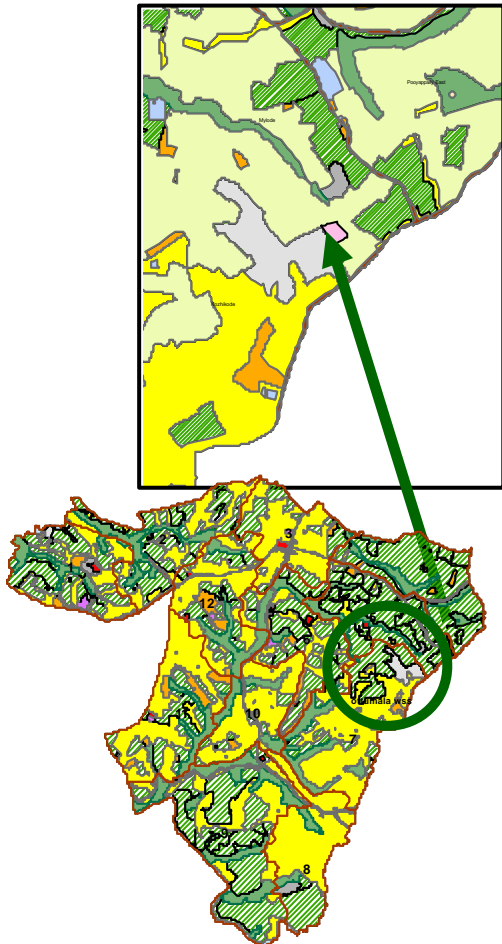


Figure 31.1 Project site for solid waste management

The energy produced from the treatment of the solid waste can be utilized for lighting the street lights etc. The location of the project site is shown in fig.31.1

2. Market.

It is proposed to renovate the existing panchayat market. Fish, meat and vegetable stalls are proposed to be arranged in the same premises. The location of the market and layout plan for its improvement is shown in figure 31.2.

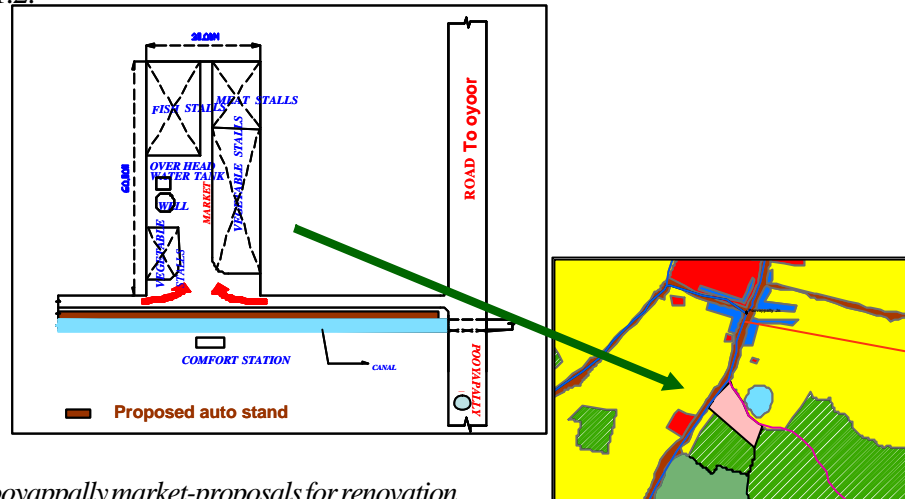


Figure 31.2 Pooyappally market-proposals for renovation

Table 31.1 Details of market

Sl.No.	Item	Area in sq.m
1	Fish stall	340
2	Meat stall	218
3	Vegetable stall	1162
4	Over head water tank	10
5	Well	18
	Total	1748

3. Community centre.

A community centre is proposed for improving the revenue income of the Panchayat. A park is also proposed in this area. A government homoeo clinic is yet another project proposed here. Land for the purpose, having an extent of half a hectare, is set apart in the 6th ward on the side of Maruthamon pally road. The location of the proposed community centre is shown in figure 31.3. An information centre, janasevana kendram, fair ground, shopping complex etc. are also proposed here.

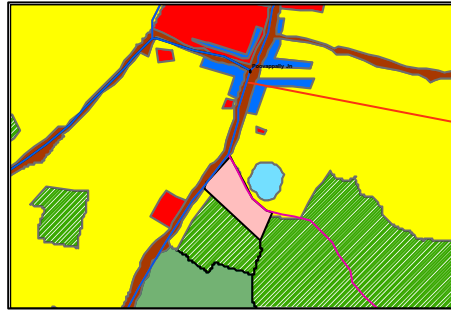


Figure 31.3 Location of proposed community centre

Govt. offices like Krishi Bhavan etc. can be located here. 50 cents of land behind the site of the community centre can be developed into a public park. The Pooyappally chira, which is located beside the site identified for public park can be cleaned and side protection walls built so that the effective open space available can be increased further.

One auditorium is also proposed on the side of the park for facilitating community gathering and also for improving the revenue of the local body.

The layout plan of the community centre is shown in figure 31.4 and the details are given in table

31.2

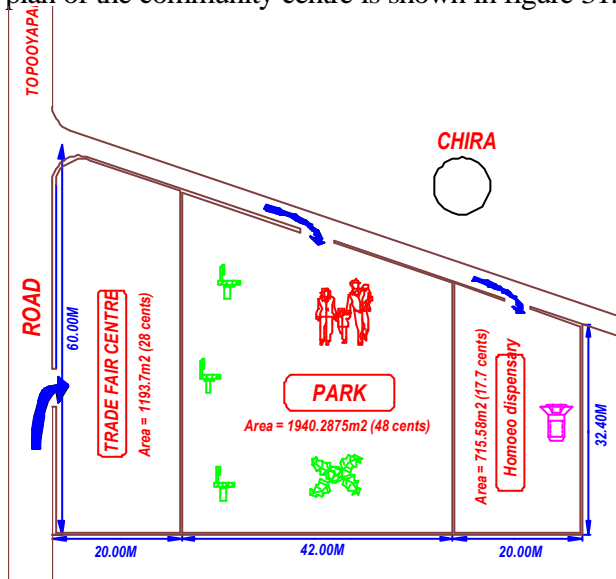


Figure 31.4 Park and community centre

Table 31.2 Park and community centre

Sl.No.	Proposal	Area in cents	Character
1	Trade centre	28	commerce
2	Park	48	open space
3	Homoeo dispensary	20	public and semi public
	Total	96	

4. Public cremation ground

There is no public cremation ground in the Panchayat. So a public cremation ground is proposed near the solid waste management site in the 7th ward in survey No. 34/216. 10 cents of land is set apart for this purpose. The location of the cremation ground is shown in figure 31.5.

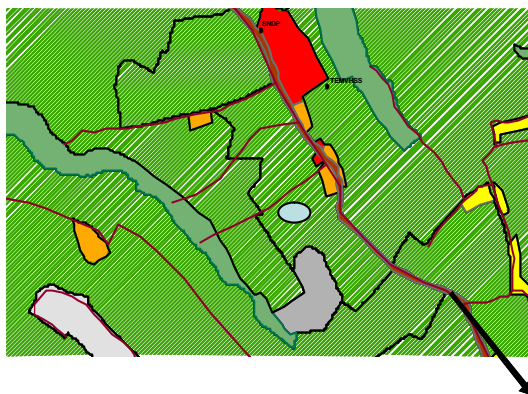


Figure 31.5 Location of public cremation ground

31.2. Financial aspects

The estimated requirement of funds for the projects under other infrastructural facilities are shown in Table 31.3.

Table 31.3 Estimated requirement of funds

Sl. No.	Item	Estimated fund requirements
1	Solid waste disposal unit	2110000
2	Renovation of Market	1000000
3	Community centre, park & homoeo hospital	6303000
4	Public cremation ground	200000

CHAPTER 32

Areas of Heritage Significance

A few sacred groves and temples are existing in Pooyappally Grama Panchayat. The Kulathoor kavu, Bhagavathy temple in Kottara ward and the Mahavishnu temple in Naalkavala ward which are the identified heritage structures of the panchayat. Considering their age and the importance in the social life of the people it is decided to protect these monuments.

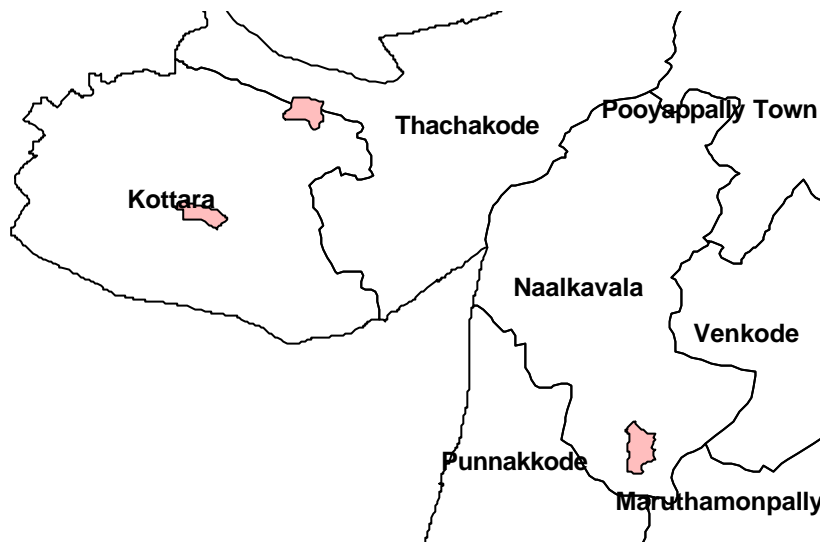


Figure 32.1 Heritage sites

1. The Kulathoorkavu in Kottara ward and the sacred grove attached to it have to be conserved .



Kulathoorkavu

2. Bhagavathy temple in Kottara ward also has to be conserved as such as a heritage area.



Bhagavathy temple

3. The Mahavishnu temple in Nalkkavala ward has to be conserved owing to its heritage importance.



Mahavishnu temple

Table 32.1. gives the details of the places of heritage significance.

Table 32.1 Places of heritage significance

Sl.No.	Name of heritage structure/premises	Ward	Extent of land	Character
1	Kulathurkavu temple	Kottara	180 cents	Sacred grove and temple
2	Bhagavathy temple	Kottara	50 cents	temple
3	Mahavishnu temple	Nalkkavala	70 cents	temple

PART-6

*FINANCIAL REQUIREMENTS,
DEVELOPMENT ADMINISTRATION
AND PHASING OF DEVELOPMENT.*

CHAPTER 33

Financial Requirements, Development Administration and Phasing of Development

In this chapter phasing of various development proposals, approximate cost of implementation and the department to be coordinated in the implementation of the proposals are discussed.

33.1 Financial requirements and development administration

The development proposals with respect to various sectors with their financial aspect for implementation and the departments/ agencies which are to be co-ordinated for the implementation of the development proposals are detailed in table 33.1

Table 33.1 Plan expenditure implementation department

Estimated expenditure for Implementation of various projects in rupees								
Sl.No	Project Proposals	Land acquisition	Land development	Construction	Infrastructural facilities	Others	Total in Rupees	Agencies involved
1	Agriculture sector							
1	Agriculture and allied activities development centre (Agricultural labour bank, community organisation, Agricultural implements, seeds, fertilisers etc)					1600000	1600000	Department of Agriculture and Grama panchayat. Block Panchayat and Jilla Panchayat
2	Coconut cultivation - irrigation facilities					400000	400000	Agriculture Department Grama Panchayat, cultivation N.G.O's
3	Cutting of diseased coconut and replanting					500000	500000	Agriculture Department Grama Panchayat cultivation N.G.O's
4	Paddy cultivation - Group farming approach					2011800	2011800	Agriculture Department Grama Panchayat individuals N.G.O's, Block Panchayat
5	Horticultural development					168000	168000	Agriculture Department Grama,Panchayat, cultivators, NGOS.Block Panchayat and Jilla Panchayat
	Sub Total						4679800	
II	Water conservation and irrigation							
1	Contour bund			1100000			1100000	Irrigation Department, Grama panchayat, Block Panchayat

								Irrigation Department, Grama panchayat, individuals NGO's, Block Panchayat and Jilla Panchayat
2	Ithikkara river- side wall construction			1890000			1890000	
3	Rain water harvesting			500000			500000	Irrigation Department, Grama panchayat, individuals, NGO's
4	Construction of side wall to the selected chiras			900000			900000	Irrigation Department, Grama panchayat, individuals, NGO's
	Sub Total						4390000	
III	Animal husbandry							
1	Dairy farms						900000	Animal Husbandry Department , Grama Panchayat, individuals, NGO's, Block Panchayat and Jilla Panchayat
2	Goat farms						390000	Animal Husbandry Department, Grama Panchayat, individuals, NGO's
3	Layer farms						48000	Animal Husbandry Department, Grama Panchayat, individuals, NGO's
	Sub Total						1338000	
IV	Industrial sector							
1	Rice mill					1000000	1000000	Grama panchayat,private enterprenuers
2	Value addition/ processing unit for coconut and horticultural produces					1000000	1000000	Grama panchayat,private enterprenuers
3	Development of handloom units					500000	500000	Grama panchayat,private enterprenuers
	Sub Total						2500000	
V	Transportation sector							
1	Development of first order road	25740000	858000	9847000			36445000	PWD Roads Division, Grama Panchayat. Jilla Panchayat
2	Development of second order roads	11610000	387000	13803000			25800000	PWD Roads division, Grama Panchayat.Jilla Panchayat
3	Improvement of junctions		1000000				1000000	Grama Panchayat.Jilla Panchayat
	Sub Total						63245000	
VI	Drinking water							

1	Ithikkara water supply scheme					1500000	1500000	Grama Panchayat, Block Panchayat
2	Thachode water supply scheme					600000	60000	Grama Panchayat
	Total						2100000	
VII	Education							
1	Maintanance of school buildings			400000			400000	Grama, Block/Jilla Panchayat
2	Sanitation facilities			50000			50000	Grama, Block/Jilla Panchayat
3	Playgrounds		100000				100000	Grama, Block/Jilla Panchayat
4	Compound wall construction			50000			50000	Grama, Block/Jilla Panchayat
	Sub Total						600000	
VIII	Housing sector							
1	Provision of drinking water to the backward colonies					500000	500000	Scheduled Tribe Development Department, Grama Panchayat.
2	Provision of sanitation facility to the backward housing colonies			2100000			2100000	Scheduled Tribe Development Department, Grama Panchayat.
3	Electrification of backward housing colonies					53000	53000	Scheduled Caste/ Scheduled Tribe Development Department, Grama Panchayat.
4	Renovation of Kutcha houses in backward colonies			1100000			1100000	Scheduled Caste/ Scheduled Tribe Development Department, Grama Panchayat.
	Sub Total						3753000	
IX	Infrastructure sector							
1	Solid waste disposal unit	100000	10000	1000000	1000000		2110000	Grama Panchayat
2	Renovation of market			1000000			1000000	Grama Panchayat
3	Community center, Park& Homoeo Hospital	3690000	123000	2550000			6363000	Grama Panchayat, BlockPanchayat, Jilla Panchayat
4	Public cremation ground	100000	100000				200000	Grama Panchayat
	Total						9673000	

33.2 Phasing of Development Proposals

The development proposals envisaged in the Development Plan is for a perspective period of 20 years. But the development Projects which are to be implemented in a phased manner are given in Table 33.2

SI No	Development proposals	Phases			
		First 5 years	5th to 10th year	10th to 15th years	15th to 20 th years
I	Agricultural sector				
	Agriculture and allied activities development centre (Agricultural labour bank, community organisation, agricultural implements, seeds, fertilisers etc)	Completion of project			
2	Coconut cultivation - irrigation facilities	Completion of project in 3 wards	Completion of projects in 3 wards	Completion of projects in 3 wards	Completion of projects in 3 wards
3	Cutting of diseased coconut and replanting	Completion of projects in 3 wards	Completion of projects in 3 wards	Completion of projects in 3 wards	Completion of projects in 3 wards
4	Paddy cultivation -Group farming approach	Completion of project in 3 wards	Completion of project in 3 wards	Completion of projects in 3 wards	Completion of 4 chain of paddy fields
5	Horticultural development	Completion of project in 4 wards	Completion of projects in 4 wards	Completion of projects in 4 wards	
II	Water conservation and irrigation				
1	Contour bund	Preliminary works	Continuation of the scheme	Completion	
2	Ithikkara river- side wall construction	Preliminary works	Continuation of the scheme	Completion	
3	Rain water harvesting	Preliminary works	Continuation of the scheme	Completion	
4	Construction of side wall to the selected chiras	Completion of one priority project	Completion of one priority project	Completion of one priority project	
III	Animal husbandry				
1	Diary farms	Completion of the projects			

2	Goat farms	Completion of the projects			
3	Layer farms	Completion of the projects			
IV	Industrial Sector				
1	Rice mill	Preliminary works	Completion		
2	Value addition/ processing unit for coconut and horticultural produces	Preliminary works	Completion		
3	Development of handloom units	Completion			
V	Transportation sector				
1	Development of first order roads	Preliminary works	Continutation of the scheme	Completion	
2	Development of second order roads	Preliminary works	Continutation of the scheme	Completion	
3	Improvement of junctions	Preliminary works	Spillover of plan scheme	Completion of first phase	Completion of second phase
VI	Drinking water				
1	Ithikkara water supply scheme	Preliminary works	Spillover of scheme	Completion of the Project	
2	Thachode water supply scheme	Preliminary works	Spillover of scheme	Completion of the Project	
VII	Education				
1	Maintanance of school buildings	Priliminary works	Continuation of the work and completion		
2	Sanitation facilities	Completion of the project			
3	Playground		Completion of the projects		
4	Compound wall construction	Completion of the projects			
VIII	Housing sector				
1	Provision of drinking water to the backward colonies	Completion of the project			

2	Provision of sanitation facility to the backward housing colonies	Completion of the project			
3	Electrification of backward housing colonies	Completion of the project			
4	Renovation of Kutcha houses in backward colonies	Completion of the project			
IX	Infrastructure Sector				
1	Solid waste disposal unit	Preliminary works	Completion of the project		
2	Renovation of the market	Completion of the projects			
3	Community center, Park& Homoeo Hospital	Preliminary works	Community centre and hospital	Developm ent of Park	
4	Public cremation ground	Preliminary works	Completion of the project		

Zoning Regulations

LOCAL DEVELOPMENT PLAN FOR POOYAPPALLY GRAMA PANCHAYAT

ZONING REGULATIONS

1. All future developments in Pooyappally Grama Panchayat area shall be in conformity with the provisions of this Development Plan.
2. For the implementation and enforcement of the proposals envisaged in this Development Plan, areas have been zoned under various categories such as *agricultural, residential, commercial, public and semi-public, mixed use, paddy fields, water bodies, etc.* Details regarding the nature of uses '*permitted*', uses '*restricted*' and uses '*prohibited*' in each zone are given in the accompanying sheets. These regulations shall be enforced in conjunction with other specific provisions if any mentioned elsewhere in the scheme.

Uses '*permitted*' in a zone cover the uses that can be normally accommodated in the relevant zone.

In some cases it may be possible to permit some other uses also, which are not likely to affect the quality and environment in a zone specified for a particular use. Such cases have to be individually studied based on their performance characteristics and special locational factors. Such cases which come under this category are classified as "Uses Restricted". Restricted – 1 category deals with the uses that shall be restricted by the executive authority with the concurrence of the Town Planner of the District office of the Department of Town and Country Planning. Restricted – 2 category deals with the uses that shall be restricted by the executive authority with the concurrence of the Chief Town Planner of the Department of Town and Country Planning.

Demand may arise in future for accommodating certain community facilities or a major use premise that can create positive impacts in the development of the locality, but not specified in a use zone in the present scenario. Such uses are also classified as "Uses Restricted". Land intensive activities proposed in a parcel of land having an extent of 2 acres minimum or industrial units engaging not less than 20 workers are included under this category provided that the site has an access width of 12 m minimum from first order road. They may be accommodated in residential and agricultural zones with the prior approval of a committee constituted at district level with the DPC Chairperson as chairman, the chairperson of the public works standing committee of the Jilla Panchayat and the Deputy Director of Panchayats as members. The District Town Planner shall be the convener of the committee.

"Used prohibited" enlists the various objectionable uses in each zone which shall not be permitted under normal circumstances.

3. Zoning regulations are not intended to prohibit existing uses that have been lawfully established prior to the enforcement of these regulations, unless otherwise specifically mentioned in this scheme. They are essentially intended to help the competent authority in decisions regarding granting or refusal of permits for land development and construction of buildings/ structures.
4. If any portion of a zone is put to a "*Use Prohibited*" as stated in Para 2, before the sanctioning of the scheme, such use shall be termed as *non-conforming use*. A non-conforming use may be allowed to continue in its existing location and essential repairs and maintenance for the structure may be permitted by the executive authority, provided that the said use create no adverse environmental influence in the zone. Addition, alteration or reconstruction, if found necessary as part of any mitigation measures may be permitted for such uses by the executive authority with the concurrence of the District Town Planner.
5. Agricultural and allied uses, existing areas and structures of archaeological importance, and religious uses may be permitted to continue in all the zones and shall not constitute non conforming uses.
6. Regulation of constructions and land developments on the sides of new roads / roads proposed for widening as per the scheme shall be governed by the distance from the centerline of the road, unless otherwise specified.

Para No.	Uses permitted	Uses restricted-1	Uses restricted-2	Uses prohibited
7	Residential Use Zone			
	All residences, Orhanages/Old Age Homes /Dharmasala	Transmission towers, Telecommunication towers and Wireless Stations	Fuel filling stations	Any other uses not specified
	Convenience shops, Clinics (Outpatient), Godowns/Warehouses/Storage upto 100 sq m non hazardous.			
	Cottage Industries			
	Service Industries of non-nuisance nature (See Annexure 1) engaging not more than 6 workers with out power or 3 workers with power limited to 5 HP			
	Local/State/Central Govt offices serving the local community, Day Care and Creche, Nursery/Kinder Garten, Primary/Upper Primary Schools, Library and Reading Rooms, Tot Lots/Parks/Play Grounds, Social welfare centres, places of worship			
	Public Utility Areas & Buildings essentially serving the needs of the local community.			
	Plant Nursery, Pump House,Wells and Irrigation Ponds, Dairy/Poultry farm, Piggery farm, smoke house attached to houses, Fish farms, seed farms.			
	The following uses are permitted where the access road has a width of 5m minimum			
	Shops/Proffessional offices/Commercial establishments/Banking and financial institutions/Restaurants- floor area upto 200 sqm, Automobile workshops for 2 / 3 wheelers, Godowns/Warehouses/Storage floor area upto 500 sq m - non hazardous, IT/Software units, Community halls, Outdoor games stadium, Fair ground, Open air theatre.			Any other uses not specified
	The following uses are permitted where the access road has a width of 7m minimum			
	Auditorium / Wedding Halls			
8	Commercial Use Zone			
8.1	All shops including shopping complexes, Professional offices, Commercial Offices & Establishments, Banking and financial institutions, restaurants, hotels and markets	Educational institutions	Fuel filling stations,weigh bridges	Any other uses not specified
	Godowns/Warehouse/Storage of non hazardous materials, stacking yards,			
	Residences - floor area upto 300 sq m, Ashram/Mutt, Guest Houses, Lodges, Hostels			

Para No.	Uses permitted	Uses restricted-1	Uses restricted-2	Uses prohibited
	Parks and play grounds and open spaces			
	Vocational training institutes, expansion of existing educational institutions			
	Library and Reading Rooms, Social Welfare centers, Movie Halls, Auditorium/Wedding Halls/Community halls			
	Cottage Industries, Automobile workshops, Automobile Service Stations, Cold storage, Service industries engaging not more than 19 workers with out power or 9 workers with power limited to 30 HP, Saw Mills, Printing Press.			
	Marble and Granite Storage/Cutting centres			
	Local/State/Central Govt. or Public Sector offices			
	Transmission towers, Telecommunication towers and Wireless Station			
	Indoor Games Stadium, Fair ground, open air theatre, exhibition centers and art gallery			
	Public Utility Areas & Buildings			
	Places of Worship			
	Clinics (Outpatient), Diagnostic Centres and Hospitals			
	Auto/Taxi/ Jeep/ Lorry stand			
	Plant Nursery, Dairy farm, Poultry farm			
9	Mixed Use Zone			
	Residences, Orhanages, Old Age Homes, Dharmasala	Guest houses, Hostels, Boarding Houses, Night Shelters, hotels	Weigh Bridge, Fuel Filling Stations	Any other use not specified
	Shops, Professional Offices, Commercial Offices/Estabishments, Banking and Financial institutions, Restaurants/Canteens	Automobile workshops for 2/ 3 Wheelers		
	Places of Worship	Secondary / Higher Secondary Schools		
	Clinics, Diagnostic Centres and Hospitals up to 20 beds	Stacking yard, Other Non nuisance character service industries ,Transmission towers, and wireless stations .		
	Public Utility Areas & Buildings			

Para No.	Uses permitted	Uses restricted-1	Uses restricted-2	Uses prohibited
	Movie Halls, Auditorium/Wedding Halls/ Community halls, social and cultural establishments.			
	Auto/Taxi/Jeep/Lorry Stand			
	Godowns/Warehouses/Storage floor area upto 500 sq m - non hazardous			
	Cottage Industries, Automobile workshops for 2/3 wheelers,Service Industries of non-nuisance Nature(See Annexure 1) engaging not more than 6 workers with out power or 3 workers with power limited to 5 HP, Marble and Granite Storage/Cutting centres.			
	Local/State/Central Govt. or Public Sector offices			
	Tot lots, Day Care and Creche, Nursery/ Kinder Garten, Primary and Upper Primary Schools.			
	Indoor Stadium, Fair ground, Open air theatre.			
	Plant Nursery, Pump House, Wells and Irrigation Ponds,diary farm, paultry farm			
10	Agricultural Use Zone			
	Agriculture/animal husbandry including allied activities such as Dairy farms, Poultry farms, sheds for keeping animals, Pump houses, wells and irrigation ponds, plant nurseries, green houses etc.	Service Industries of non-nuisance nature (See Annexure 1) engaging not more than 6 workers with out power or 3 workers with power limited to 5 HP	Fuel filling stations	Any other use not specified
	Residences- floor area upto 300 sq m .	Automobile workshops for 2/ 3 Wheelers,	Saw mills, timber yard, Stacking Yard	
	Clinics (Outpatient)	Transmission towers, Telecommunication towers and Wireless Station	Outdoor stadium	
	Convenience Shops - floor area upto 100 sq m, Professional Offices.	Places of Worship,Social welfare centres	Cremation ground.	
	Godowns/Warehouses/Storage - non hazardous - floor area upto 100 sq m			
	Cottage Industries,Cashew factories and other Agro industries			

Para No.	Uses permitted	Uses restricted-1	Uses restricted-2	Uses prohibited
	Day Care and Creche, Nursery/Kinder Garten/Primary & Upper Primary schools			
	Library and Reading Rooms			
	Tot Lots/Parks/Play Grounds			
11	Water bodies			
	Side protection walls, Pump House/Wells			Any other use not specified
12	Paddy Fields			
	Paddy Cultivation	Agriculture/ Horticulture/Fodder cultivation, Fish Farms/Seed Farms/Pump House/Wells and Irrigation Ponds with out any building construction.	Minor Public Utility areas & buildings which will not affect the character of the area	Any other use not specified
13	Public and semi public use zone			
	Construction activities that form an integral part of the existing public use only are permitted.			Any other use not specified
14	Heritage sites			
	Essential maintainance and repairs only shall be permitted in the case of heritage buildings. Scared groves and kavus shall be conserved.			Any other use not specified
15	Special Zones			
	In sites earmarked for specific projects land development/building construction that form an integral part of the project only are permitted.			Any other use not specified
General Notes:				
1	Subject to zoning regulations of the respective use zones, more than one uses may be combined in a building, provided that the total floor area of such a building shall not exceed the maximum floor area permitted for any of such use premises in that use zone.			
2	For the purpose of these regulations, floor area means the total floor area of the building on all floors.			
3	Land to a depth of 50 m on either sides of the proposed boundary of the following roads viz. Kollam -Ayoor road via Kurisummoodu Jn., Kollam-Ayoor road via Pooyappally and Kottarakkara -Oyoor Road, having width of 12 m and 21 m in residential and agricultural zones are deemed to be under Mixed use Zone.			