

SOCIAL IMPACT ASSESSMENT STUDY

DRAFT REPORT

LAND ACQUISITION FOR M.C. ROAD WIDENING, MUVATTUPUZHA IN ERNAKULAM DISTRICT



Entrusted by District administration, Ernakulam

REQUIRING BODY



**Kerala Public Works
Department, Roads
Division, Muvattupuzha**

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List of Abbreviations

APL	Above Poverty Line
BA	Bachelor of Arts
BPL	Below Poverty Line
DPR	Detailed Project Report
DSS	Diploma in Social Services
FGD	Focus Group Discussion
GDP	Gross Domestic Product
GO	Government Order
GoK	Government of Kerala
INR	Indian Rupee
IRC	Indian Roads Congress
KM	Kilo Meters
LA	Land Acquisition
LC	Level Cross
M2	Square Meter
MA	Master of Arts
MSW	Master of Social Work
OBC	Other Backward Communities
PhD	Doctor of Philosophy
PRICE	Project Information and Cost Estimation
PWD	Public Works Department
RD	Revenue Department
RFCTLAR&R Act	The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013
Rs	Rupees
SC	Scheduled Caste
SIA	Social Impact Assessment
UG	Under-Graduation
UP	Upper Primary

Chapter 1

Executive Summary

1.1 Project and public purpose

Muvattupuzha is a prominent old town in the midlands directly to the east of Kochi in Ernakulam district, Kerala. It is situated at around 36 km from downtown Kochi. The town is a growing urban centre in central Kerala. The town is also popular as the starting point of Muvattupuzha river which happens by the merging of three rivers – namely Thodupuzhayar (Thodupuzha river), Kaliyar (Kali river) and Kothayar (Kothamangalam river) – to form Muvattupuzhayaar. Muvattupuzha was part of the Vadakkumkoor Kingdom until it was captured by the Travancore Kingdom. St. Thomas the Apostle of Jesus Christ who introduced Christianity to India, is believed to have visited this region. The Marth Mariam Syro-Malabar Catholic Church of Arakuzha has a recorded history of over 1000 years, making it one of the oldest Syrian churches in Kerala.

The old Muvattupuzha bridge built over the Muvattupuzha river was the first concrete bridge in Asia. It was completed in 1914. The bridge was built in Muvattupuzha under the supervision of the British engineer W.H. Emrald. This bridge is across the Muvattupuzha river connecting Nehru Park and Kacherithazham. The town consists of two regions separated by the Muvattupuzha bridge. Kacherithazham is the main centre of the town to the east of the Muvattupuzha bridge. Nehru Park, Velloorkunnam and Vazhappilly are to the north of the bridge. TB Junction and P.O Junction lies east of the bridge. Kavumkara is an old market which lies to the northeast of the town after the bridge on the Muvattupuzha–Kothamangalam road.

The nearby main towns are Kothamangalam, Thodupuzha, Piravom, Koothattukulam, Perumbavoor. There are many small suburban towns close to Muvattupuzha like Kolenchery, Vazhakulam, Kalloorkkad, Pothaniced, Nellikuzhy, Nellad etc.

Muvattupuzha has a rich cultural tradition. Margamkali and martial arts like Parichamuttukali, are popular among the Syrian Christian community. Shadkala Govinda Marar was born on the banks of the Muvattupuzha river at Ramamangalam. The nearest major railway station is Aluva railway station which is 36 km from the city. Thrippunithura railway station is 31 km. The Cochin International Airport at Nedumbassery is 34 km away from Muvattupuzha town.

Muvattupuzha is well connected to the main cities of the state via road. Muvattupuzha is in the center of the midlands region starting from the eastern borders of Kochi city at Kakkanad spreading all the way to Thodupuzha and Vannappuram. Unfortunately, railways has not yet reached Muvattupuzha. But, the new Sabari railway project will ensure railway connectivity.

Muvattupuzha town is a major junction for highways passing through the town. Arguably, Muvattupuzha is the biggest junction in Kerala as far as number of highways and roads joining the town. There are about 9 highways and major roads which join at Muvattupuzha.

Major highways are:

- NH 85 (previously NH 49) Kochi-Dhanushkodi passing through Munnar.
- MC Road towards Angamaly connects the town towards northern part of the state such as Thrissur, Palakkad and Kozhikode

- MC Road towards Thiruvananthapuram passing through many important towns in Central Travancore like Kottayam, Changanassery.
- Punaloor-Muvattupuzha PM road passing through low ranges (foothills of western ghats) towns like Thodupuzha, Pala, Ponkunnam
- Muvattupuzha-Vaikom-Alappuzha highway through Piravom, Peruva, Thalayolaparambu.
- Muvattupuzha-Theni SH 43 state highway passing through Chalikkadavu, Randattinkara, Kalloorkkad, Udumbannoor.
- Palarivattom-Thekkadi SH 41 passing through Kakkanad, Pattimattom, Muvattupuzha, Pandappilly, Arikkuzha, Thodupuzha, Moolamattom, Vagamon
- Muvattupuzha-Kaliyar road passing through Kakkadassery, Pothanicad, Paingottoor, Vannappuram

Muvattupuzha is a part of Central Kerala. It lies between Angamaly and Kottayam on the Main Central Road which runs along the length of the old Travancore, from Thiruvananthapuram to Angamaly. The first and second longest state highways of Kerala, Main Central Road (Angamaly - Thiruvananthapuram / SH-01 / 240 km) and Main Eastern Highway (Muvattupuzha-Punalur / SH-08 / 154 km), meet here. The Kochi-Madurai NH 49 passes through Muvattupuzha.

Since, Muvattupuzha town is a major junction for highways and also there is lot of schools, colleges and business units contribute to the increase in the traffic jam. The town is congested.

1.2 Location

Muvattupuzha Municipality is in Ernakulam district. The M.C road passes through Vellorkkunnam and Marady villages in the town. The project is being

planned in Ernakulam district in Muvattupuzha taluk of Marady and Vellorkkunnam villages.

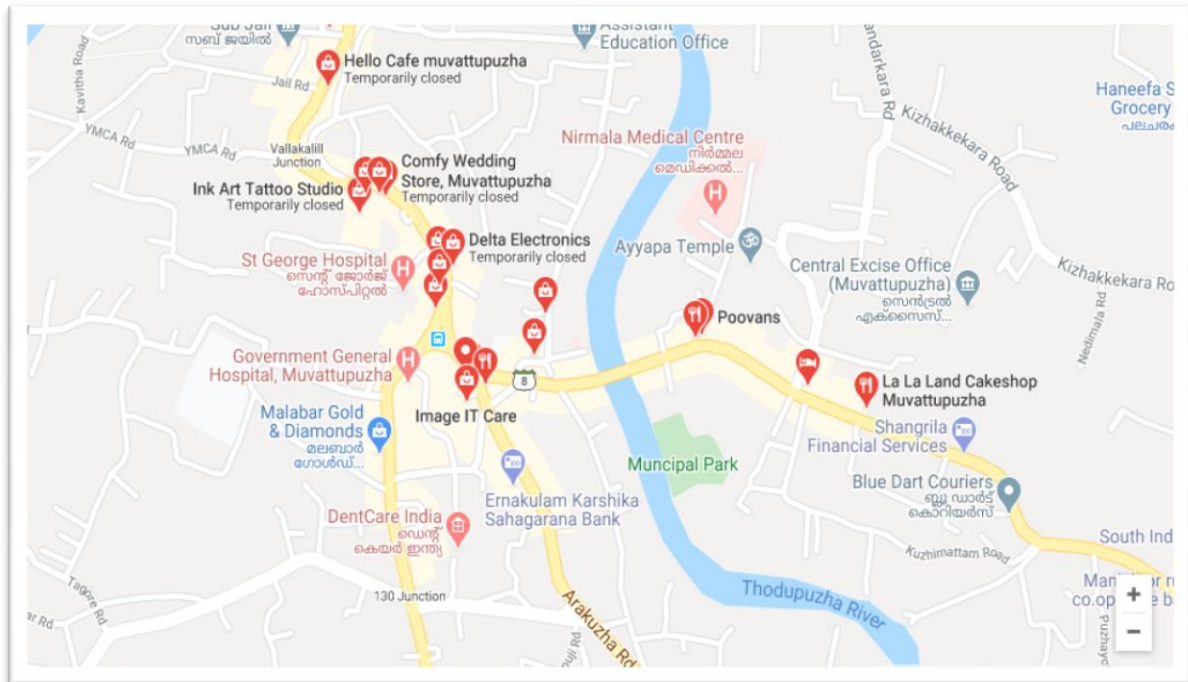


Fig. 1.2 Project location

1.3 Size and attributes of land acquisition

The project is mapped to acquire 0.1389 Hectares of land in Marady and Vellorkkunnam village and most plots are being used as commercial units. The identified land comprises of private as well as public land and includes Dry land and Wet land.

1.4 Alternatives considered

The proposed MC road is situated in a heavily built up area. There will not be any need to consider an alternative for this project. The project aims to develop the existing deficiencies of the road by acquiring the land and make the new

road according to the plan. And thereby make a solution to the traffic jam in the town.

1.5 Social impacts

As per the present alignment for the acquisition of land for M.C road widening, Twenty Six (26) directly affected persons were found out by the SIA team. One (1) residential building, Compound Wall of Government Town U.P. School, and Seventeen (17) commercial units will also be affected. The other adverse effects include loss of water-bodies, livelihood opportunities for the business establishment and its employees. A brief summary of major adverse impacts are as follows

Loss of buildings and land : 26 persons (only 14 persons gave adequate information in survey)

Loss of Land : 26 persons

Loss of Livelihood Opportunities : 32 persons

Threat to Social Institution : The Compound Wall of Government Town U.P. School, Muvattupuzha Muncif Court compound Wall, Police aid post.

Threat to religious institutions : Grotto of Holy Maggie church.

Despite the negative impacts, the proposed project is expected to be beneficial for the people in the region as it ensures safer and faster transportation and better access with other regions in the district.

1.6 Mitigation measures

- Compensation as per the Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act 2013 and Kerala

Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Rules 2015.

- Resettlement procedures as per the Policies vide G.O.(Ms) No.485/2015/RD dated 23/09/2015 and G.O.(MS) No.448/2017/RD dated 29/12/2017 issued by Revenue (B) Department, Government of Kerala for the rehabilitation and resettlement package for acquisition of land in the state in lieu of RFCTLAR&R Act 2013.
- To avoid negative impact on livelihood of the families, resettlement procedures should be done before the evacuation of the project affected shops.
- Reinstall common facilities such Roads and Walkways to residential/ other properties which are expected to affect due to the implementation of the project.
- Measures to rebuild the affected portion of Govt. town U.P School, Muvattupuzha.
- Ensure rebuild the grotto of Holy Maggie church.
- Ensure that the functioning of the shops which are not included or partially included in the acquisition is not hindering during the project construction period. Otherwise consider for compensation for the affected livelihood during the construction period.
- Measures to be taken to unhindered the entrance to the houses/shops, people's mobility and vehicle movement during construction
- Take possible measures to recreate income source for the directly and indirectly affected persons.
- Safety of the people while road widening and healthy disposal of wastages which may arise out of construction should be ensured.

Chapter 2

Detailed Project Description

2.1 Background of the Project, including developer's background and governance/ management structure

Roads in India are considered as the most crucial mode of transportation; being cost effective and preferred for freight and passenger transport. India has the second largest road network in the world connecting every nook and corner of the country with its 5.23 Million Kilo Meter roads comprising of National/State Highways, Districts and Village Roads (National High Way Authority of India, Annual Report 2016-17). It is estimated that road transportation contributes nearly 4.7 % towards India's GDP. Besides its significance to the economy, roads enable social integration by connecting different regions, institutions and people across the country.

As per the Kerala PWD-Road Bridge Maintenance Policy Order (22, 10, 2016), the State has a network of roads over 1.5 Lakh KMs and except the National Highways (1542 KM), all other major roads are being constructed, maintained and managed by Kerala Public Works Department with the funding from Government of Kerala.

Kerala Public Works Department (Kerala PWD) is one of the important departments in the Government of Kerala and operates under Ministry of PWD. The main aim of the project is to upgrade and standardize the existing stretch, thereby providing an easy and comfortable journey along the stretch. Upgrading the project stretch as per IRC standards and MoRTH Specifications increases the efficiency of traffic operations through the area as well as offers

better connectivity with nearby locations. Since the project lies in the heart of the town, the standardization of the available infrastructure will help in boosting the economic and social development of the whole region. Also the project road grabs much importance in the transport sector as it acts as a main corridor connecting the key roads of the state viz. National Highway 49, MC Road SH 1, and Main Eastern Highway SH 8.

Muvattupuzha town portion is a prime junction along the stretch of State Highway 1(MC Road), the development of the area was taken as a distinct work in the KSTP Phase II project. Later the work is handed over to Roads Division, Muvattupuzha by KSTP Division, Muvattupuzha for execution. The Executive Engineer, Muvattupuzha Roads Division, has informed the financial plan for the development of Muvattupuzha town portion. Government of Kerala has announced an amount of 30Cr as serial no.10 in the budget speech 2017-18 as well as the project was included in the KIIFB projects. A principal administrative sanction has been accorded vide serial no.144 in G.O (Rt) No.942/201/PWD dated 10/07/2017 to carry out the standardization works of Muvattupuzha town. The Project Preparation Unit (PPU) under the Office of the Chief Engineer (Design), Public Works Department has been entrusted with the preparation of the Detailed Project Report (DPR) for the development of the Muvattupuzha town portion by Chief Engineer (Roads and Bridges).

2.2 Rationale of the project including how the project fits the public purpose criteria listed in the Act

The problem due to enormous traffic growth and traffic congestions along the project route can be solved only by standardizing the project road. Even though the traffic demands of the area are high, due to the restrictions in land

acquisition only four lane carriage ways with an ROW of 20.0m is proposed for the project road.

The project road, of length 1.850 km, starts from P.O Junction in Muvattupuzha town and ends at Velloorkunnam. The project road is to be widened to four lane carriageway of 15.0 m wide separated by 2.0m wide median. The project would fit in the rationale for public purpose as the project likely to reduce travelling time, traffic, pollution and energy consumption and ensures a safer transportation through the region. Further, as per Section 2 b (i) of The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act 2013 (RFCTLAR&R Act), the project fits in for public purpose.

2.3 Details of project size, location, capacity, outputs, production targets, costs and risks

Four lane carriage ways with an ROW of 20.0m is proposed for the project road. The project road is to be widened to four lane carriageway of 15.0 m wide separated by 2.0 m wide median. As part of the project, proper drainage facilities with adequate side drains are proposed in order to drain out water from the pavement, along with the improvement of the existing CD structures. Considering the importance of the project road, all the horizontal curves are standardized for a design speed of 40 km/hr for the project road and 35km/hr at few locations where sharp curves and reverse curves are seen. The radius and transitions are provided according to the design speed. The junctions located along the alignment are improved as per IRC specifications. The deficiencies in profile, camber, super elevation etc are also improved. Installation of proper road safety furniture is also included in this project. Based on the soil investigation data, the 90th percentile CBR value of existing sub grade is

obtained as 13%. Hence for 137 msa and 13% CBR pavement thickness to be provided as per plate 7&8 of IRC 37 is 600 mm. For the widening portion, the designed pavement composition is as given below: Bituminous Concrete (BC) = 50mm, Dense Bituminous Macadam (DBM) = 100mm, Wet Mix Macadam (WMM) = 250 mm and Granular Sub Base (GSB) = 200 mm. For the existing pavement locations, the layers from WMM, DBM and BC are proposed. The proposal is put forward assuming that the existing pavement layers will act as GSB.

The vent way of all the existing culverts is seen hydraulically inadequate and structurally obsolete. Thus the existing 5 culverts are reconstructed as concrete box culverts with a size of 1.5mX1.5m in order to drain off the storm water to the nearby water bodies. Protection works have been proposed for the filling and for cutting areas. RR retaining walls are proposed for high cutting areas. The proposed RR retaining wall utilizes the dismantled rubble from the site itself.

Table 2.3.1 Design Standards

Sl No	Description	Standards	Standards
		Plain/Rolling	Plain/Rolling
		Ruling	Minimum
1	Design Speed	40	35
2	Roadway i) Total Lane width (3.5m per lane) of each divided carriage way	15.0m	15.0m
3	Sight Distance Desirable (intermediate)	90m	80m
	Minimum (stopping)	45m	40m
	Overtaking	165m	
4	Horizontal Curvature(m) Requiring 7% super elevation	60m	45m

	Requiring no super elevation	180m	180m
5	Minimum length of vertical curve	20m	15m
6	Maximum grade change not requiring vertical curve	1.20%	1.50%
7	Gradient (%) i) Ruling ii) Limiting iii) Exceptional	3.3 5 6.7	3.3 5 6.7
8	Super elevation (%) Maximum Desirable	7 5	7 5
9	Rate of change of super elevation	1 in 50	1 in 50
10	ROW	20.0m	20.0m
11	Set-Back (Distance between building line and road boundary)	3-6m	3-6m

Table 2.3.2 - Abstract of Estimate

Sl No	Heading Description	Cost (Rs.)
1	Site clearance and dismantling	409028.00
2	Earthwork for road work	3760173.63
3	Sub base, base, shoulder	41515459.77
4	Base and surface courses	39246113.31
5	Drain, Duct and Retaining wall	42697654.21
6	Culverts	3708037.43
7	Bus Shelter	266511.44
8	Traffic Signs, Road markings and other appurtenances	15189697.42
9	Miscellaneous Items	1076401.02
10	Repair and rehabilitation of bridges	1310326.20
11	Parking Area	7654115.89

12	Estimate for replacement of pipeline from P.O Jn to Velloorkunnam by Kerala Water Authority, Muvattupuzha	19710000
13	Shifting of KSEB lines	3400000
14	Land Acquisition	195000000
TOTAL		37,49,50,000.00/-

The major risks identified with the project are adverse weather condition, unforeseen shortages of labour or materials, strikes, disputes and damage to person and property due to fire, flood, earth quake, etc. The chances of occurrence of various unexpected and adverse effects were analyzed considering the ground condition and subsequently the mitigation measures were proposed.

Table 2.3.3 Project Risk and Mitigation Measures

Sl. No.	Risk	Mitigation measures proposed
1	Land acquisition	Compound Wall of Govt. town U.P School, Muncif Court complex, Police aid post, shall be acquired for smooth progress of the work and complete project on time.
2	Adverse weather condition	Proper planning and works below ground level to be completed before monsoon.
3	Shortage of labour and materials	Proper work scheduling Shall be handled by the Contractor by making the same available
4	Strikes	This shall be accounted by additional working hours/ augmentation of resources thereafter

5	Disputes	Increased communication and reviews to avoid occurrences of disputes.
		Any disputes to be settled without delay by properly assessing the situation and arriving at a win-win situation
6	Damage to person and property due to safety issues or force majeure	Proper safety measures shall be ensured during construction.
		Insurance coverage
7	Project Management risks	Institutionalizing an activity based project schedule
	This includes change in priorities, overload, communication issues, lack of coordination, Inexperienced work force, etc.	Regular reviews and assessment of progress
		Shall be avoided by appointing well experienced and reputed organizations as implementation agencies.
		Proper monitoring
8	Organizational risk :	Each unit in the Project Management Organization is planned considering minimizing the organizational risk
	This includes inexperienced staff, insufficient time to plan, losing critical staff at critical time, Inconsistent cost, time, scope and quality objectives	
9	Objection from the local community	Settled by setting a time limit without affecting the work progress
10	Contractual	The chance of occurrence of the same is very

	relations:	less as the frame works are completed and finalized in the initial stage itself. However, in case of occurrence immediate measures shall be adopted
	Issues arise due to permit and license, new stake holders, priority changes, funding changes	
11	Security issues due to laborers	Proper ID cards
		Surveillance measures
		Entry restrictions
		Minimum activities during peak time

2.4 Examination of alternatives

The proposed MC road is situated in a heavily built up area. There will not be any need to consider an alternative for this project. The project aims to develop the existing deficiencies of the road by acquiring the land and make the new road according to the plan. And thereby make a solution to the traffic jam in the town.

2.5 Phases of the project construction

The requiring body has adopted Work Breakdown Structure (WBS) and a detailed Work Program Schedule is enclosed with Table 9.1 in DPR. WBS in project management and systems engineering, is a deliverable-oriented breakdown of a project into smaller components. WBS is a hierarchical and incremental decomposition of the project into phases, deliverables and work packages. It shows a subdivision of effort required to achieve an objective; for example a program, project and contract. As per the schedule, the completed time for the project is estimated as 290 days.

2.6 Core design features & size and type of facilities

The project area is located at the heart of Muvattupuzha town region. The project road, of length 1.850 km, starts from P.O Jn in Muvattupuzha town and ends at Velloorkunnam. Four lane carriageway with an ROW of 20.0m is proposed for the project road. The project road is to be widened to four lane carriageway of 15.0m wide separated by 2.0m wide median. As part of the project, proper drainage facilities with adequate side drains are proposed in order to drain out water from the pavement, along with the improvement of the existing CD structures. Considering the importance of the project road, all the horizontal curves are standardized for a design speed of 40 km/hr for the project road and 35km/hr at few locations where sharp curves and reverse curves are seen. The newly proposed alignment is designed and drawn using the software Civil 3D. The radius and transitions are provided according to the design speed. The junctions located along the alignment are improved as per IRC specifications. The deficiencies in profile, camber, super elevation etc are also improved. Installation of proper road safety furniture is also included in this project.

Based on the soil investigation data, the 90th percentile CBR value of existing sub grade is obtained as 13%. Hence for 137 msa and 13% CBR pavement thickness to be provided as per plate 7&8 of IRC 37 is 600 mm. For the widening portion, the designed pavement composition is as given below: Bituminous Concrete (BC) = 50mm, Dense Bituminous Macadam (DBM) = 100mm, Wet Mix Macadam (WMM) = 250 mm and Granular Sub Base (GSB) = 200 mm. For the existing pavement locations, the layers from WMM, DBM and BC are proposed. The proposal is put forward assuming that the existing pavement layers will act as GSB.

As traffic details for the side road are not available, the pavement design has been carried out for minimum value traffic of 2msa. The CBR value has been taken as same as that of the Muvattupuzha town portion area. For the widened portion, the pavement design has been done for 2 msa and 13% CBR. The pavement thickness to be provided as per plate 7&8 of IRC 37 is 420 mm. The designed pavement composition is given below: Bituminous Concrete (BC) = 30mm, Dense Bituminous Macadam (DBM) = 40mm, Wet Mix Macadam (WMM) = 200 mm, Granular Sub Base (GSB) = 150 mm.

Typical Design of Road Side Drain

The road side drains for urban section will be designed as per IRC: SP – 50 (Guide lines on Urban Drainage) adopting the design period as 15 years. The capacity of the proposed drain will be able to carry run off from the road. As per the requirement, covered reinforced cement concrete drains on both sides are proposed below footpath.

Traffic Control Devices

Road markings and road sign standards are to be provided as per IRC 35 and IRC 67. The road markings are to be provided by considering the safe stopping sight distance.

Protection Works

Side beam is improved by filling with good gravelly earth for 30 cm average thickness. Protection works such as RR retaining walls shall be provided as per the requirement at filling and cutting areas wherever the width of land is restricted.

Safety Barriers

W-beam crash barrier should be provided on the outer edges of roadway where the embankment height is 3m. These shall be of metal beam with metal posts

with steel posts. Guard stones with reflectors are provided for height less than 3.0m.

Parking Lanes

The excess land in the right of way available is to be utilized for parking spaces, with angle parking system.

Utility Services

Utility services as per IRC 98 may be provided. Utility services include water supply lines, sewer lines, storm water drains, electric cables, telephone cables, gas pipelines etc. A transverse duct for placing the utility services is provided at every 500m interval, to avoid the cutting of the surface of carriageway in future.

Table 2.6.1 Design Features

Sl No	Description	Standards	Standards
		Plain/Rolling	Plain/Rolling
		Ruling	Minimum
1	Design Speed	40	35
2	Roadway i) Total Lane width (3.5m per lane) of each divided carriage way	15.0m	15.0m
3	Sight Distance Desirable (intermediate)	90m	80m
	Minimum (stopping)	45m	40m
	Overtaking	165m	

4	Horizontal Curvature(m) Requiring 7% super elevation	60m	45m
	Requiring no super elevation	180m	180m
5	Minimum length of vertical curve	20m	15m
6	Maximum grade change not requiring vertical curve	1.20%	1.50%
7	Gradient (%)		
	i) Ruling	3.3	3.3
	ii) Limiting	5	5
	iii) Exceptional	6.7	6.7
8	Super elevation (%)		
	Maximum	7	7
	Desirable	5	5
9	Rate of change of super elevation	1 in 50	1 in 50
10	ROW	20.0m	20.0m
11	Set-Back (Distance between building line and road boundary)	3-6m	3-6m

2.7 Need for ancillary infrastructural facilities

The project area is located at the heart of Muvattupuzha town region. The project road, of length 1.850 km, starts from P.O Jn in Muvattupuzha town and ends at Velloorkunnam. The project road is aligned along the State Highway 1 and is significant for the development of the region considering the road traffic. The project covers construction of approach roads, drainages, traffic safety infrastructure and movement of existing utilities have also incorporated in the Detailed Project Report (DPR).

2.8 Workforce requirements (temporary and permanent)

Construction activities are planned to start after the completion of land acquisition. Selection of the contractor will be based on open competitive

bidding. The total approximate quantities of the respective items of work and the time of completion are specified and the contractual obligations cover the rate, the approximate quantities involved and the time of completion. The work force requirements are made according to the contract.

2.9 Details of social impact assessment/ environment impact assessment if already conducted and any technical feasibility reports

As per the Detailed Project Report, the proposed road doesn't fall under protected areas such as Forest/Wild Life Sanctuary/NP Areas/Biodiversity Areas/Ecologically Sensitive Areas and hence the prior clearances are not applicable under Forest Conservation Act, 1980 nor Wildlife Protection Act, 1972.

The DPR include Technical Feasibility Studies, Cost Benefit Analysis, Risk Assessment and other major investigations such as Topographical /Traffic surveys and Geotechnical studies. However as per the available information, no studies to assess social impact of the project are conducted in the past.

2.10 Applicable legislations and policies

The applicable laws on land acquisition, rehabilitation and resettlement for the proposed land acquisition for M.C. Road widening are:

- The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013.
- Government of Kerala – Revenue (B) Department -State Policy for Compensation and Transparency in Land Acquisition vide G.O (Ms) NO.485/2015/RD dated 23/09/2015.
- Government of Kerala – Revenue (B) Department -State Policy for Rehabilitation and Resettlement Package for Land Acquisition in the

State in lieu of RFCTLAR&R Act 2013 vide GO(MS)No.448/2017/RD dated 29/12/2017.

- Right to Information Act, 2005.

Chapter 3

Team Composition, Approach, Methodology and Schedule of the Social Impact Assessment

3.1 Team Members

Vide Government Notification No. DCEKM/C5-2977/19 dated 18/06/2020, the SIA Unit of Rajagiri Outreach, Ernakulam was appointed to conduct Social Impact Assessment Study and to prepare a Social Impact Management Plan as per section 4 (1) of the Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement (RFCTLAR&R) Act, 2013. Further, a team was constituted with experts who have engaged in similar projects and deployed them into the project with a set of definite roles and responsibilities.

Sl. No	Name	Qualification and Designation	Experience
1.	Dr. Binoy Joseph	Ph.D, MA (PM& IR) Principal and Chairperson	25 Years in Management and Development
2.	Dr.(Fr.)Saju.M.D.	M.Phil,Ph.D Consultant	13 years in teaching, research and training
3.	Fr.Shinto Joseph	MSW Consultant	5 years in teaching, research and training
4.	Ms. Meena Kuruvilla	MSW Project Director	30 years in Development sector
5.	Mr. Biju C P	BA Development Officer-SIA	24 years in Development sector

6.	Mr. Tony Babu	MSW Research Associate	2 years in Development sector
7.	Mr. Albin Noble	MSW Research Associate	1 year in Development sector

Table 3.1- Team members

3.2 Methodology and Rationale

As per the Gazette Notification No. 381 Vol.8 published on 15 February 2019 issued by district collector Ernakulam, public and private lands are reported to be acquired in Maradi and Vellorkkunnam Villages in order to widen M.C. road. However, our researchers have identified 26 directly affected Persons who own and hold the land and 8 indirectly affected persons who were running business in the affected area. Further the business units and employees working in the units were also included in this study. To infer crucial information required to assess the impact and to prepare Mitigation and SIA Management Plan, our field investigators have visited commercial offices in the region and collected their phone numbers. Further, to collect the information and assess the impact of the affected parties a telephonic interview was held because of the covid-19 issues.

Focus Group Discussion and Key Informant Interviews of Affected Persons, Administrators, Civil Officers and other important stakeholders were also held by the expert qualitative researchers of the SIA Unit to gather common, specific and perceived impact of the project. The published reports and designs from KSTP, Muvattupuzha were also referred in this study.

3.3 Sampling

As the size of the land to be transferred for the project by the affected person and extent of impact due to latter is unique for each, a population Socio-Economic-Impact Survey was found to be appropriate over sampling method. Further, respondent size was found to be 26 directly affected and 32 commercial units and hence was possible to collect the information in the limited timeframe as per the scheme of the study.



Site visit along with Sri.Eldo Abhraham M.L.A , Land acquisition officers and Municipal Chairperson

3.4 Overview of Data Sources

Both primary and secondary information were collected and analysed through mixed method by the expert quantitative and qualitative researchers. Secondary information and published reports from concerned offices of KSTP/Revenue/Municipality/Villages/Civil Stations were collected and referred by the field investigators at multiple stages.

A unique structured questionnaire was prepared, tested and validated to collect information from affected persons through Socio-Economic-Impact Survey. A separate questionnaire was prepared for directly affected (land owners) as well as for indirectly affected (tenants and employees of tenants). All affected persons were participated in the survey and have responded to the questionnaire interview. Survey contained questions aimed to collect the information such as Demographic/ Economic/ Family/ Livelihood, details of performing/non-performing assets in the project land and the types/degree of impact. Further, qualitative data through Key Informant Interviews and FGD were also included in the study. The response and data points were analysed through statistical software and findings have reported along with recommendations.

3.5 Schedule of Consultation Meetings/ Public Hearings

As part of the study, multiple meetings/interviews/discussions were held with important stakeholders.

Table 3.5- Schedule of Consultation Meetings

Date	Activity/Event/Meeting	Venue
23/06/2020	Pilot Study and Key Informant Interviews	Muvattupuzha
27/06/2020	Socio-Economic Survey and Key Informant Interviews	Muvattupuzha
23/06/2020	Meeting with Land Acquisition Officer,	Muvattupuzha
14/08/2020	Distribution of Notice and broadcasting about Public Hearing Meeting	Muvattupuzha

Chapter 4

Land Assessment

4.1 Description with the help of the maps, information from land inventories and primary sources

The proposed M.C. road widening would require 0.1389 Hectares (Approximate) of land in Maradi and Vellorkkunnam Villages of Muvattupuzha Taluk, Ernakulam. The identified land comprises of both private as well as public land and includes Dry land and Wet land. The proposed M.C road will ensure faster and safe transportation through the Muvattupuzha town. Project location with the help of Google Map is in the figure below.

Figure 4.1- Project location Map



As per the primary sources, one residential building, and thirty two commercial units will be fully affected due to the proposed M. C road. Further the compound wall of government town U.P School, Police-aid post, Muncif court wall, holy magi church grotto will also be affected.

4.2 Entire area of impact under the influence of the project (not limited to land area for acquisition)

Muvattupuzha Municipality is in Ernakulam district. The M.C road passes through Vellorkkunnam and Marady villages in the town. The project is being planned in Ernakulam district in Muvattupuzha taluk of Marady and Vellorkkunnam villages.

The public transportation via Muvattupuzha would require faster and safer road networks. Further, there are many religious/ educational institutions and civil organisations located in the proposed M.C road will have a significant positive impact in the region.

Figure 4.2- Project Location Photograph



4.3 Total land requirement for the project

As per the Notification and Schedule released by District Collector Ernakulam, a total extent of 0.1389 hectares of land from Maradi and Vellorkkunnam Villages of Muvattupuzha Taluk, Ernakulam district is mapped to be acquired. The identified land comprises of both private as well as public land and includes Dry land and Wet land.

4.4 Present use of any public, utilized land in the vicinity of the project area

PWD road, Government town U.P school, muncif court compound wall, are included in the project land for the construction of M.C road in Muvattupuzha town.

4.5 Land (if any) already purchased, alienated, leased or acquired, and the intended use for each plot of land required for the project

The concerned authorities have mapped to acquire 0.1389 hectares of land for the proposed construction of M.C road. As per the available information from the concerned departments, no land has been either leased or purchased for the project yet.

4.6 Quality and location of land proposed to be acquired for the project

Muvattupuzha Municipality is in Ernakulam district. The M.C road passes through Vellorkkunnam and Marady villages in the town. The project is being planned in Ernakulam district in Muvattupuzha taluk of Marady and Vellorkkunnam villages. The concerned authorities have mapped to acquire 0.1389 Ares of land for the proposed construction of M.C road. Farming and

business have been the traditional means of income for the people in the region. The quality of soil is known to be strong enough for heavy structures.

4.7 Nature, present use and classification of land and if agriculture land, irrigation coverage and cropping patterns

Muvattupuzha Municipality is in Ernakulam district. The project is being planned in Ernakulam district in Muvattupuzha taluk of Marady and Vellorkkunnam villages. Our field investigators have identified 26 directly affected persons whose properties are mapped to acquire for the proposed M.C road widening.

The socio-economic survey reveals that twenty two (22) land plots are classified as 'Purayidam.' And three (3) land plots are classified as 'Nilam' (Figure 4.7.1) The present uses of land are found to be diverse. 14 land plots are used for commercial purpose, 1 land plot is used for residential purpose and 1 land remains unused. (Figure 4.7.2) As per the primary data source, the affected land has one (1) Well for drinking water requirements. The project land is the extension of the present road, there is no trees residing in the proposed area.

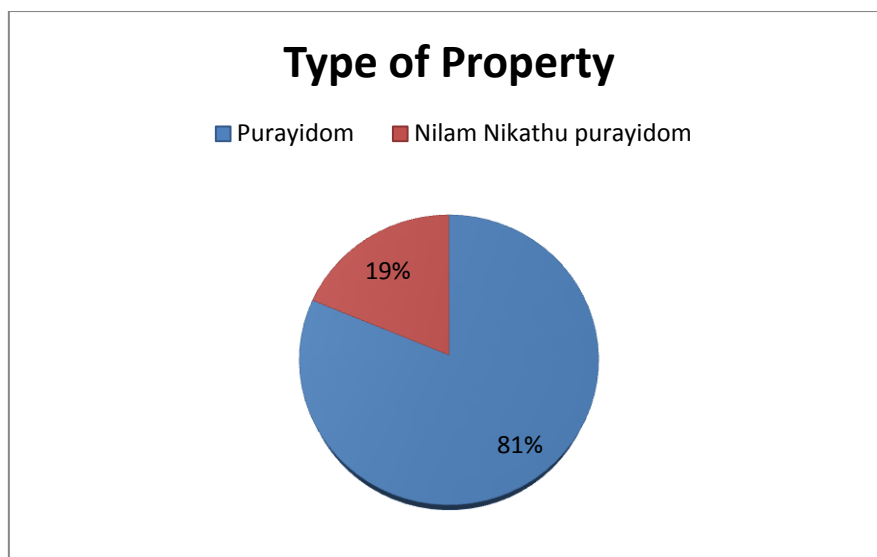


Figure 4.7.1 Type of Property

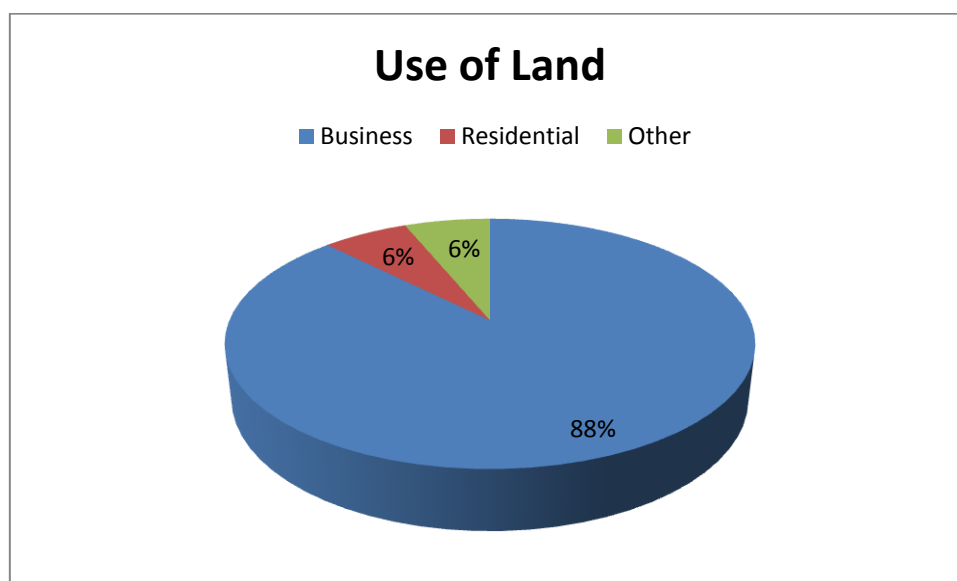


Figure 4.7.2 Use of land

4.8 Size of holdings, ownership patterns, land distributions and number of residential houses

As per the present design and alignment, the M.C road widening project would directly affect 25 persons whose land is mapped for the acquisition procedures. The survey reveals that one (1) residential house will be affected.

The year on which the affected person hold ownership ranges from 10 years to more than 50 years and decade wise ownership status of the affected land is presented in Figure 4.8.1. While 63% of the population have inherited the land from their ancestors, 37% of the population have bought the land to arrive at ownership (Figure 4.8.3)

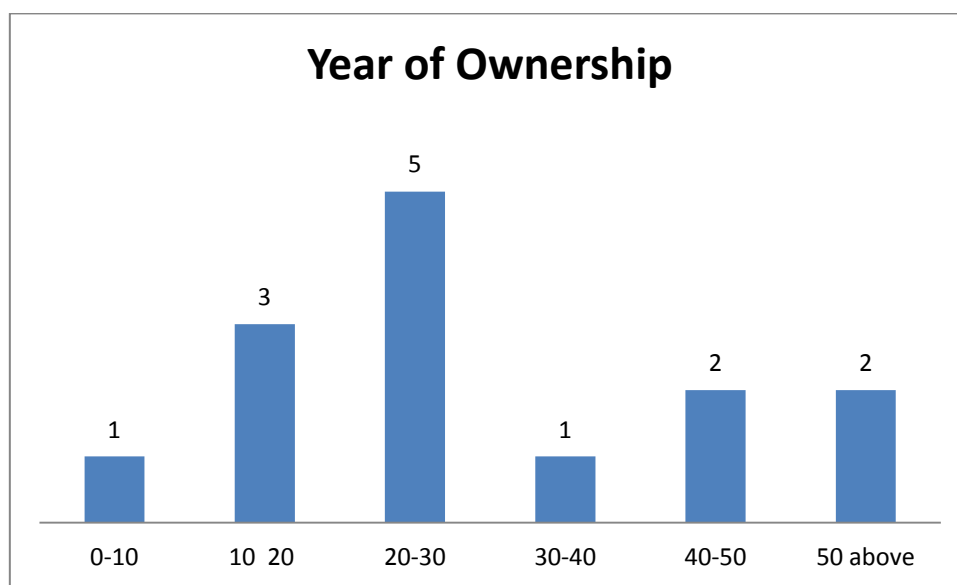


Figure 4.8.1 Year of ownership

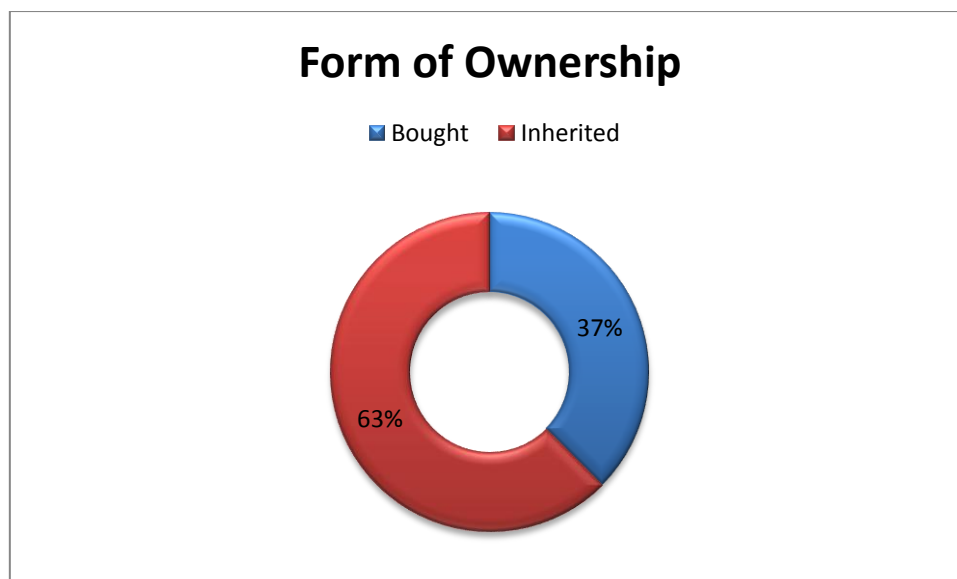


Figure 4.8.2 - Forms of Ownership

4.9 Land prices and recent changes in ownership, transfer and use of lands over the last three years

The perceptive market value of the land is reported to be around 10-25 Lakhs per cent and will be varied based on the size of plots and value in the specific area. Majority of them have inherited and owns the land for more than 20 years and above.

Chapter 5

Estimation and Enumeration (Where Required) of Affected Families and Assets

5.1 Estimation of families

As per the notification from District Collector, Ernakulam, Twenty five (25) plots comprising of public and private lands are aligned for the widening of M.C road in Muvattupuzha town. Contrary to this, land plots owned by Twenty five (25) persons are found to be affected by the field investigators of the SIA unit as guided by the Survey Stones fixed by the Revenue Department. While one (1) residential building are known to be affected, thirty two (32) units engaged in commercial activities as well as compound walls of Government town U.P School, Muncif court complex, police-aid post, will also are impacted.

5.1.1 Properties which are directly affected (own land that is proposed to be acquired)

Table 5.1.1 – List of affected property

Village : Maradi

Sl.No	Survey No.	Extent in Hectares	Type of land
1	365/6	1.15	Dry land
2	366/6	0.97	Wet land
3	366/9	0.29	Dry land
4	369/6	1.66	Dry land
5	369/7	0.07	Dry land
6	370/1-4	0.20	Dry land
7	370/1-11	0.40	Dry land

8	370/1-15	2.42	Dry land
9	370/2	0.53	Dry land
10	372/15-7	0.89	Dry land
11	371/23 A1	0.07	Dry land
12	371/23 C	0.23	Dry land
13	372/2 A	0.03	Dry land
14	372/2 B	0.03	Dry land
15	372/15-1	0.08	Dry land
16	372/15-3	0.16	Dry land
17	372/15-6	0.48	Dry land
18	373/4	0.61	Dry land
		10.27 Ares	

Village : Vellorkkunnam

Sl.No	Survey No	Extent in Hectares	Type of land
1	838/32 C	0.0004	Dry land
2	838/32 A	0.0014	Dry land
3	839/24	0.0020	Wet land
4	839/25	0.0080	Dry land
5	839/27 Part	0.0030	Wet land
6	839/28 Part	0.0018	Dry land
7	840/7 Part	0.0015	Dry land
	Total	0.0181 Ares	

5.2 Family of scheduled tribes and other traditional forest dwellers who have lost any of their forest rights

Muvattupuzha is a town which is situated on the banks of the Muvattupuzha river. Neither any Scheduled Tribes, nor any other community with special forest rights are reported to be affected with the project.

5.3 Families which depend on common property resources which will be affected due to acquisition of land of their livelihood

As reported in the Socio-economic survey, no property resources such as Canal, Pond etc. are not shared among the affected persons at present and hence no adverse effect on the same.

5.4 Families which have been assigned land by the State Government or the Central Government under any of its schemes and such land is under acquisition

No families in recent years were assigned land by any government and no such land will be affected.

5.5 Families which have been residing on any land in the urban areas for preceding three years or more prior to the acquisition of the land

Muvattupuzha is a town in Ernakulam district. As reported in the Survey conducted by SIA unit, since the affected area comprised of business units and buildings, no parties were staying in the area.

5.6 Families which have depended on the land being acquired as a primary source of livelihood for three years prior to the acquisition

Most of the affected persons have reported that the major source of income in their family is the income from business, rental income and others have pension, Salary. And the acquisition of land for M.C road widening will affect livelihood of many families. Further, Government town U.P School in the town, Muncif court compound wall, police aid post etc. will also have an adverse impact as the project land alignment.

5.6.1 Families which are indirectly impacted by the project (not affected directly by the acquisition of own lands)

The proposed M.C road widening is also expected to affect the livelihood of eight tenants who runs commercial units such as Lottery agency, Bakery, Foot wares, Stationary shops, and other small business units. Income in the families of all staffs employed by the latter will also have an adverse impact due to the aforesaid project.

5.6.1 Inventory of productive assets and significant lands.

The in and around areas of Muvattupuzha town is business and farming and is reported that One (1) residential building will be affected. In addition to the functioning school building, thirty two units engaged in commercial activities are also fall in the project site.

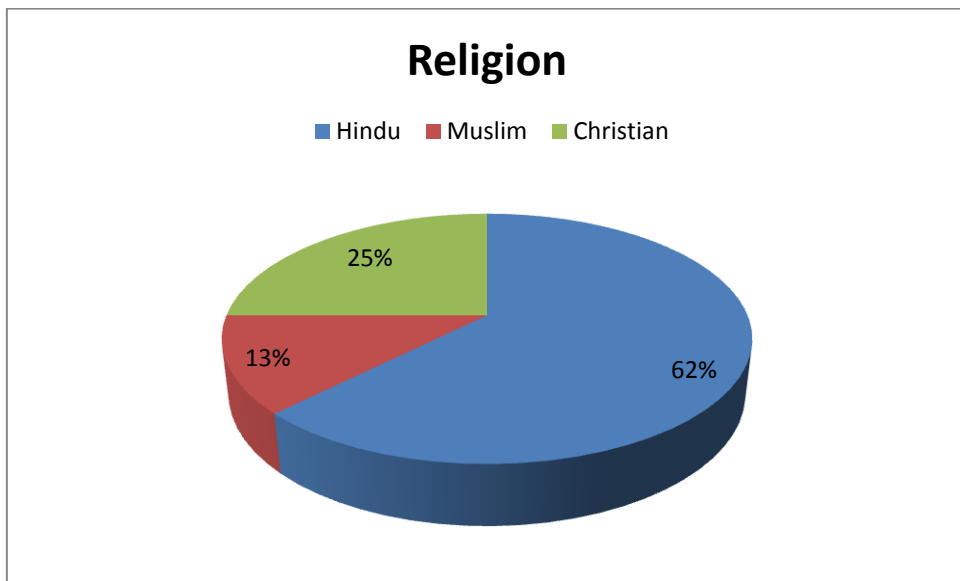
Chapter 6

Social Economic and Cultural Profile (Affected Area and Resettlement Site)

6.1 Demographic details of the population in the project area

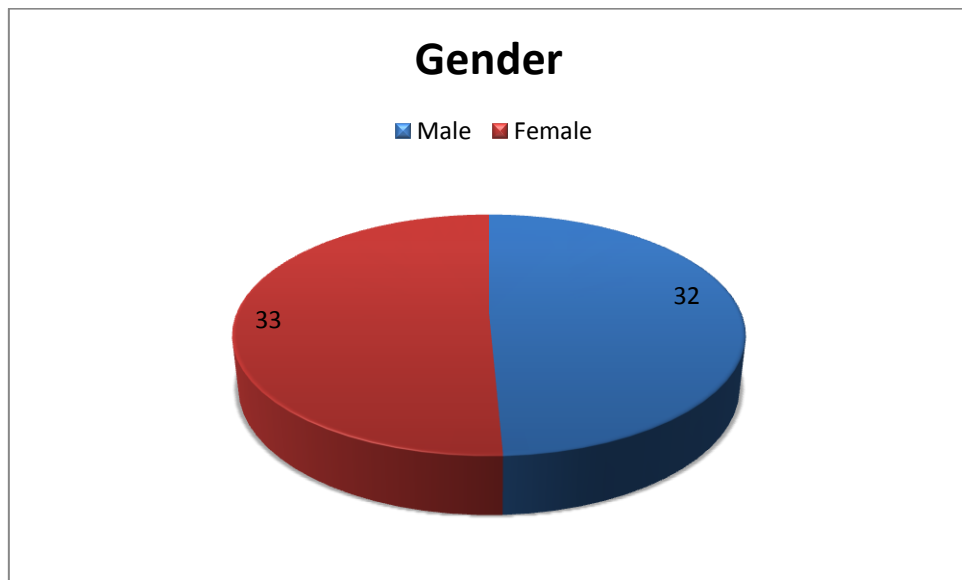
As given in the figure 6.1.1, Hindu faith is dominated among the affected persons as 62% follow the religion. The remaining 13% families follow Islam and 25% follows Christianity.

Figure 6.1.1 Religion



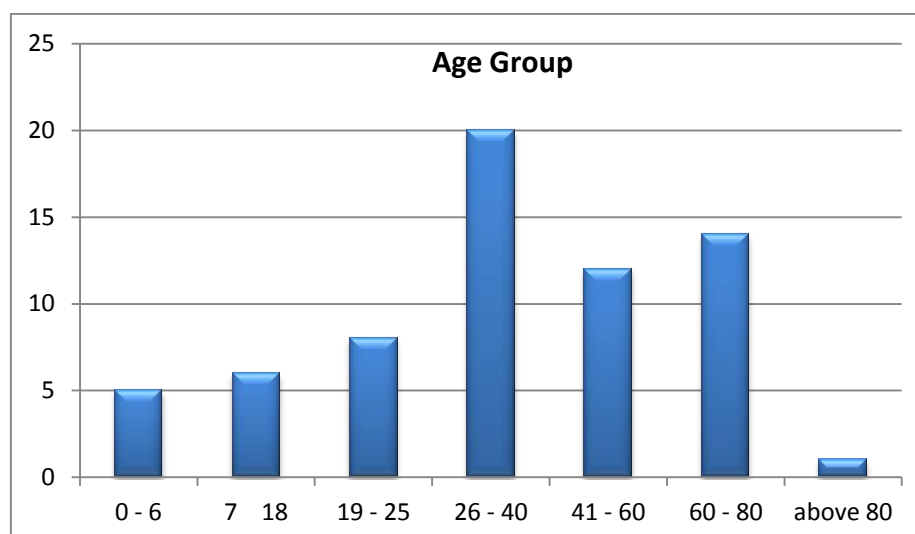
The gender statistics of the affected families reveal that female population (N= 33) is higher than the male group (N=32). Figure 6.1.2

Figure 6.1.2 Gender



While analyzing age of the affected population (Figure 6.1.3), it is found that adult in the age group of 26-40 outnumbered the rest with 20 of them followed by 12 persons falling in 41-60 age group. Similarly, presence of younger children (0-6) and elders (60-80) in the families are comparatively high with 5 and 14 numbers respectively. Number of children under age group of 7-18 and adults in 19-25 age groups has counted as 6 and 8 each. There is One (1) person falls in the age group of >80 category.

Figure 6.1.3 Age of Affected Persons



As illustrated in Table 6.1 detailing the marital status of adults in the affected families, about more than half of the population is married (N=48) and nineteen (19) are reported as unmarried. Survey also counts one (1) person as widow and no person as separated.

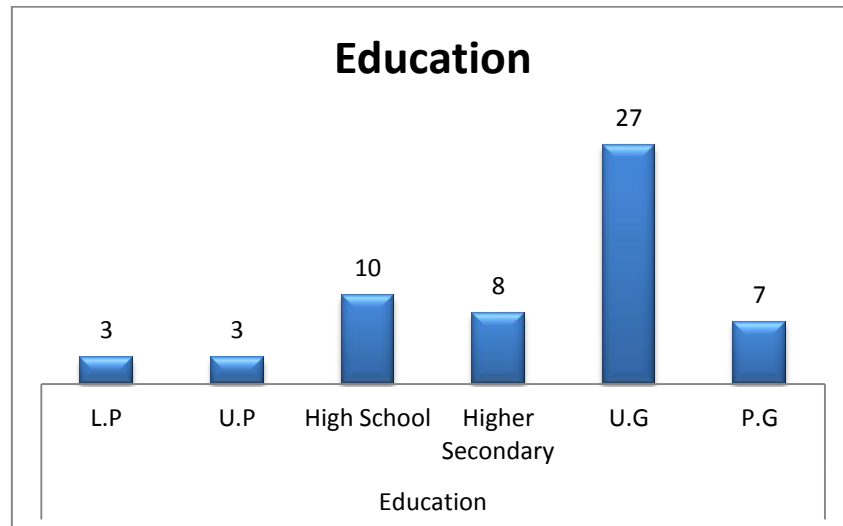
Table 6.1 Marital Status of Adults

Marital Status of Adults	
Status	Population
Married	48
Unmarried	19
Separated	0
Widowhood	1

With regards to the education background of the affected persons, survey reveals that ten (10) people in the affected families have High School qualification, whereas eight (8) are either pursuing or completed Higher Secondary School education. While Three (3) have LP School qualification, No.

of persons with UP School qualification is only Three (3). Number of individuals with UG and PG qualification are Twenty seven (27) and Seven (7) respectively. (Figure 6.1.4)

Figure 6.1.4 Education

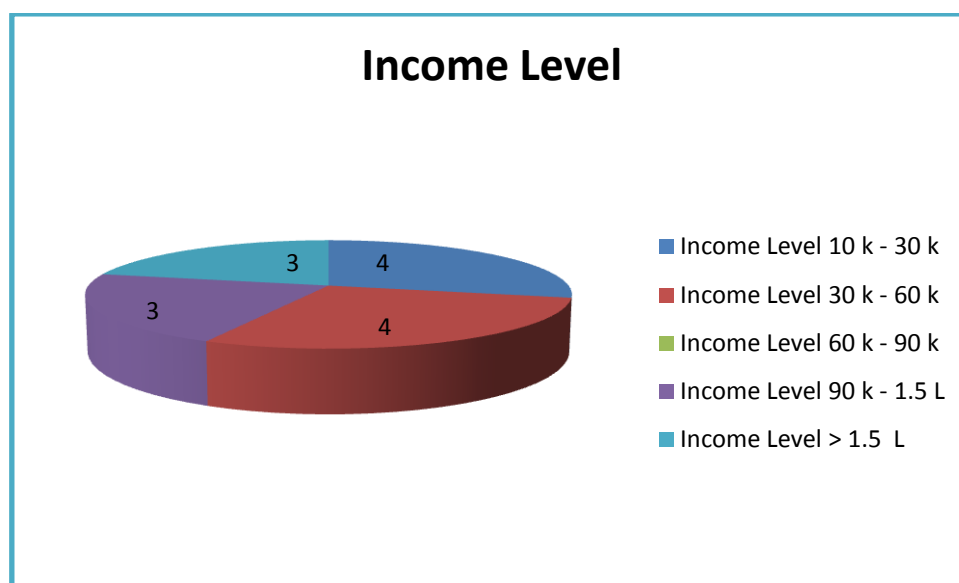


6.2 Income and poverty levels

With regards to the income level of the population, Twenty Six (26) affected families have promptly participated in the survey and twelve respondents didn't give the required information.

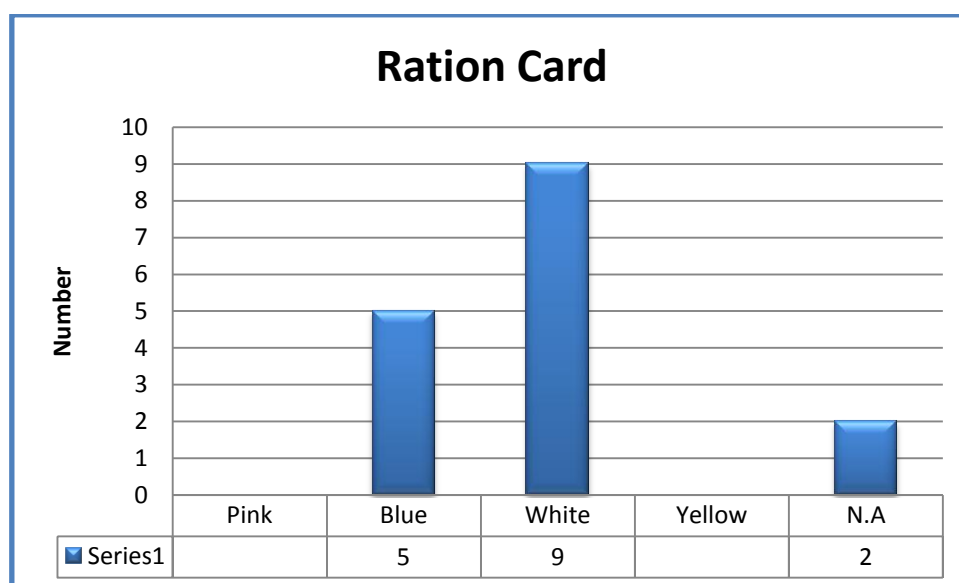
Income level of the affected families is found to be diverse, ranging from INR 10,000 to INR 400000 per month. Figure 6.2.1 furnishes the income level of 14 families and Four (4) families earn an income in the range of INR 10,000-30000 per month, followed by Four (4) families fall in INR 30,000-60,000 category. While Three (3) families earn between INR 90,000 and 150,000, Three (3) families earns more than 150,000 lakh per month. Also Twelve (12) persons do not respond to their family details.

Figure 6.2.1 Income Level



As illustrated in Figure 6.2.2, Five (5) families having Blue ration card and Nine (9) families holding White ration card indicates that the majority of the affected population live above poverty line as per the government standards. Two (2) persons do not respond about the details of ration card.

Figure 6.2.2 Ration Card



6.3 Vulnerable groups

Muvattupuzha Municipality is in Ernakulam district. The M.C road passes through Vellorkkunnam and Marady villages in the town. The project is being planned in Ernakulam district in Muvattupuzha taluk of Marady and Vellorkkunnam villages. The concerned authorities have mapped to acquire 0.1389 hectares of land for the proposed construction of M.C road. Though major aspects of Human Development Index such as education, income, health etc. are found to be positive, there are certain vulnerable groups especially children and elders who would require special attention while implementing the project. No. of Children under 6 years of age is Five (5) and elders whose age is above 60 years is Fifteen (15). Further there are One (1) widow and One (1) cardiac patient among the affected persons who would also be vulnerable due to the project.

6.4 Land use and livelihood

The socio-economic survey reveals that 23 land plots are classified as 'Purayidam' and 3 plots are classified as 'Nilam'. (Figure 4.7.1) The present uses of land are found to be diverse. 14 land plots are used for commercial purpose, 1 land plot is used for residential purpose and 1 land remains unused. The survey reveals that the livelihood opportunities of 32 families will be affected.

6.5 Local economic activities

The experts from Socio-Economic Survey reports that Business in local towns, government jobs and pension constitute the major source for household income and livelihood, yet a minority is engaged in farming and other daily wage jobs.

6.6 Factors that contribute to local livelihoods

Farming and trade were the two prominent and traditional livelihood activities in the place and also government jobs contribute to the livelihood opportunities of the people. The growing Muvattupuzha town attracted many businessmen and workmen from the nearby villages and finds livelihood means.

6.7 Kinship patterns and social and cultural organization

As observed by the expert team of SIA, people generally live in harmony and work together for the development of the region. Schools, Religious and Cultural Organisations are also present in the region and the most notable being is Government town U.P. school, Muncif Court Complex, Muvattupuzha Municipality, Police Station, etc.

6.8 Administrative organization

Maradi Village, Muvattupuzha Municipality, Muncif Court Complex, Police Station, Excise office, etc. are some of the administrative organisations located in the vicinity of project site; despite the compound wall of the Muncif court complex no other administrative organizations are being affected directly with the proposed M.C road widening.

6.9 Political organization

Muvattupuzha is a town in which major political organizations were situated in the town. Major political organizations in Kerala have present in the vicinity of the project location.

6.10 Community based and civil society organizations

Holy Maggie church grotto is being affected by the present land acquisition for the widening of the M.C road in Muvattupuzha town.

6.11 Regional dynamics and historical change processes

Muvattupuzha town is situated in Muvattupuzha taluk in Ernakulam district. The region is known for its cultivation for trade and cultivation. The banks of the Muvattupuzha river has evolved as the commercial centre of the village. To leapfrog the development of the region, a faster and safer road network is essential and the proposed widening of the road is likely to become catalysts for the same.

6.12 Quality of the living environment

Major population in the project area live Above Poverty Line with access to facilities such as Schools, Religious Centres, Civil Organisations, Social Groups etc.. Hence the Muvattupuzha town is a developed town, the facilities in the town are also being used widely especially for Health, Education and Livelihood.

Chapter 7

Social Impact Management

7.1 Approach to mitigation

To assess the mitigation, the expert research team of SIA Unit has adopted an approach that is spanned in three phases. In the first phase, a physical observation of the area was held and conducted a pilot study to understand major risks and opportunities involved with the project. Through a structured questionnaire, detailed dynamics of risks of each affected person is collected and analysed. Further, to understand generic and common risks involved with the project, in-depth interviews were held with selected key persons and stakeholders of the project. A public hearing is being scheduled for a comprehensive measurement of risk and to mitigate it in the third phase.

7.2 Measures to avoid, mitigate and compensate impact

The widening of M.C. Road in Muvattupuzha town was proposed by KSTP Division Muvattupuzha. KSTP has adopted the existing design, considering not only the lower estimated cost of the project, but the minimal impact to the residential/ commercial buildings as well. However, with the existing alignment plan, One (1) residential building is understood to be affected and total of Twenty Six (26) families are to be directly impacted. Further, the tenants and employees working in the owned and rented organisation/ commercial units are known to be indirectly affected with the project. The following measures may be taken to avoid, mitigate and compensate impact.

- Compensation for the land owners as per the Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act 2013 and Kerala Rules 2015.
- The Rehabilitation and Resettlement package shall be provided to the affected families as per the Policies issued by Revenue (B) Department, Government of Kerala vide G.O.(MS)No.485/2015/RD dated 23/09/2015 and vide G.O.(Ms) No.448/2017/RD dated 29/12/2017 for the rehabilitation and resettlement package for land acquisition in the state in lieu of RFCTLAR&R Act 2013.
- To avoid negative impact on livelihood of the families, resettlement procedures should be done before the evacuation of the project affected shops.
- Reinstall common facilities such Roads and Walkways to residential/ other properties which are expected to affect due to the implementation of the project.
- Measures to rebuild the affected portion of Govt. town U.P School, Muvattupuzha.
- Ensure rebuild the grotto of Holy Maggie church.
- Ensure that the functioning of the shops which are not included or partially included in the acquisition is not hindering during the project construction period. Otherwise consider for compensation for the affected livelihood during the construction period.
- Measures to be taken to unhindered the entrance to the houses/shops, people's mobility and vehicle movement during construction
- Take possible measures to recreate income source for the directly and indirectly affected persons.

- Safety of the people while road widening and healthy disposal of wastages which may arise out of construction should be ensured.

7.3 Measures that are included in terms of Rehabilitation and Resettlement and Compensation as outlined in the Act

Measures to be taken to provide compensation and Rehabilitation and Resettlement package as per the RFCTLARR Act 2013 and the Policies issued by Revenue (B) Department, Government of Kerala vide G.O.(MS)No.485/2015/RD dated 23/09/2015 and G.O.(Ms)No.448/2017/RD dated 29/12/2017 for the rehabilitation and resettlement package for land acquisition in the state in lieu of RFCT LAR&R Act 2013.

7.4 Measures that the Requiring Body has stated it will introduce in the project proposal

Requiring body stated that sufficient fund has been allocated in the project for land acquisition.

7.5 Alterations to project design and additional measures that may be required to address the extend and intensity of impacts across various groups as identified during SIA

Requiring body is planned the project alignment in such a way to cause very minimum impacts to the families. Nobody has suggested any alterations or additional measures during the SIA study.

7.6 Detailed Mitigation Plan including detailed activities to be carried out for each mitigation strategy, timelines for each mitigation strategy

To mitigate the social impact of the proposed land acquisition, compensation and R&R package should be provided to the families as per the Policies issued by Revenue (B) Department, Government of Kerala vide G.O.(MS)No.485/2015/RD dated 23/09/2015 and G.O.(Ms)No.448/2017/RD dated 29/12/2017 for the compensation and R & R package for land acquisition in the state in lieu of RFCTLARR Act 2013 by strictly following the time plan and procedures stated in the Kerala Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Rules, 2015.

Table 7.6.1 Social Impact Management Plan

Sl. No.	Social Impact	Impact Management	Time Frame	Mitigation Indicators
1	Loss of land	Provide compensation as per the 1 st schedule of RFCTLARR Act 2013 and the related policies of the State Government	Time frame as per the Kerala Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation	Sensitize the affected families about the reasonable price and other legal benefits of the land
2	Loss of assets	Provide compensation as	and Resettlement	Assets should be measured in the

	attached to the land	per the 1 st schedule of RFCTLARR Act 2013 and the related policies of the State Government	Rules 2015.	presence of the land owners and inform them the procedures of its valuation
3	Loss of livelihood/ income	Provide R&R package as per the 2 nd schedule of RFCTLARR Act 2013 and the related policies of the State Government		Compensation shall be given to the land owners and the people with legal documents who works in the project area for more than 3 years.
4	Eviction of shops	Compensation and R&R package as per the 1 st and 2 nd schedule of RFCTLARR Act 2013 and the related policies of the State Government		Resettlement procedures shall be done before the eviction of shops
5	Resettlement of	Resettlement procedures as per		The affected basic facilities shall be

	basic facilities like Septic tank and Drinking water tank	the 2 nd schedule of RFCTLARR Act 2013 and the related policies of the State Government		resettled timely without causing inconvenience to the families. If the remaining land is insufficient for construction, consider the rehabilitation of the family
6	Loss of Entrance	Adequate entrance to the shops and houses nearby the bridge shall be included in the project design		Ensure adequate entrance to the houses and shops near by the bridge after the project implementation
7	Hindering the functioning of the shops during construction period	Construction shall be planned as unhindered the functioning of shops which are not included or partially included in acquisition. If hinders income loss shall be compensated	Provide compensation in the income lose time itself to meet the day to day expenses of the families	Ensure the pleasant functioning of the shops in the project area during the construction period or compensate the income loss during the time of impact.

8	Traffic block and hindering public mobility during construction period	Plan and implement safety measures and develop plan of action before the project construction for the uninterrupted transportation and movement of people	Plan before the construction period	Measures shall be taken to unhindered the vehicle movement and public mobility during construction period
9	Retention of construction waste	Scientific disposal of construction waste shall be done on time	Plan before the construction period	Ensure the scientific and timely disposal of construction waste has done before the project implementation without causing environmental issues to the region

7.7 The SIA plan indicating which measures the Requiring Body has committed to undertake and those that have been proposed, but not committed to be undertaken by the Requiring Body

Not Applicable

Chapter 8

Social Impact Management Plan Institutional Framework

8.1 Description of institutional structures and key person responsible for each mitigation measures

RFCTLARR Act, 2013 section 43 and The Kerala RFCTLARR Rules 2015 Rule 22 define the Administrator appointed by the State Government would be the person responsible for Preparation of Rehabilitation and Resettlement Scheme for affected families of Land Acquisition. Subject to the superintendence/ directions / control of the appropriate Government and the Commissioner for Rehabilitation and Resettlement, the formulation, execution and monitoring of the Rehabilitation & Resettlement Scheme shall vest with the Administrator. Special Tahsildar (LA) N.H.No.1 is the Administrator of the land acquisition from Maradi and Vellorkunnam villages in Muvattupuzha Municipality in Muvattupuzha Taluk, Ernakulam.

As per The Kerala Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Rules,2015 and the Policy framed by the State government via G.O. (Ms) No.485/2015/RD, dated 23/09/2015, for the land acquisition in Kerala State 2 committees shall be constituted.

1. District Level Fair Compensation, Resettlement and Rehabilitation Committee which comprises of following members:

- District Collector
- Administrator for resettlement and rehabilitation
- Land Acquisition officer,
- Finance Officer

- Representatives of the requiring body empowered to take financial decisions on its behalf.
 - Representatives of Local Self Government Institution of the area where the land is situated.
2. The State Monitoring Committee for Rehabilitation Committee, which shall have the following members:
- Chief Secretary
 - Revenue Secretary
 - Secretary of the Administrative Department
 - Law Secretary
 - Finance Secretary

The District Level Fair Compensation, Resettlement and Rehabilitation Committee will finalize the estimate of a fair and reasonable price of land and compensation along with the Rehabilitation and Resettlement package to be given to the affected person/ family and submit the same to the State Level committee. The State Level Empowered Committee shall approve the estimate or return it for reconsideration with suggestions/observations.

After the approval of the State Level Monitoring Committee the District Level Fair Compensation Resettlement and Rehabilitation Committee shall present the estimated compensation and resettlement and rehabilitation package to the affected family or affected person and explain the terms and conditions of the same. Upon receiving the consent of the affected person or affected family, the District Level Fair Compensation Resettlement and Rehabilitation Committee shall submit the consent along with the minutes of its proceedings to the District Collector for finalizing the conveyance of land in terms of the consent. The Compensation and package agreed upon shall be paid into the bank account, the details of which shall be submitted by the affected family or affected person

along with the consent. On completion of the conveyance the Collector shall take possession of the land.

8.2 Specify role of Non-Governmental Organizations

RFCTLARR Act 2013 section 4 insists to conduct a Social Impact Assessment study whenever the Government intends to acquire land for a public purpose. As per the Rule 9 of The Kerala Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Rules 2015, the Government shall empanel the individuals/ organizations as Social Impact Assessment units to conduct the Social Impact Assessment study of the land acquisition. Rajagiri outREACH, an NGO functioning in Rajagiri College of Social Sciences is entrusted by the District Collector via Notification No. C5-2977/19/DCEKM dated 18th June 2020 to conduct the Social Impact Assessment Study of the land acquisition from Vellorkunnam and Maradi villages for the widening of M.C road in Muvattupuzha town. Hence Rajagiri outREACH is responsible to conduct procedures for Social Impact Assessment including Public Hearing.

8.3 Indicate capacities required and capacity building plan, including technical assistance if any

PWD Roads division, the Requiring Body of the project may provide necessary information to the governing offices and shall finalize the resources and capacities in consultation meetings.

8.4 Timelines for each activity

Timeline for each activity of the land acquisition will be as per the Kerala Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Rules, 2015.

Chapter 9

Social Impact Management Plan Budget and Financing of Mitigation Plan

9.1 Costs of all resettlement and rehabilitation costs

The financial Sanction for the widening of M.C. road in Muvattupuzha town including the land acquisition has been accorded by Kerala Infrastructure Investment Fund Board (KIIFB) for an amount of 37.495 Crores. In total 12.08 Ares land has to be acquired for the project from 26 land owners. No rehabilitation requires for the project. But resettlement procedures shall be done for the affected shops and the properties attached with the land. Compensation also should be provided for the affected livelihood. Considering the all impacts of the land acquisition the Administrator appointed for the project will prepare a draft Rehabilitation and Resettlement scheme.

9.2 Annual budget and plan of action

Not Applicable

9.3 Funding sources with break up

Not Applicable

Chapter 10

Social Impact Management Plan Monitoring and Evaluation

10.1 Key monitoring and evaluative indicators

- Land price and compensation amount
- Resettlement procedures without affecting the livelihood of families
- Time frame of the procedures and disbursement of compensation
- Time bound clearance of construction waste from the site

10.2 Reporting mechanisms and monitoring roles

Reporting mechanisms and monitoring roles of the land acquisition for the widening of M.C road in Muvattupuzha town will be as per the Rules stated in the Kerala Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Rules 2015. The Special Tahsildar (LA) N.H.No.1 is the Administrator of the proposed project and he is responsible for the formulation, execution and monitoring of the Rehabilitation & Resettlement Scheme. A draft of the Rehabilitation & Resettlement Scheme prepared by the Administrator shall be finalized by the District Level Rehabilitation and Resettlement Committee formed for the project and shall be approved by the State Monitoring Committee.

10.3 Plan for independent evaluation

Not Applicable

Chapter 11

Analysis of Costs and Benefits and Recommendation on Acquisition

11.1 Final conclusions on assessment of public purpose, less displacing alternatives, minimum requirements of land, the nature and intensity of social impacts, and viable mitigation measures will address costs

The problem due to enormous traffic growth and traffic congestions along the project route can be solved only by standardizing the project road. The traffic demands of the area are high. Muvattupuzha, positioned towards the eastern side of Ernakulam district, is located about 43 km from district capital of Ernakulam. Muvattupuzha is bordered by Kottayam district on southern side and Idukki district on eastern side. The proposed M.C widening would fit in the rationale for public purpose as the project is likely to reduce travelling time, traffic, pollution and energy consumption; and ensures a safer transportation through the region.

The proposed design itself will displace no families and 26 families in total are to be affected directly.

The district authorities have estimated that 0.1389 hectares (Approximate) of land comprising of private as well as public land would be required for the project. As per the Government Order DCEKM/C5-2977/19 dated 20-06-2020 by District Collector, Ernakulam, 26 plots in Maradi and Vellorkunnam villages of Muvattupuzha taluk is identified to be acquired.

The nature of impact varies from one to another. The project will not displace any families. The SIA study reveals that Twenty Six (26) families will be directly affected as their land/building lay in the alignment for the project.

Besides, commercial activities will be affected causing adverse impact on the livelihood of the people. Most of the affected persons have been doing commercial activities in the region for a long time and the emotional attachment to the region should also be considered appropriately during rehabilitation and resettlement. Fair compensation and R & R Package based on RFCTLAR&R Act, 2013 is expected to cover major risks through its mitigation measures. Further, the affected persons in general are positive on the benefit of the proposed road widening as it is expected to reduce traffic, improve connectivity with other locations and is likely to result in appreciation of commercial value for land and other assets.

11.2 The above analysis will use the equity principle as a framework of analysis for presenting a final recommendation on whether the acquisition should go through or not.

Based on the analysis and assessment of the positive and negative impacts of the widening of M.C road at Maradi and vellorkunnam Villages in Ernakulam District, SIA Team recommends the project to implement with minimal impact with the affected families. The project is expected to improve quality of living in the region especially on transportation and the same is empathised by the affected persons despite the negative impact the project leaves. The following are recommended to mitigate the impact.

- Compensation for the land owners as per the Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act 2013 and Kerala Rules 2015.
- The Rehabilitation and Resettlement package shall be provided to the affected families as per the Policies issued by Revenue (B) Department, Government of Kerala vide G.O.(MS)No.485/2015/RD dated 23/09/2015

and vide G.O.(Ms) No.448/2017/RD dated 29/12/2017 for the rehabilitation and resettlement package for land acquisition in the state in lieu of RFCTLAR&R Act 2013.

- To avoid negative impact on livelihood of the families, resettlement procedures should be done before the evacuation of the project affected shops.
- Reinstall common facilities such Roads and Walkways to residential/ other properties which are expected to affect due to the implementation of the project.
- Measures to rebuild the affected portion of Govt. town U.P School, Muvattupuzha.
- Ensure rebuild the grotto of Holy Maggie church.
- Ensure that the functioning of the shops which are not included or partially included in the acquisition is not hindering during the project construction period. Otherwise consider for compensation for the affected livelihood during the construction period.
- Measures to be taken to unhindered the entrance to the houses/shops, people's mobility and vehicle movement during construction
- Take possible measures to recreate income source for the directly and indirectly affected persons.
- Safety of the people while road widening and healthy disposal of wastages which may arise out of construction should be ensured.

References

1. The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013
2. Kerala Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Rules 2015.
3. Kerala State Policy issued by Revenue (B) department G.O.(MS)No. 485/2015/RD dated 23.09.2015 for fair compensation and transparency.
4. Kerala State Policy for Rehabilitation and Resettlement Package for acquisition of Land in the State in lieu of RCFTLAAR Act, 2013 G.O. (Ms) No. 448/2017/RD dated 29/12/2017.
5. The project details received from KSTP Muvattupuzha.