

Village Disaster Management Plan

Munroethuruthu, Kollam, Kerala



Community Based Disaster Risk Management Programme

A community based approach to Disaster Risk Reduction implemented under 'GoI-UNDP Project on Enhancing Institutional and Community Resilience to Disasters and Climate Change' with technical support from Foundation For Development Action - a Not for Profit Development Organisation based at Pathanamthitta, Kerala.

Implemented By

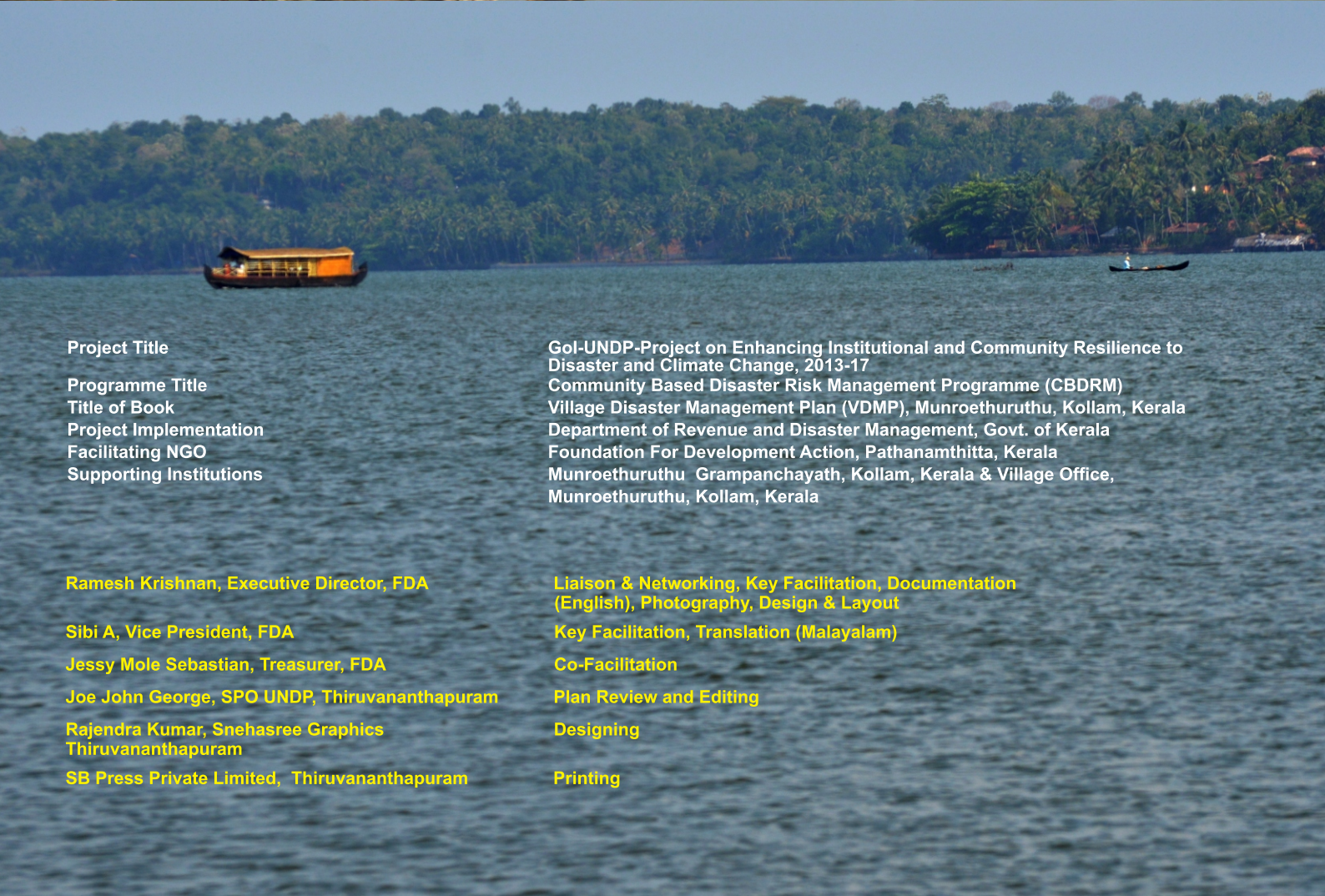
The Department of Revenue and Disaster Management, Government of Kerala



सत्यमेव जयते



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Project Title

Programme Title

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Project Implementation

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Disaster and Climate Change, 2013-17**

Community Based Disaster Risk Management Programme (CBDRM)

Village Disaster Management Plan (VDMP), Munroethuruthu, Kollam, Kerala

Department of Revenue and Disaster Management, Govt. of Kerala

Foundation For Development Action, Pathanamthitta, Kerala

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Biography on Resident Colonel John Munro (June 1778 – January 1858)

John Munro was born in June 1778 as second son to Captain James Munro 7th and Margaret Mackenzie in Teaninich, county Ross, on the eastern side of the highland of Scotland north of Inverness. His father James Munro was Laird of Teaninch (Royal Navy), the hereditary lord of the manor, who had also been in the navy. John Munro joined the East India Company (EIC) at a very young age of 16 or 17 and was sent to Madras where he took part in the battle of Seringapatnam and was shortly afterwards appointed Adjutant of his regiment, in which office he displayed a thorough acquaintance with military duties. John Munro also became an accomplished linguist, being able to speak and write fluently in French, German, Italian, Arabic, Persian and several of the Indian dialects. John Munro held various appointments on the Staff, and was private secretary and interpreter to successive Commanders in Chief in India. He was personally acquainted and in constant correspondence with Colonel Arthur Wellesley, Duke of Wellington during the Mahratta War. John Munro assisted in quelling the Nellimore Mutiny and was soon afterwards appointed Quartermaster-General of the Madras army, at the early age of 27.



In 1795, the British established supremacy in South India and Kerala came under their governance. From 1800 onwards, in order to maintain British Supremacy in Kerala, a Resident was appointed by the British Administrative head and Colonel John Munro was made its second Resident in 1811. Colonel John Munro distinguished himself well in the field, and had a talent for handling the Indian people. His tactful handling of the people of Travancore and Kingdom of Cochin at a time of the attack by Velu Thampi Dalawa on the East India Company, led to his being appointed the Resident of the Company for these kingdoms. Colonel John Munro also served as Diwan (Prime Minister) to the Regents Rani Gouri Lakshmi Bai and Rani Gouri Parvati Bai of the kingdom of Travancore and Raja Kerala Varma of the kingdom of Cochin from 1812 to 1818. With this freedom of action, he won the confidence of the rulers and the people as to be able to introduce the practice, in the administration of justice, of having a Christian sitting on the bench as judge beside a Brahmin. During his tenure as the Diwan of these states, he reformed the judicial system, improved the revenue of the states, prevented corruption and mismanagement and started the process of abolishing slavery in 1812. Slavery was abolished in the Munro Island on the 8th of March 1835 and finally by Royal proclamations by the Maharajah of Travancore in 1853 and 1855. Despite being the resident of the English East India Company, during differences of opinion between the English East India Company and Travancore or Cochin, he always argued in favour of the princely states. Colonel John Munro brought the temples in Travancore under state control and by improving the management of the temples fostered the practice of Hinduism. He Taxed the sale of Arrack, not only to raise revenue, but also to discourage drunkenness. Thus there was a wider social reforms in his policies and gained much appreciation from the community.

During Colonel John Munro's time, a senior priest of Malankara Sabha, Pulikottil Joseph Kathanar expressed his desire to establish seminary for training priests and a place to settle the newly converted Christians and thus the place was named after Resident Colonel John Munro of the erstwhile Princely state of Travancore by the locals to honour him and is still known as Munroethuruth or Munroothuruthu. The island is situated at a distance of 25 km from Kollam by road and is found in the confluence of Ashtamudi Kayal and Kallada River. History has recorded that Colonel John Munro was one of the most brilliant and popular administrators of Travancore and Cochin and still remains an enigmatic figure in the history of the church in India and a fascinating example of the pious influences in the East India Company. Colonel John Munro died on 25th January 1858.

സന്ദേശം

മനുഷ്യനും പ്രകൃതിയും തമ്മിലുള്ള ബന്ധം ജീവിതാവശ്യങ്ങൾ നിറവേറ്റുന്നതിനപ്പുറം ചൂഷണം എന്ന തലത്തിലേക്കെത്തിയപ്പോൾ പ്രകൃതിക്ഷോഭങ്ങളും പാരിസ്ഥിതിക പ്രശ്നങ്ങളും കാലാവസ്ഥാവ്യതിയാനവുമെല്ലാം കാലദേശങ്ങൾക്കതീതമായി ജനസമൂഹത്തിന് ഭീഷണിയായിത്തുടങ്ങി. ലക്ഷോപലക്ഷം ജനങ്ങൾ എല്ലാവർഷവും വിവിധ നാടുകളിൽ ഇത്തരം പ്രകൃതിദുരന്തങ്ങൾക്ക് ഇരയായിക്കൊണ്ടിരിക്കുന്നു. കേരളത്തിൽ ഇത് സുനാമിയുടെയാണ് ശ്രദ്ധിക്കപ്പെട്ടു തുടങ്ങിയത്. ജനങ്ങളുടെ ജീവനും സ്വത്തിനും ഭീഷണിയായിക്കൊണ്ടിരിക്കുന്ന പ്രകൃതി ദുരന്തങ്ങളുടെ ആഘാതം കുറയ്ക്കുക എന്ന ലക്ഷ്യത്തോടെയാണ് അതാത് പ്രദേശത്തെ ജനങ്ങളുടെ അറിവിനെയും കഴിവിനെയും കൂട്ടിയിണക്കി ശാസ്ത്രീയമായ രീതിയിൽ സാമൂഹ്യാധിഷ്ഠിത ദുരന്തസാധ്യതാനിവാ രണപ്രവർത്തനങ്ങൾ ലോകമെമ്പാടും നടപ്പിലാക്കിക്കൊണ്ടിരിക്കുന്നത്. ഭൂപ്രകൃതിയുടെ പ്രത്യേകത മൂലം വെള്ളത്താൽ ചുറ്റപ്പെട്ട കൊല്ലം ജില്ലയിലെ മൺഭ്രാന്തരുത്ത് പ്രദേശത്ത് 2004 ഡിസംബർ 26 ലെ സുനാമിക്ക് ശേഷം 85% പ്രദേശങ്ങളിലും വേലിയേറ്റം മൂലം ജനജീവിതം ദുസ്സഹമാവുകയും, ജനങ്ങൾ ഇവിടം വിട്ട് പോകാൻ തുടങ്ങുകയും, ഒരു ദുരന്തസാധ്യതാ പ്രദേശം എന്ന അവസ്ഥ ഉണ്ടാവുകയും ചെയ്തു. ഈ അവസരത്തിൽ ജനങ്ങളിൽ നിന്ന് ഫലവത്തായ രീതിയിൽ അടിയന്തിര പ്രതികരണം ഉറപ്പുവരുത്തുക, ദുരന്തസാധ്യതാ പ്രദേശങ്ങൾ കണ്ടെത്തുക, ദുരന്തലഘൂകരണ മാർഗ്ഗരേഖ തയ്യാറാക്കുക, അടിയന്തിര കർമ്മസമിതികൾ രൂപീകരിക്കുക, അവരുടെ കാര്യശേഷി വികസിപ്പിക്കുന്നതിനാവശ്യമായ പരിശീലനങ്ങൾ നടത്തുക, വിവിധ വകുപ്പുകളുടെ ഏകോപനത്തോടെ ജനങ്ങളിൽ അവബോധം സൃഷ്ടിക്കുക എന്നീ ലക്ഷ്യങ്ങളോടെയാണ് 2015-16 കാലയളവിൽ സാമൂഹ്യാധിഷ്ഠിത ദുരന്തസാധ്യതാനിവാ രണ പദ്ധതി മൺഭ്രാന്തരുത്തിൽ ആരംഭിച്ചത്. പ്രസ്തുത ലക്ഷ്യങ്ങൾ നിറവേറ്റാനും ഈ പദ്ധതിക്ക് കഴിഞ്ഞിട്ടുണ്ട്. ഐക്യരാഷ്ട്രസഭാവികസന പരിപാടി (ഡചളജ) യുടെ സഹകരണത്തോടെ സംസ്ഥാന ദുരന്തനിവാ രണ അതോറിറ്റി, റവന്യൂവകുപ്പ്, ജില്ലാഭരണകൂടം എന്നിവരുടെ നിർദ്ദേശത്തിൽ സാമൂഹ്യാധിഷ്ഠിത ദുരന്തസാധ്യതാനിവാ രണപ്രവർത്തനങ്ങൾക്കായി കൊല്ലം ജില്ലയിലെ മൺഭ്രാന്തരുത്ത് വില്ലേജിനെ തെരഞ്ഞെടുത്തതിൽ അതീവ സന്തോഷമുണ്ട്. ഫൗണ്ടേഷൻ ഫോർ ഡവലപ്പ്മെന്റ് ആക്ഷൻ എന്ന സർക്കാരിതര സംഘടനയാണ് മേൽപ്പറഞ്ഞ ലക്ഷ്യങ്ങൾക്കായി ഇവിടെ പ്രവർത്തിച്ചത്.



ഈ അവസരത്തിൽ ഇതിനു വേണ്ടി പ്രവർത്തിച്ച ഫൗണ്ടേഷൻ ഫോർ ഡവലപ്പ്മെന്റ് ആക്ഷൻ എന്ന സംഘടനയുടെ പ്രവർത്തകർ, പഞ്ചായത്ത് ഭരണസമിതി അംഗങ്ങൾ, ബ്ലോക്ക് പഞ്ചായത്ത് മെമ്പർ, പൊതുപ്രവർത്തകർ, മറ്റ് വകുപ്പ് മേധാവികൾ, വില്ലേജ് ഓഫീസർ, കുടുംബശ്രീ ഭാരവാഹികൾ, പൊതുജനങ്ങൾ, തുടങ്ങി എല്ലാവരോടുമുള്ള നന്ദിയും കടപ്പാടും അറിയിക്കുന്നു. ഈ പദ്ധതിയുടെ ഭാഗമായി തയ്യാറാക്കിയ മൺഭ്രാന്തരുത്ത് വില്ലേജിന്റെ ദുരന്തലഘൂകരണ മാർഗ്ഗരേഖ ഈ മേഖലയിലെ തുടർപ്രവർത്തനങ്ങൾക്കുള്ള ഒരു ആധികാരിക രേഖയായിരിക്കുമെന്ന് എനിക്കുറപ്പുണ്ട്.

ആശംസകളോടെ

ബിനു കരുണാകരൻ
പ്രസിഡന്റ്, മൺഭ്രാന്തരുത്ത് പഞ്ചായത്ത്.

Message

Kerala State is multi hazard prone. Both human induced and naturally triggered hazards and consequent disasters are noticeably increasing, all the more because of the diaspora of the population to terrains formally deemed inhabitable, unsustainable land use and the local manifestations of global climate change. It may be impractical to assume that every event which threatens life and property of human kind is preventable. However, by scientific and systematic planning, disastrous consequences of number of such events can be drastically reduced. It is with this clear intention that Disaster Management Act 2005 (Central Act 53 of 2005) vide section 30(2) (vi) directs all local authorities to prepare Disaster Management Plan.



The Island of Munroe, is one of the most vulnerable village in the state to the local manifestations of global climate change and associated disasters. Mainstreaming Disaster Risk Reduction into the developmental planning of the village thus becomes an inevitable need for the long termsustenance of human survival in the island.

It is of profound importance that other Local Self Governments of Kerala State replicate the model as implemented by Munroe Panchayath.

On behalf of Kerala State Disaster Management Authority and the “Government of India - United Nations Development Programme (UNDP) Project on Enhancing Institutional and Community Resilience to Disasters and Climate Change”, I express sincere gratitude to the Grama Panchayath Committee of Munroe Island, Village Office of Munroethuruthu, the District Disaster Management Authority of Kollam and the Foundation for Development Action (FDA) for supporting us in successfully completing Kerala’s first of two village Disaster Management Plans.

“Towards a Safer State” is where we are heading to collectively...

A handwritten signature in black ink, appearing to read 'Sekhar L. Kuriakose'.

Dr. Sekhar L. Kuriakose
Member Secretary KSDMA &
Head SEOC

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Acronyms

DRR	Disaster Risk Reduction
GoI	Government of India
UNDP	United Nations Development Programme
CBDRM	Community Based Disaster Risk Management
FDA	Foundation For Development Action
ERT	Emergency Response Team
PCVA	Participatory Capacity Vulnerability Assessment
PLA	Participatory Learning and Action
VDMP	Village Disaster Management Plan
DRM	Disaster Risk Management
VDMC	Village Disaster Management Committee
PRI	Panchayati Raj Institution
CDS	Community Development Society
ICDS	Integrated Child Development Services
NGO	Non Governmental Organisation
IIEMS	Indian Institute of Emergency Medical Services
SHG	Self Help Group
BLS	Basic Life Support
CPR	Cardio Pulmonary Resuscitation
AED	Automatic External Defibrillator
SWOC	Strength- Weakness-Opportunity-Challenges
BPL	Below Poverty Line
CCA	Climate Change Adaptation
EWS	Early Warning System
CRS	Community Radio Station
PWD	Public Work Department
BSNL	Bharat Sanchar Nigam Limited
SSC	Standing Committee Chairperson



Community Based Disaster Risk Management aims at reducing vulnerabilities through increasing capacities

Scope

After passing of the landmark Act - The Disaster Management Act 2005, there appeared a big leap forward in the field of Disaster Risk Reduction (DRR). A paradigm shift from response and relief centric approach to a proactive and comprehensive approach towards disaster management covering all aspects from prevention, mitigation, preparedness to rehabilitation, reconstruction and recovery got prominent place. National vision of Disaster Management Policy highlights building safer and disaster resilient India by developing a holistic, proactive, multi-disaster and technology driven strategy for disaster management. Prevention, mitigation and preparedness to reduce the impact of disasters on people and property became focused area of intervention and while doing so the communities were brought at the centre stage and provided momentum and sustenance through collective efforts of government agencies and Non-Governmental Organisation's.

Background of the Project

The Department of Revenue and Disaster Management, Government of Kerala is implementing "Gol-UNDP Project on Enhancing Institutional and Community Resilience to Disasters and Climate Change" in the state of Kerala since August 2015. Two revenue villages, namely Munroethuruthu in Kollam and Peringara in Pathanamthitta districts were selected by Chairperson of both the District Disaster Management Authorities to implement Community Based Disaster Risk Management Programme (CBDRM) with community participation and involvement. Foundation For Development Action (FDA), a Not for Profit Development Organisation based at Pathanamthitta provided technical support to execute the project in these villages. Community education and sensitization programme; formation of Emergency Response Team's (ERT's); training and capacity building programme for ERT's; preparation of resource/social, hazard and evacuation maps adopting Participatory Capacity Vulnerability Assessment (PCVA) tool; problem identification and prioritization of local issues through adopting Participatory Learning and Action (PLA) tool and development of Village Disaster Management Plan (VDMP) are the deliverables of the project.

Community Based Disaster Risk Management Programme

Disaster is defined as a catastrophe, mishap, calamity or grave occurrence in any area, arising from natural or man made causes, or by accident or negligence which results in substantial loss of life or human suffering or damage to, and destruction of, property or damage to, or degrading of, environment, and is of such a nature or magnitude as to be beyond the coping capacity of the community of the affected area. Communities are the first to experience the effects of any disaster and the first to respond to disasters. It is these communities that constitute what is referred to as "disaster fronts". Top-down approaches to Disaster Risk Management (DRM) fail to address the specific local needs of vulnerable communities. A key aspect of a successful community based initiative is partnership with, empowerment of, and ownership by the local communities and these factors underpin sustainable approach to Community Based Disaster Risk management programme. CBDRM programme provides opportunities to the local community to evaluate their

own situation based on their experiences. Under this approach, the local community not only becomes part of creating plans and decisions, but also becomes a major player in implementing activities of the project. Community empowerment for DRR demands full participation of the local community in assessing risks; mitigation planning; capacity building; participation in implementation and developing systems for monitoring which ensures their stake. Although the community is given greater roles in the decision-making and implementation processes, the approach does not ignore the importance of scientific and objective risk assessment and planning. It acknowledges that as many stakeholders as needed should be involved in the process, with the end result of achieving capacities and transferring resources to the community. In short, community approach to disaster management demand and ensure people's participation from conceptualization, planning, execution and evaluative stages.

Goal

Communities living in the most vulnerable areas are organised and take collective decisions to limit and reduce the impact of disasters - natural as well as human induced by developing individual and community survival skills, enhance knowledge level to reduce disaster risks and vulnerabilities and in doing so facilitate the process to achieve community resilience and empowerment.

Objectives

- a) To sensitize and build awareness of local community to take judicious actions in all phases (pre-during-post) of disaster management.
- b) To facilitate and strengthen community capacity in managing disasters at local level by reducing the impact of disasters.
- c) To extend helping hand to the district administration and to the local body in undertaking relief and rehabilitation activities.

Profile of Kollam District

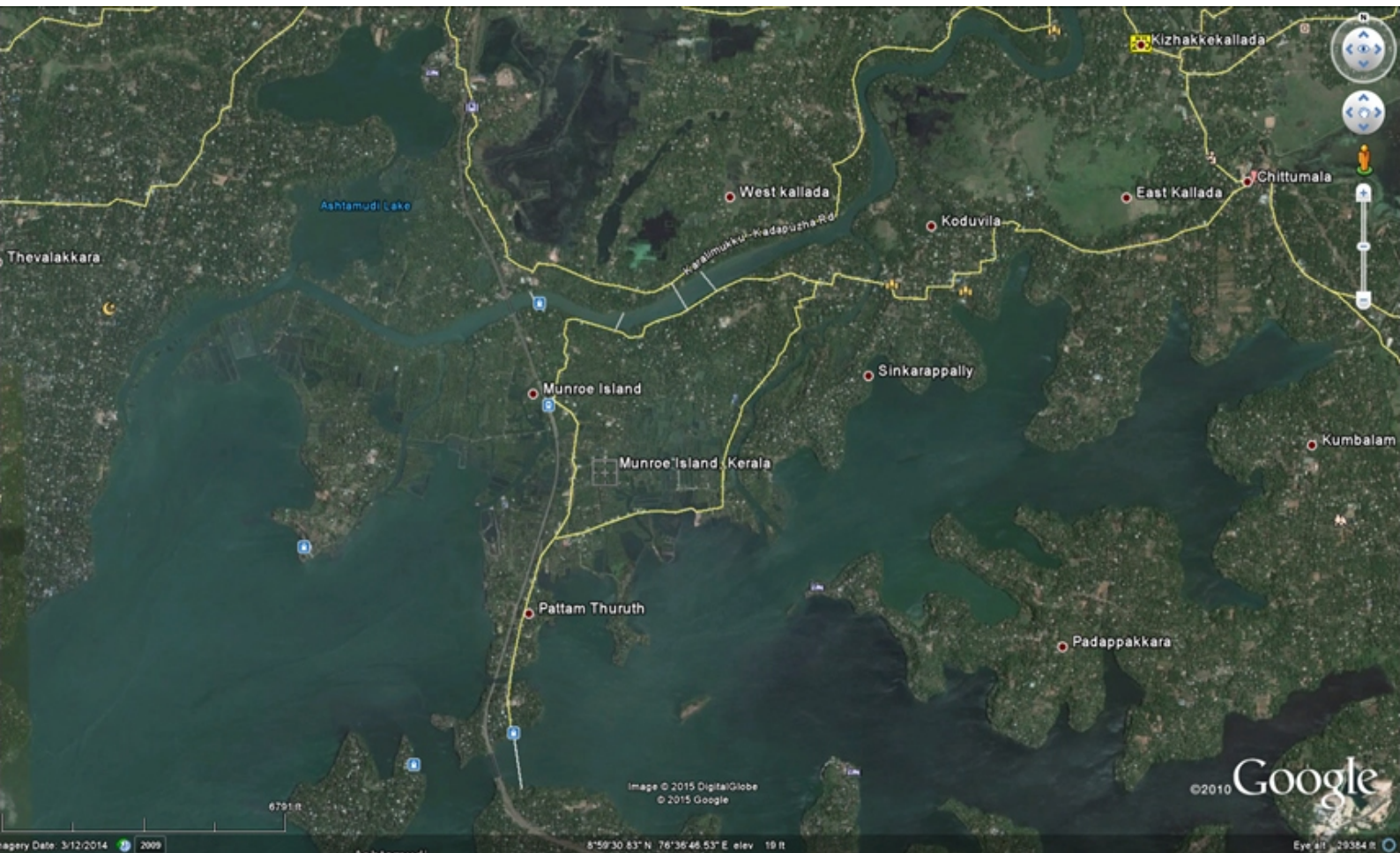
Kollam formerly known as “Quilon” is the oldest port city in the Malabar Coast and was the capital city of historic Venad Kingdom and Travancore Kingdom. Kollam was once one of the most important trading ports in India and was known as Desinganadu. Since ancient times, city of Kollam has played a vital role in the business, economical, cultural, religious and political history of Asia and Indian Sub continent. The district is located on the southwest coast of India, bordering Lakshadweep sea in the west, Thirunelveli district of Tamil Nadu in the east, Alappuzha in the north and Thiruvananthapuram in the south. Kollam is the capital of Kerala's cashew industry, plains, mountains, lakes, lagoons and backwaters, forests, farmland and rivers make up the topography of the district. The district is blessed with natural attributes having a long cost line and other water bodies. Sasthamkotta Lake is the largest freshwater lake in Kerala, which provide drinking water requirement to the city of Kollam. Two major river namely Kallada and Itthikara flows through the district. Ashtamudi and Paravur are the two important lakes in the district. The district enjoys a tropical humid climate with an oppressive summer and plentiful rainfall of around 2,700 millimeters. The average temperature of the district ranges from 25 to 32 degrees Celsius. According to 2011 census, the district has a total population of 25,85,064 which is roughly 8.11% of the total population of the State.

Map of Kollam District



Profile of Munroethuruthu

Munroe Island, locally known as Munroethuruthu is a typical backwater island village located in the confluence of Ashtamudi Lake and Kallada river in Kollam taluk of Kollam district and is an amalgamation of eight small islands having a total area of 13.4 sq. km. The island is accessible by rail, road and inland navigation and is about 25 KM away from the district headquarters of Kollam. As per 2011 census, the administrative village of Munroethuruthu has a total population of 10,380 consisting 5128 male and 5252 female. The island is named in honor of Resident Colonel John Munro of the former Princely State of Travancore. In 1795 the British established their supremacy in South India and the princely state of Travancore came under their governance. 1800 onwards, a Resident was appointed by the East India Company as administrative head of Travancore.



Colonel John Munro was appointed as 2nd Resident by the British East India Company. The primary occupation and source of livelihood of people of Munroethuruthu were coconut coir manufacturing; inland fishing and other agriculture and its allied activities, but things have changed after December 2004 Tsunami occurred in the Indian Ocean Tsunami.

The area surrounding the Munroethuruthu is part of Ashtamudi estuary which forms an important geological segment of the south Indian peninsular shield, both crystalline rocks and tertiary sediments are the major components of the estuary. Tertiary sediments and sedimentary rocks are the formations in the island and nearby areas. The Quaternary sediments are of marine and fluvial alluvium of recent age and where as Tertiary sediments comprise mainly laterite. The area predominates with intensive aquaculture where traditional and modern aqua farms are seen. Settlements with coconut, mixed crops are other land use practices in the area. The area had large scale coir retting practice in the earlier periods which is now limited to very few locations.

CHAPTER 2 Community Capacity Building

Village level consultation meeting to implement Community Based Disaster Risk Management programme

On 19th of August 2015, Village Officer representing the Department of Revenue and Disaster Management organised a consultation meeting at Munroethuruthu Grampanchayat to discuss about the implementation of CBDRM Programme under GoI-UNDP Project on Enhancing Institutional and Community Resilience to Disasters and Climate Change. The objective of the



Former GP President Smt. Thankamani Sasidharan addressing participants of village consultation meeting

meeting was to orient on the scope of CBDRM, formation of Village Disaster Management Committee (VDMC) and scheduling of further programme. The meeting was chaired by Grampanchayat President and attended by 24 people which includes Panchayati Raj Institution (PRI) members; Panchayath Secretary; Doctors (Ayurveda, Allopathic and Homoeopathy); Kudumbashree Community Development Society (CDS) Chairperson, Assistant Engineer Panchayath, ICDS supervisors; officials from the Department of Agriculture; political party representatives; members of farmers club and few other key person's of the Grampanchayat. The Panchayath President delivered welcome speech and briefly outlined the purpose of the meeting. State Project Officer, UNDP presented details of UNDP projects currently being implemented in the

state of Kerala and introduced supporting NGO FDA entrusted with the responsibility to implement CBDRM in Munroethuruthu village. Programme Coordinator of supporting NGO, FDA made a detailed presentation on CBDRM. The presentation was on the concept, basic principles, process of CBDRM and risk mapping using PCVA - a participatory learning and action tool. A discussion was also initiated on who could be the major stakeholders of the project; identification and inclusion of vulnerable groups, formation of ERT's; training and capacity building programme for members of Emergency Response Teams (ERT's) and formation of VDMC.



Shri Binu Karunakaran representative of farmers club interacting with meeting participants

After the presentation, the floor was open for discussion. Majority of the participants talked on issues related to environment, habitation, livelihood and other socio-economic problems of the village. Members of farmers club and others shared that, after the construction of Thenmala Dam over River Kallada, their village lost its charm and glory. The soil sedimentation process which occurred after yearly flooding was interrupted and gradually the soil become barren. Paddy cultivation and other agriculture activities slowly reduced, inland fishing which was the major source of livelihood was severely affected. Destruction of biodiversity and loss of mangrove forest cover resulted in decreased fish breeding in inland water. The villagers shared that, every year from the month of November till February - March, the village is severely affected by tidal waves originating from Ashtamudi Lake. Many families migrated and had settled in nearby Grampanchayat or are staying with friends and relatives. According to local version, the incidence

VDMP Munroethuruthu

of building and land subsidence has surfaced especially after 2004 Tsunami. Lot of changes have also occurred in hydrosphere of the locality. Flow of water in streams has changed and high tides have become a regular affair in the village. Availability of clean drinking water and appropriate sanitation technology in the village became a challenge. Villagers shared that, men are facing difficulty in finding bride for them from other places, simply because parents and family members of bride are not willing to send their daughter to Munroethuruthu because of various environmental and other problems in the village.



Asst. Collector, Kollam Ms. S. Chithra IAS addressing participants of a zonal meeting at Panchayat office

Representatives of supporting NGO- FDA suggested dividing the entire village into three zones for better implementation of field level activities. The matter was discussed in the forum and wards 1, 2, 12, & 13 were brought under zone I; ward 3, 4, 5, 6 & 7 under zone II and ward 8, 9, 10 & 11 under zone III. Tentative dates for conducting zonal level meetings were fixed. Meeting in zone I was decided to be conducted on 8th, zone II on 18th and in zone III on 30th. Grampanchayat President thanked all participants and concluded the meeting.

Zone level sensitization meeting on Community Based Disaster Risk Management Programme

In consultation with the Grampanchayat, supporting NGO - FDA had finalized dates for conducting zonal level community sensitization meeting on CBDRM. Meeting in zone I was conducted on 8th, zone II on 18th and in zone III on 30th of December 2015. The zonal meetings were attended by

officials from UNDP; District Administration; Department of Revenue and Disaster Management and supporting NGO- FDA.

All zonal meetings were chaired by Panchayath President and attended by respective ward members and other community people. In the meeting, UNDP officials presented an introduction to “GoI-UNDP Project on Enhancing Institutional and Community Resilience to Disasters and Climate Change” and its activities. Projects and programmes of UNDP implemented in other parts of the state with support from The Department of Revenue and Disaster Management, Government of



Ms. Sibi, A Programme Coordinator FDA taking session on CBDRM

Kerala was shared with meeting participants. The intended results of CBDRM programme was also narrated in detail including roles and responsibilities of Grampanchayat and volunteers of ERT which will be formed under CBDRM Programme.

Project Coordinator of supporting NGO- FDA spoke on the recent disaster that occurred in the city of Chennai. The severity of disaster it brought to the city and its impact on the community, commerce, environment, infrastructure, lives and livelihood of people was discussed in the meeting. Hazard and vulnerability factors and elements of the Grampanchayat was highlighted and discussed. It is in this context the Programme Coordinator established the relevance of CBDRM programme and on building capacities of local community members especially of youth groups on management of disasters at local level and increasing coping skills of the community. The philosophy, principles, process and end results of CBDRM programme was described in detail to

the participants. Formation of three types of ERT's namely; 1) Search & Rescue, 2) Shelter Management and 3) First Aid and criteria for selection of volunteers were shared. Services of expert agencies like Kerala Fire and Rescue Services and Indian Institute of Emergency Medical Services (IIEEMS) were ensured for imparting specialized trainings to members of ERT's on their respective domain. Towards the end of the meeting, volunteer list was prepared in consultation with concerned ward members and other key persons of the ward.



Villagers interacting with facilitators of Participatory Risk Mapping exercise at Grampanchayat office

Participatory Capacity Vulnerability Assessment (PCVA)

Participatory Capacity Vulnerability Assessment is a vital tool in reducing disaster risks and its impact. It helps in designing a better recovery plan for communities towards hazard and risks. The exercise was crucial for the community to understand what hazards exist and what are the capacities needed to minimize the risks. DRR is thus a concept and practice of reducing disaster risks through integration of traditional wisdom and scientific knowledge, analysis, assessment.

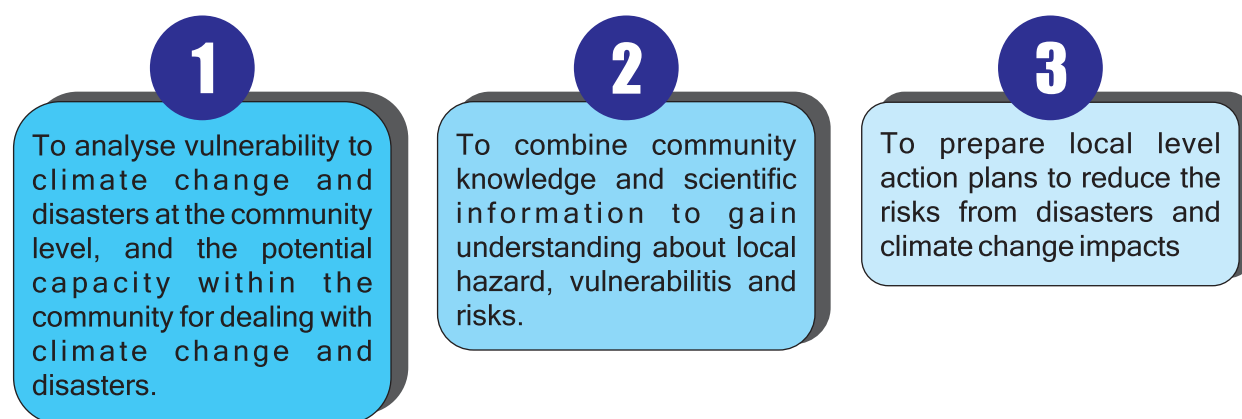
PCVA exercise was undertaken in Munroethuruthu Village on 18th of December 2015 and 16th of March 2016. PCVA is a systematic process and qualitative way of analyzing vulnerability which involves participation of vulnerable communities themselves in an in-depth assessment of their vulnerability and at the same time empowers and motivates the community to take appropriate actions to reduce their risks and vulnerabilities. It helps the community to arrive at local priorities, set actions and facilitate decision support for building resilience. The overall aim of PCVA is to link

disaster preparedness and response to long-term mitigation planning and achieve sustainable development. Resource/Social Map, Hazard Map, Evacuation Map, prioritization of problems and analysis of problems using Problem-Solution Tree tools were applied to undertake Hazard, Vulnerability and Risk assessment. Information was collected from the participants in the PCVA exercise and participatory analysis was done by involving PRI and local community members.

Participants

PRI members; Panchayath Officials; Kudumbashree CDS Chairperson; women and men SHG members, representatives of farm clubs, Youth; Village Elders and other key informants of the village were part of the PCVA exercise. The participants were oriented on PCVA and its process and had prepared three different types of maps - Resource/Social; Hazard, Evacuation Maps and were actively involved in Problem/Solution Tree analysis.

Objectives of PCVA



Stages of PCVA

1	Generate community view on hazard, vulnerabilities and on issues related to DRR
2	Understanding capacity, hazard and vulnerabilities in local terms
3	Analyse hazard, vulnerabilities and capacity
4	Prioritising core issues
5	Action plan for risk reduction

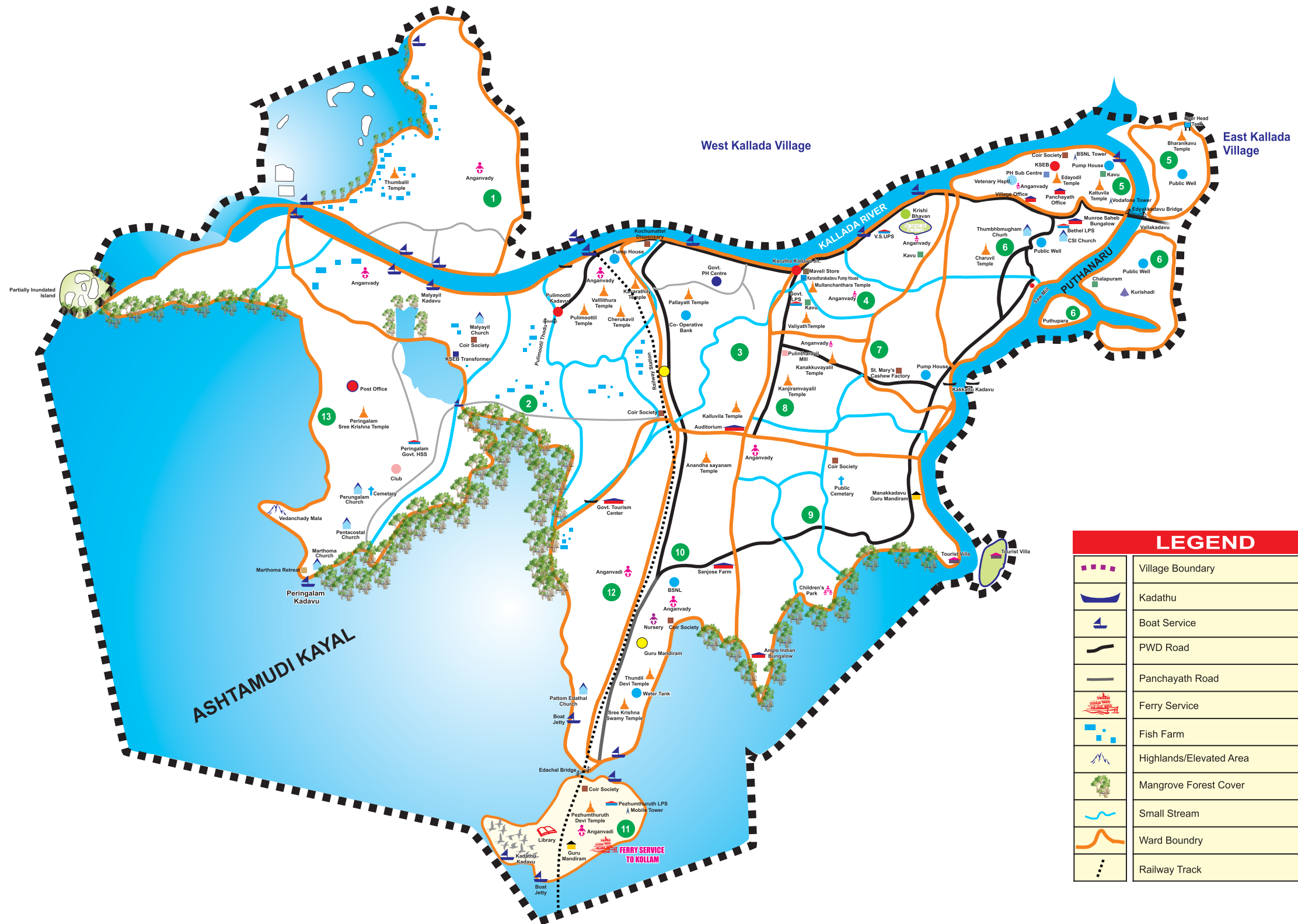
Community Resource Identification and Mapping

As part of PCVA, the entire resources; services and institutions of the village were identified in consultation with the community. Resources like; water bodies (pond, stream, river and lake); agriculture land; mangrove forest cover; pisciculture; open ground; road network; ferry services; boat jetty and social institutions and infrastructures like; schools, hospitals, primary health centre's; government offices, banks, anganwadi; religious institutions; coir societies and youth clubs were marked on resource/social map. For the purpose of PCVA, village map was prepared and with the help of PRI members and other key informants, resources of the villages were plotted on the map. Three consultation meetings were held in the village to ensure all resources available in the village was captured and plotted on the map.

PARTICIPATORY LEARNING & ACTION EXERCISE - RESOURCE MAP

Prepared by
 Foundation for
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 ACTION**
 18 Dec. 2015
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 Map not in scale

MUNROETHURUTHU VILLAGE



LEGEND	
	Village Boundary
	Kadathu
	Boat Service
	PWD Road
	Panchayath Road
	Ferry Service
	Fish Farm
	Highlands/Elevated Area
	Mangrove Forest Cover
	Small Stream
	Ward Boundry
	Railway Track

Training and Capacity Building Programme for ERT members

Basic Life Support

One day training on “First Responder Course (Basic Life Support/First Aid)” for 42 members of ERT's representing three zones of the village was conducted at VS Upper Primary School, Munroethuruthu on 31-December-2015. The training programme was facilitated by master trainers from IIEMS, Kottayam.

Technical Session - 1: Basic Life Support (Adult and Infant)

Points that were covered under the topic include; what is BLS, what is the purpose and importance of BLS and on basic anatomy. Most of the medical emergencies falls under the category namely; cardiac arrest, stroke and choking. If the victim is found unconscious, then check her/his voice; movement of eyes and breath. If none of these are responding, then the First Aid Provider shall conclude it to be a case of cardiac arrest. The first and foremost action a First Aid Provider shall take is to call an ambulance or a vehicle through which the victim can be comfortably taken to the nearest hospital for advance medical care. The procedure and process of providing First Aid to a victim are as follows.

- a) **Ensure safety of victims** : Here the First Aid Provider shall ensure that all safety measures are taken care off. The First Aid Provider shall ensure her/his safety. The victim shall be moved to a shortest safer place for providing first aid.
- b) **Check responsiveness** : The First Aid Provider shall gently tap her/his shoulder and ask “Are you ok” in loud and clear voice. If the victim responds, then CPR is not required. If the victim is not responding, then the following steps shall be undertaken.
- c) **Call ambulance** : Immediately call an ambulance by dialling 108, 102 or other ambulance available near to the accident site. The caller shall give exact description of the location including some landmark.
- d) **Check for pulse** : The First Aid Provider shall check for a pulse. Too much of time shall not be spend for checking Pulse Rate.
- e) **Check for breath** : Make sure that the airway is not blocked. If the mouth is closed, press with your thumb and forefinger on both cheeks at the end of the teeth and then look inside. Remove any visible obstacle that is in your reach but never push your fingers inside too far. Put your ear close to the victim's nose and mouth, and listen for slight breathing.
- f) **Administer CPR (Compression)** : Before administering Cardio Pulmonary Resuscitation, ensure that the person is lying on a flat and firm surface. Place the heel of one hand on victim's breastbone and place the second hand on top of the first hand, palm down and interlock the fingers of the second hand between the first hand. Position your body directly over your hand so that your arms are straight and push down in the center of the chest 2 inches for 30 times by both the hands directly over the breastbone in a faster mode.
- g) **Clear airway** : In order to open the airway to allow respiration, you have to tilt the head and lift the chin. Put your palm on the victim's forehead and gently tilt the head back and then with the other hand, gently lift the chin forward to open the airway. Check for normal breathing, look for chest motion, listen for normal breath sounds, and feel for the person's breath on your cheek and ear.

- h) **Breathing:** After ensuring open airway, you should close the nostrils of the victims with your fingers for mouth-to-mouth breathing and cover the person's mouth with yours, making a seal and breath out for about one second s this will make sure the air goes in the lungs and not the stomach and watch to see if the chest rises. If it does rise, give the second breath. After applying rescue breathing, if the chest doesn't rise, the repeat clear airway method and give two breaths and chest compression and followed by two rescue breaths. The entire process of administering CPR by using “Mannequin” was demonstrated. The trainees were made into groups and practiced CPR and its entire process (Ensure safety of victims, check responsiveness; call ambulance; check for pulse; check for breath; administer CPR (Compression); clear airway and facilitate breathing).



Task force member practicing CPR

Session on “how to do CPR on an infant” was undertaken. The first step is to check whether the baby is conscious or not and this can be checked by flicking your fingers against the feet of the baby. If the baby doesn't respond, then immediately call emergency medical helpline. If you find the baby in conscious state, but choking, then administer First Aid before attempting CPR. If the baby is coughing or gagging while in choking, let him/her continue to cough and gag on his/her own. If the baby is not coughing, you will need to be prepared to perform “Back Blow and chest thrust in order to release the baby from whatever is blocking the airway. Check for breathing again and this can, be done by placing middle finger on the inside of baby's arm. If the baby has a pulse and is breathing, then put the baby in recovery position. If there are no pulse and breathing, then continue with the next step to perform CPR which is a combination of compressions and breaths. To open the airway of the baby, gently lift the baby's head back and chin up to open the child's airway and then pinch the nose shut, tilt the head back, push up the chin and give two rescue breaths each lasting about one second and exhale gently until the chest of the baby rises. After doing two rescue breaths, the First Aid Provider shall check for brachial pulse and if there are no pulse, then



Shri G. Rajasekharan Nair master trainer IEMS demonstrating administration of CPR in infant

the first aid provider shall begin CPR on baby. For giving compression, the First Aid Provider shall take two or three fingers held together and shall place them in the middle of baby chest right below the nipples and gently compress the chest 30 times by pressing down 1/3 to 1/2 the depth of the baby's chest. The First Aid Provider shall continue the two rescue breaths and 30 chest compressions until sign of life is seen.

The process and procedure of using an Automatic External Defibrillator (AED) was narrated. He said that in European countries AED's are in plenty in use. In India and Kerala also AED's are now being used in railway stations. After completing practice of Adult CPR, the master trainer demonstrated CPR in infant.

Technical Session-2: Foreign Body Airway Obstruction in Adult & Infant

The main objective of the session was to familiarize members of Emergency Response Team to understand about the techniques of addressing choking in adult, as well as in child and to develop skills in them through demonstration & practice. Following topics were also discussed in the session.



Master trainers of IEMS demonstrating administration of first aid to victim of choking

- a) Relief of foreign body airway obstruction
- b) Mild obstruction
- c) Severe choking
- d) Choking - Abdominal Thrust Managing
- e) Choking in pregnant women
- f) Choking if irresponsive
- g) Infant Choking symptoms
- h) Infant Choking Management and
- i) Infant Choking action & reactions

Technical Session -3: First Aid

The main objective of this session was to make ERT members understand what is “First Aid”, techniques of First Aid, provide additional information on First Aid, What are different situations where First Aid can be applied & to develop skills in them through demonstration & practice. The facilitators used PowerPoint slides and few other visuals on First Aid. Following topics were discussed with the trainees.

- a) Aims of First Aid
- b) Key skills needed in giving First Aid
- c) First Aid at time of Drowning
- d) First Aid at time of Heart Attack
- e) First Aid at time of Stroke
- f) First Aid at time of Epilepsy
- g) First Aid at time of Thermal Injuries
- h) First Aid at time of Electric Shock
- i) First Aid at time of Poisoning
- j) First Aid at time of Snake bites
- k) First Aid at time of Road accidents
- l) First Aid at time of Dog bites
- m) First Aid at time of Noise injury
- n) First Aid at time of Eye injury
- o) First Aid at time of human body organs cut of
- p) Emergency Medical Service & Attention to be provided

Shelter Management

One day training on “Shelter Management” was conducted on 15th Jan 2016 for 30 ERT members of Munroethuruthu village. The training programme was facilitated by supporting NGO-FDA. Topics covered in the training programme were based on Humanitarian Charter and Minimum Standards (SPHERE Standards) they are; 1) Meaning and Scope of Shelter Management; 2) Roles and Responsibilities of different agencies (Govt. Departments; International and National Organisation's and local NGO's) for disaster relief, rehabilitation and reconstructions; 3) Identification and Criteria for selection of safe shelter; 4) Details of Shelter Staffing Pattern; 5) Minimum Standards of Relief - Supply of Food, Clothing and Water & Sanitations. Under this topic, the trainer discussed on control and prevention of communicable diseases; waste management; vector control; sanitation facilities; provision of clean and safe drinking water and personal and community hygiene. Strength-Weakness-Opportunity-Challenges (SWOC) analysis of existing two shelters of the village was conducted with the sole objective to help the trainee understand positives-negatives and opportunities which can be explored to improve the existing temporary shelters managed by the Department of Revenue and Disaster Management during emergency. The trainees were divided into groups and instructions were shared with the trainees for doing SWOC analysis. Consolidations of the group exercise are mentioned in the box.



Task Force members engaged in SWOC analysis of existing relief shelters of the village

SWOC – Strengths-Weaknesses-Opportunities-Challenges		
	Helpful to achieve objectives	Harmful to achieve objectives
Internal Origin Attributes of the institution	Strengths	Weaknesses
	Shelter is on high elevated land (In safe location) Shelter can accommodate large number of people Availability of water for non cooking – non drinking purposes Existence of a primary health centre near to shelter Support from Grampanchayat & other key department for disaster relief & response	Inaccessibility to shelter Inadequate facility to transport relief supplies to shelter Lack of proper waste management systems Lack of drinking water facilities Inadequate sanitation facilities Lack of facility to keep domestic animals
External Origin Attributes of the environment	Opportunities	Challenges
	Utilization of services of members of ERT's formed under CBDRM programme Service of Accredited Social Health Activist (ASHA) and Kudumbashree workers to be ensured Mobilization of MLA, MP Local Area Development fund to increase the facilities of shelters	Outbreak of epidemic Safety and security of women and children Unsafe boat service to reach to shelter

Input sessions also included short documentary on “Shelter Management” implemented at Haiti - the Caribbean nation where in 2010 an earthquake of magnitude of 7 brought huge devastation and killed 2.2 lakhs people and injured thousands and how the local government and international organisation's had involved in the redevelopment of Shelter and in restoring lost livelihood of the affected community. Documentary on “Sanitation Options” was also screened in the training programme.

The trainees shared their feedback on the training programme. One of the ward member said, he was unaware that government departments and agencies have such huge roles and responsibilities for disaster relief and rehabilitation. The training programme had given much information on which departments to be contacted for management of different types of disasters. People shared their good as well as bitter experiences of staying in shelters opened by the Department of Revenue and Disaster Management during flood. A village elder said, he learned many things from the training programme which can be put into practice next time when government department open shelter in their village.

Search and Rescue

One day training on “Search and Rescue” for 25 ERT members of Munroethuruthu village was conducted on 15-March-2016 at Alooran swimming club premise, Kallada River. The training programme was facilitated by master trainers of Kerala Fire and Rescue Services of Thiruvananthapuram, Kollam and Kundara unit. Grampanchayat President inaugurated the training programme. Ward members, volunteers and other local leaders participated in the training programme.

Technical Session – 1: Water Rescue

Station Officer of Kerala Fire and Rescue Services, Kollam handled the first session. The profile of Kerala Fire and Rescue Services and its objective was presented. After the introductory session, various methods for rescuing a drowning person were narrated with demonstration. Water rescue methods covered in the session are as follows:



Master trainers of Kerala Fire and Rescue Services helping volunteer to learn different types of knots

Reach If the victim is located close to the shoreline, then the rescuer can retrieve him/her by using an oar, towel, fishing pole, branch of tree or hook etc. without having to enter the water. The victim must be conscious, alert and able to grab and hold on to the reaching device for this method to be considered.

Throw If the victim is too far away from the shoreline to be reached with a rigid object. The rescuers can throw ropes, rope bags, flotation rings or discs tied to a rope, etc. to retrieve the victim without having to enter the water.

Row If the victim is too far away from the shoreline to be reached or to have a flotation device thrown to them, then the rescuers must use a boat to access and retrieve the victim without having to enter the water. Once close enough to the victim, the rescuers can Reach, Throw, or lift them directly into the boat (whichever method is easiest and safest).

Go Rescuers must physically enter the water and swim to the victim to retrieve him/her. This method may be used from the shoreline or from a boat depending on the circumstances. This method is typically used for unconscious victims but may also be used for conscious and alert victims that are in distress or unable to grab and hold on to a flotation device. Only those rescuers, who are strong swimmers, should enter the water to retrieve a victim.

Following safety tips to save the life of a drowning person was shared with the trainees.

- a) The rescuer shall never attempt to approach the drowning person from face to face straight angle. The rescuer shall always approach the drowning person from behind and shall catch hold of his/her hair or cloth and swim back towards the shore.
- b) Safety of the rescuer shall be given utmost importance.
- c) Never try to apply pressure on stomach of the drowned person to drain out water.



Master trainers of Kerala Fire and Rescue Services demonstrating administration of first aid to drowning victim

- d) Make necessary arrangement to provide first aid to the drowned person and take the victim to the nearest hospital.

Rescuing victims through rope using different types of knot were also demonstrated and the volunteers were trained on tying various rescue knots.

Technical Session – 2: First Aid

Session on providing First Aid which includes checking of pulse rate in human body and on mock administration of CPR was demonstrated. Before providing CPR, the First Aid Provider shall bring the victim to safe place, and shall call an ambulance. The method of providing First Aid to victim of drowning was demonstrated.

Technical Session – 3: Carrying Methods

Master trainers of Thiruvananthapuram Fire and Rescue Services handled session on “Carrying Methods and demonstrated how a person can be rescued or lifted without using stretcher. They also demonstrated making stretcher by using available local resources. Following are the carrying methods demonstrated.

- Two hand seated
- ❖ Three hand seated
- ❖ Four hand seated
- ❖ Firemen lift method &
- ❖ Pack strap carry method

Technical Session – 4: Practical

The master trainers took the volunteers along with them to the water and helped them to learn rescue techniques required for saving the life of a drowning person. The volunteers practiced the skill under the supervision of master trainers. Method to safely wear Life Jacket, use of Life Buoy and demonstration of scuba diving was also done on the occasion.



Master trainers of Kerala Fire and Rescue Services demonstrating scuba diving

Hazard Profile of Kollam District

Kollam is categorized as multi-hazard prone district by BMTPC - Building Material and Technology Promotion Council, Government of India. The district is prone to reverine flood caused due to heavy rain as well as flooding due to high wind and storm surge in the coastal belt. The entire district falls under EQ - Earthquake Zone III making the district moderately vulnerable to earthquakes of magnitude 6.9 or more. The district is increasingly becoming prone to disasters and experiences various kinds of disasters of recurrent nature which result in loss of life, livelihood and property and disruption of economic activity and causing immense misery and hardship to the affected population. Tsunami of 26th December 2004 added a new dimension to the disaster scenario of the district. Coastal erosion along the coastal areas is very frequent and severe, necessitating evacuation and rehabilitation of the coastal people to safer locations. The district is also vulnerable to cyclone like high wind bringing high devastation in the coastal as well as highland. Lightening has become a major cause of concern which accounts to loss of lives and property damage. The district is prone to landslides which occur mainly during monsoon. Areas vulnerable to landslides are Punalur, Thenmala, Piravanthur and Aryankavu. Drought like conditions have also becoming more frequent in the district due to failure of monsoon leading to acute scarcity of drinking water. The incidence of biological hazards like epidemics - dengue and chikungunia etc are showing high prevalence. Human induced disasters like fire, chemical and other industrial hazards are on high.

Hazard

Hazard is the natural and manmade phenomenon that may cause physical damage, economic loss and threaten human life and wellbeing. Such phenomena may affect different places singularly or in combination at different times. The hazard has varying degrees of intensity and severity.

In PCVA exercise, the community members had indentified the following hazards and made an assessment as follows.

Hazard	Hazard Assessment
Flood due to high tidal surge	<p>In Munroethuruthu Island, flooding due to tidal surge has become a regular affair. People say before December 2004 Tsunami, flooding used to occur mainly in the month of December-January-February. But the tidal surge followed by flooding is occurring on an average in all the 12 months in a year. Flooding is more severe in the month of January and February.</p> <p>11 low lying wards of Munroethuruthu Grampanchayat are regularly being affected by high tidal waves resulting in flooding and flood water entering into dwelling units.</p>

Hazard	Hazard Assessment
Flood due to high tidal surge	<p>Out of 11 wards, 3 wards namely; Ward - 2 Kidapram (South); Ward - 12 Pattamthuruthu (West) and Ward - 13 Peringalam severely affected.</p> <p>Whereas 8 wards namely; Ward - 1 Kidapram (North); Ward - 3 Kandramkani; Ward - 4 Villimangalam (West); Ward - 6 Nenmeni (East); Ward - 7, Ward - 8 Nenmeni; Ward - 9 Nenmeni (South) and Ward 10 - Pattamthuruthu (East) are partially affected by flood.</p>
Boat accident	<p>There are around 15 small and medium boat jetties (Kadavu) in Munroethuruthu which ferries people across Kallada river and Puthenarr without having any safety gears (life jacket / life buoy). The Kadavu at Peringalam bears significance, since students of Govt. HSS Peringalam used to daily commute by traditional boat to reach their school. During monsoon and high tide students become highly vulnerable to drowning.</p>
Road / Vehicular accident	<p>Two vulnerable points are there in Munroethuruthu village which are highly prone to vehicular accident. The narrow strip of road which run parallel to Kallada river opposite to Govt. PH Centre in ward 3 (Kandramkani) and Krishi Bhavan in ward 4 (Villimangalam) does not have protectionwall to stop vehicles from falling into Kallada river. Many school buses, private and public transport buses are plying through this narrow road, making it the most vulnerable point to road accidents.</p>
Epidemics	<p>Tidal surge leading to flooding and inundation of low laying areas has become regular affair in the village. The areas affected by flooding are in the brim of outbreak of water borne diseases and other skin infections. Sanitation facilities are unhygienic as pit latrines used in the location are not feasible for areas having high water table. During high tide, people are unable to use toilet and night soil make its passage in water bodies resulting in pollution.</p>



Peringalam Kadavu



Pit Latrine under construction



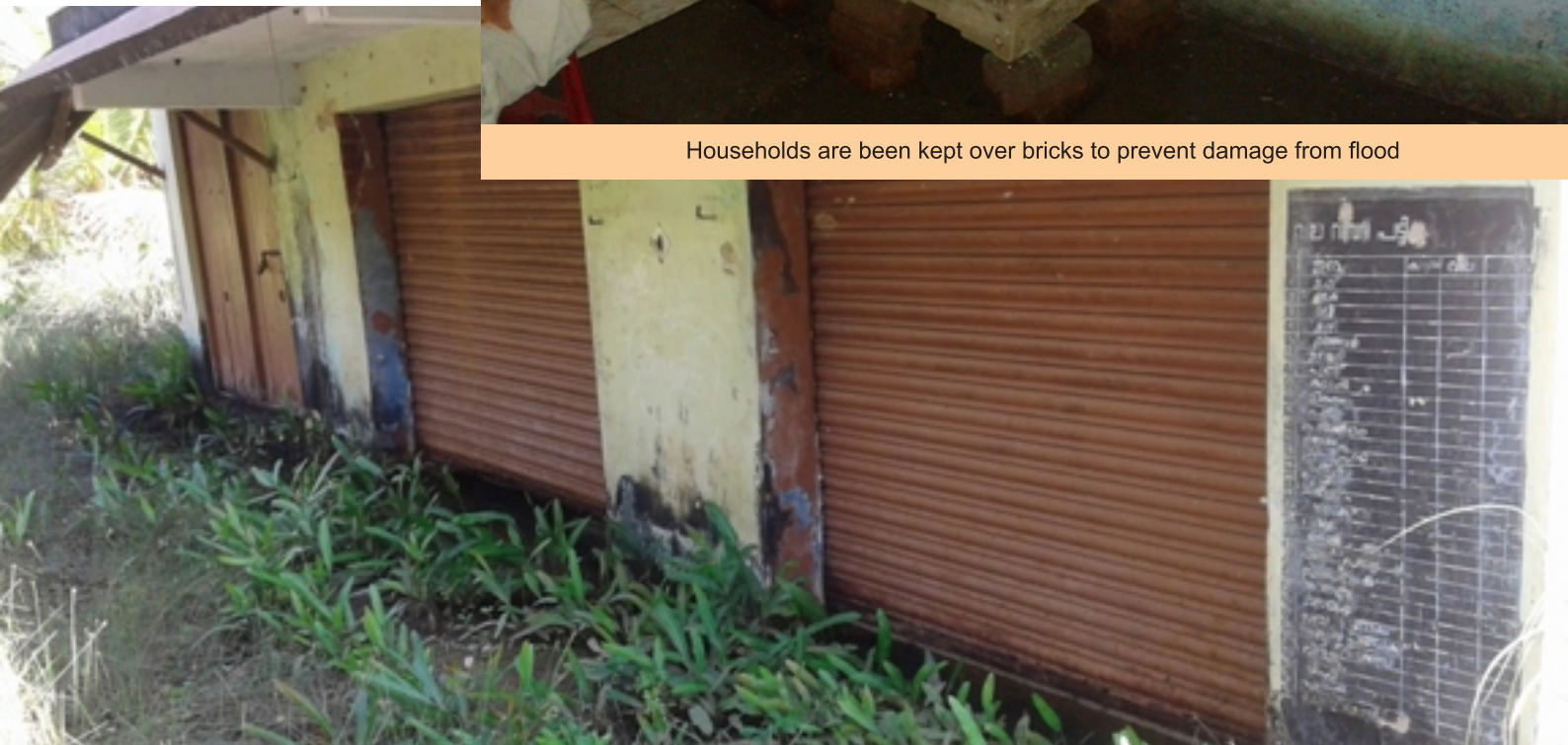
Abandoned house



An residential building abandoned after settlement of the floor below the ground.



Households are been kept over bricks to prevent damage from flood

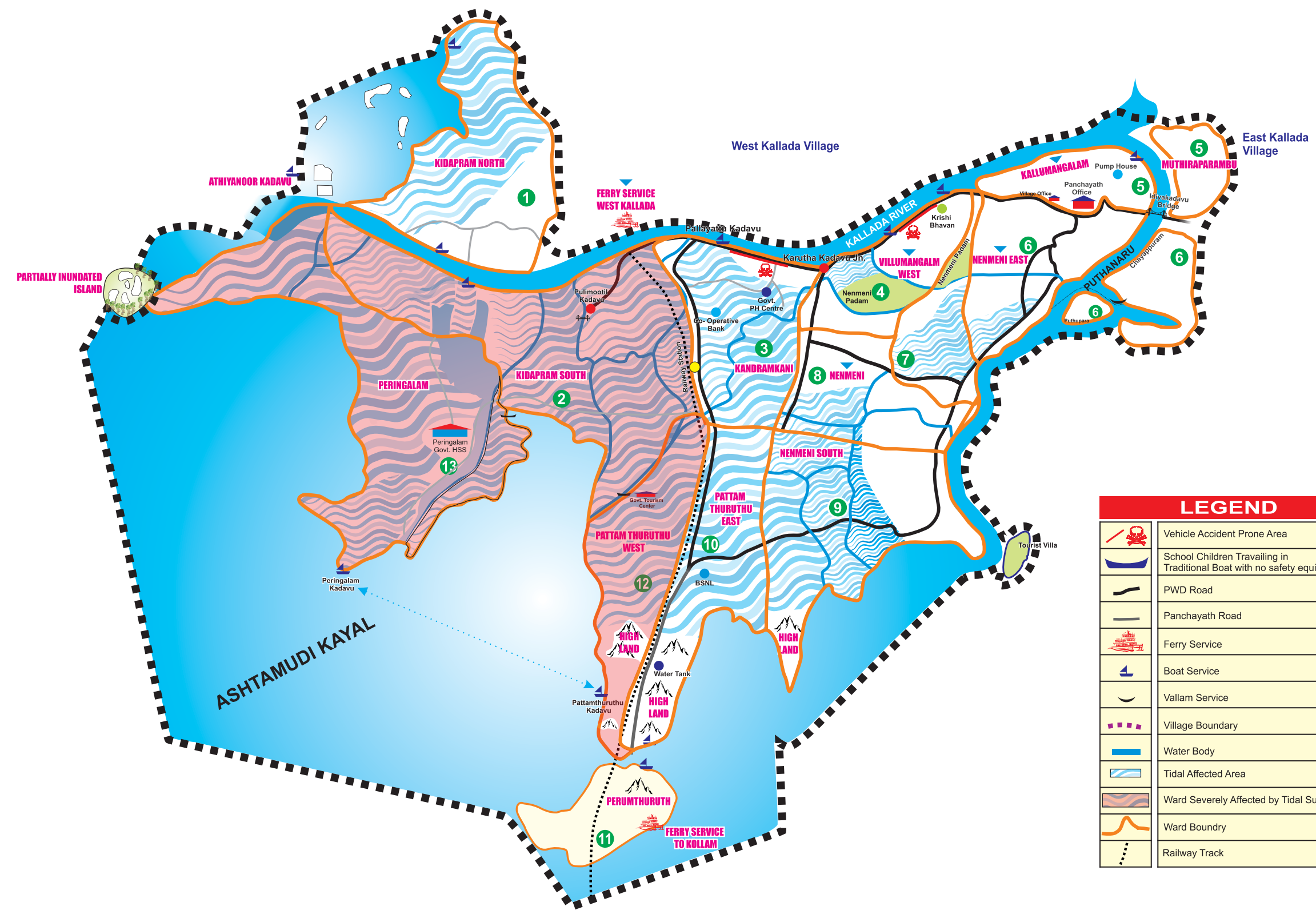


A commercial building that has settled near Munroethuruthu Railway station

PARTICIPATORY LEARNING & ACTION EXERCISE - HAZARD MAP

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 18 Dec. 2015
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 Map not in scale

MUNROETHURUTHU VILLAGE



LEGEND	
	Vehicle Accident Prone Area
	School Children Travailing in Traditional Boat with no safety equipments
	PWD Road
	Panchayath Road
	Ferry Service
	Boat Service
	Vallam Service
	Village Boundary
	Water Body
	Tidal Affected Area
	Ward Severely Affected by Tidal Surge
	Ward Boundry
	Railway Track



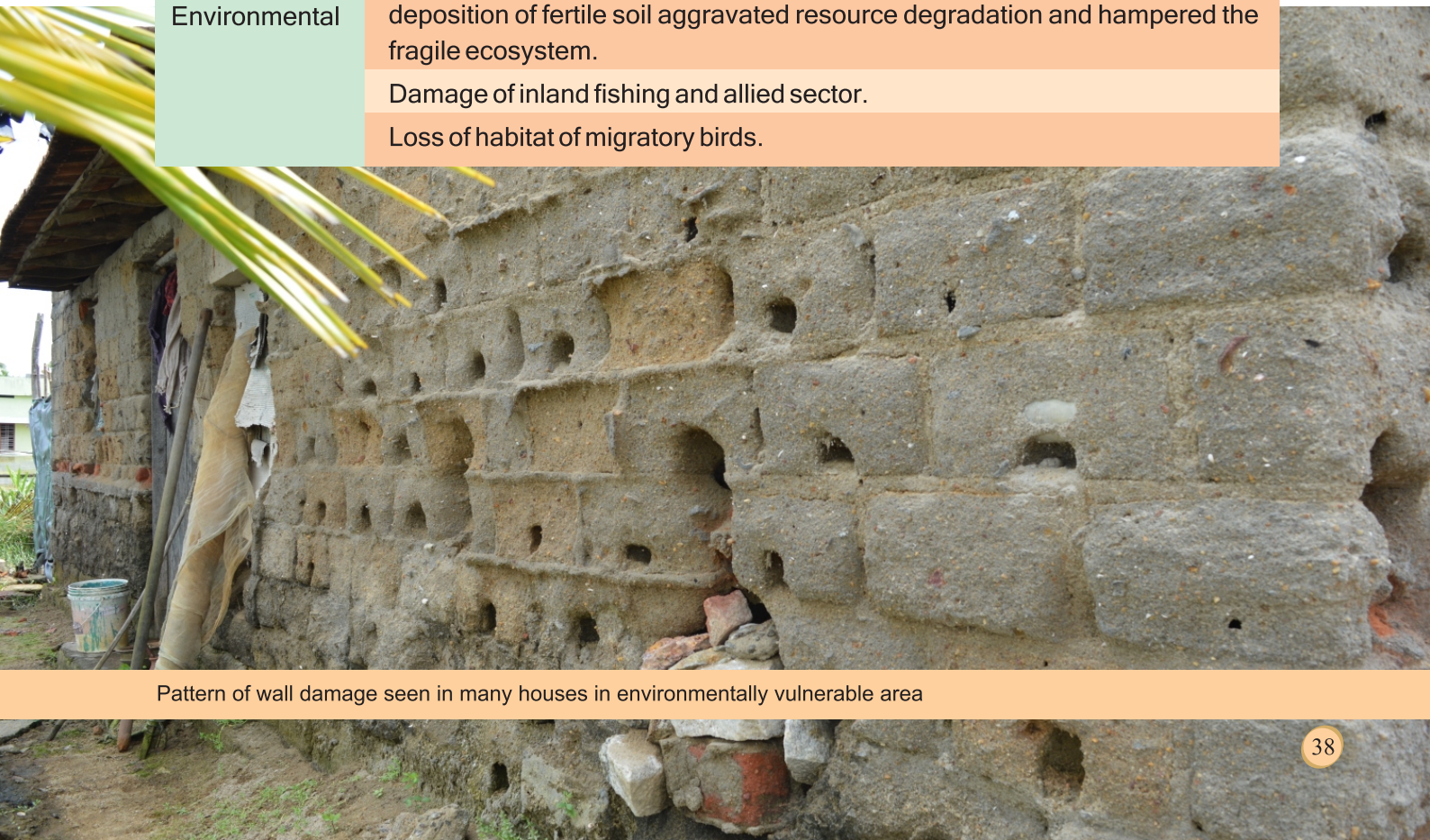
Vulnerability

Vulnerability is a term used to describe exposure to hazards and shocks. People are more vulnerable if they are more likely to be badly affected by events outside their control. “Vulnerability defines the characteristics of a person or group and their situation that influence their capacity to anticipate, cope with, resist and recover from the impact of a hazard.” (Wisner et al, 2004). It involves a combination of factors that determine the degree to which someone's life, livelihood, property and other assets are put at risk by a discrete and identifiable event in nature and society.

In PCVA exercise various dimensions and issues contributing to vulnerability of the community were discussed. Reflections and assessment on factors of vulnerability are as follows.

Dimensions of Vulnerability	Reflections and Assessment of Vulnerability
Physical	Physical setting of Munroethuruthu village is major contributor to its vulnerability. The village is a union of eight small islands situated in the confluence of Kallada River and Ashtamudi Lake. River Puthanaru an offshoot of Kallada River flows through the south eastern side of the village.
	85% of the total land area are situated in low laying area and are vulnerable to tidal surge arising from Ashtamudi Lake resulting in flooding. During high tide, flood water enters buildings and houses leading to damage of property. 85% of the area includes 11 wards which is affected by high tidal surge and flooding. Out of 11 wards 3 wards namely; Ward - 2 Kidapram (South); Ward - 12 Pattamthuruthu (West) and Ward - 13 Peringalam are severely affected. 300 families are living in these area are exposed to flood hazard, of which 175 families of Pattamthuruthu (West) ward are worst hit.
	Few people living in the area had abandoned their houses and moved to safer locations because of settling down of houses below surface level and entering of flood water into dwellings.
	Road network, transport facility, accessibility to emergency services like medical care and safe evacuation during emergency are not available in area where flood havoc is severe.
Social	Level of social well being of individuals, households and communities have a direct impact on their level of vulnerability to hazards. Social dimension to vulnerability was found to be a multi-faceted and a cross cutting issue.
	Awareness, education and training on DRR and Climate Change Adaptation (CCA) among local residents including youth in village are low.
	In-depth awareness, education and training of PRI members in Good governance on DRR-CCA are medium.
	In-depth information of PRI members on roles and responsibilities of key line departments on disaster responses-relief assistance and rehabilitation services is medium.
	Coping capacity and skills to manage disaster risks and exposure to hazard among women, children and youth is low.

Dimensions of Vulnerability	Reflections and Assessment of Vulnerability
Social	Number of Persons with Disability are marginal in the village, however special care plan needs to be evolved to ensure their safety and security from disaster risks and vulnerabilities.
	Due to vulnerability factors and media hype of hazard, men are finding it harder to get alliance from outside the Panchayath.
Economic	Around 1360 Below Poverty Line (BPL) families are residing in physically vulnerable area of the village. After disaster, these families find themselves in difficult circumstance to survive and build back owing to the absence of risk transfer mechanism like insurance and savings to cover up losses from disaster.
	Loss of employment and livelihood due to closer of traditional coir yarn making industries; gradual slowdown in agriculture and allied activities and fishing industries became the reason for increase in poverty.
	After every incident of tidal swell and flooding, people living in vulnerable area are forced to spend available savings for the repair and maintenance of houses which drains out wealth and make poor people poorer.
Environmental	Due to poverty, people living in vulnerable and high risk areas are unable to shift to safer location, which forced them to live with hazard.
	Alarming depletion in mangrove forest cover due to human intervention in the pretext of taking up new developmental activities.
	Reduction in riverine flooding and natural process of sedimentation and deposition of fertile soil aggravated resource degradation and hampered the fragile ecosystem.
	Damage of inland fishing and allied sector.
	Loss of habitat of migratory birds.



Pattern of wall damage seen in many houses in environmentally vulnerable area

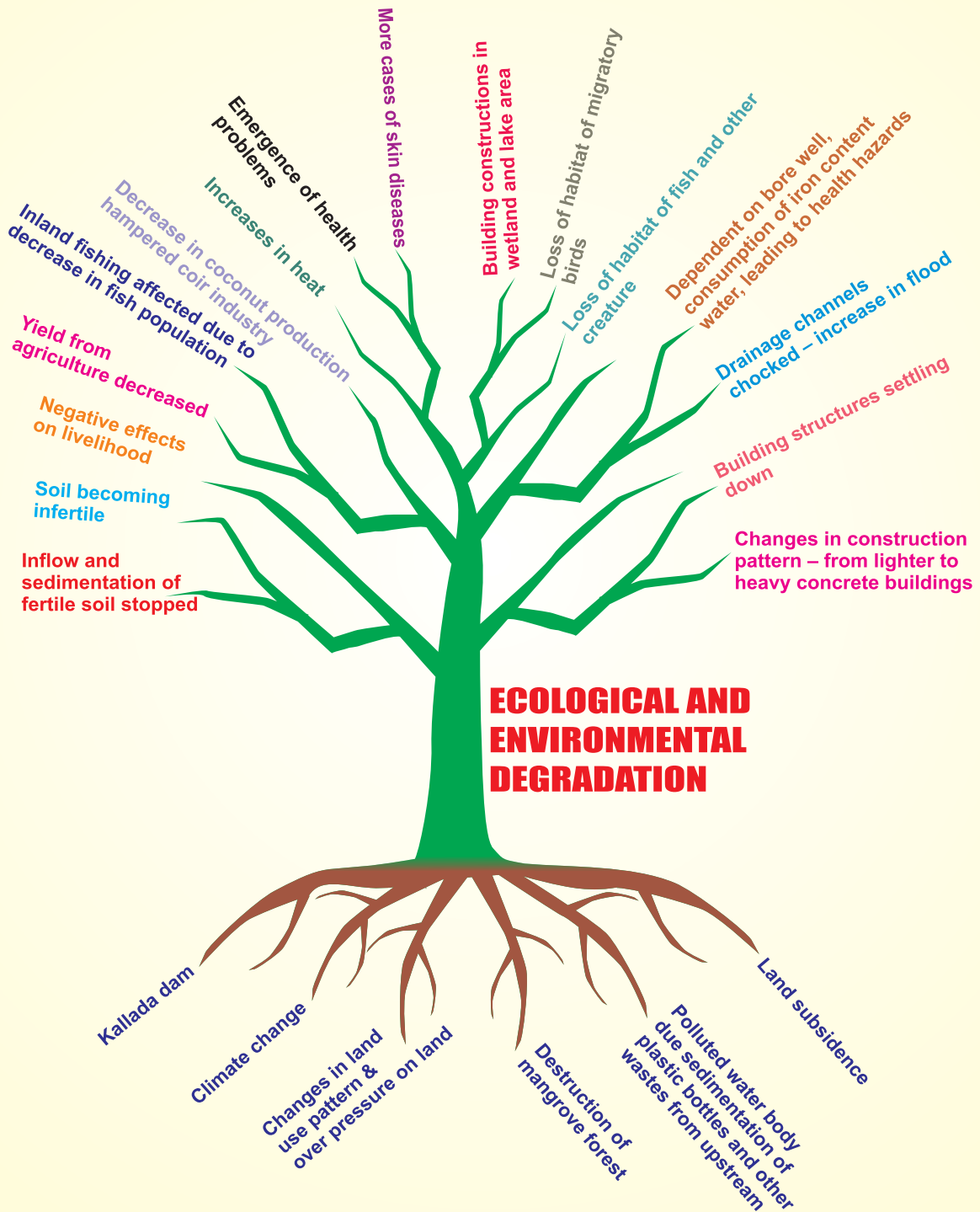
With the objective of developing an effective programme which aims to reduce disaster risks and exposure to hazard, PLA tool called “Problem Tree - Solution Tree” exercise was conducted on 16-March-2016 involving people's representatives and key informants of the Grampanchayath. Under the exercise, all the problems and issues of the village were listed down and a ranking was done to identify major problem being faced by the community and an analysis of the core problem was undertaken. Suggestive action plans and recommendations of the exercise are mentioned in mitigation chapter.

Ranking	Problem Statement.
I	High tidal surge, flooding and incidence of building settling down Negative impact on ecosystem, estuarine and reverine systems due the construction of Kallada dam
IV	Scarcity of clean drinking water
II	Lack of proper sanitation facility suitable for the location - Toilets becoming unusable during high tide
III	Destruction of traditional livelihoods associated with agriculture, its allied activities and inland fishing
VI	Lack of health facilities and infrastructure
V	Lack of better transportation facilities - road network and inland water transportation



Sr. Jessie Mole Sebastian member FDA facilitating session on Problem Tree – Solution Tree Analysis

PROBLEM TREE ANALYSIS



Mitigation

Mitigation is defined as preventive actions characterized by long term measure or action taken to reduce and avert the damaging effects of a hazard on human, community function and on social and economic infrastructure. It includes both structural and non-structural measures to minimize the impact of disaster risks. For developing an effective mitigation plan, understanding local risk, local choices, and investment in long term actions are critical in reducing risks and exposure to hazard.

Objectives

- ❖ To reduce loss of lives
- ❖ To facilitate reduction in economic disruption and losses
- ❖ To reduce factors contributing vulnerability
- ❖ To enhance community and institutional capacity to cope up with hazards
- ❖ To help facilitate rapid recovery and
- ❖ To reduce disaster risks

Following are the recommended mitigation measures that can be adopted by the Grampanchayath and village community to reduce the impact of exposure to hazard.

Structural	Non Structural
Development of appropriate and cost effective building design	Training on DRR and Climate Change Adaptation (CCA) for VDMC
Adoption of alternative sanitation technology	Strengthening of ERT by providing refresher training on DRR and CCA
Construction of rain water harvesting structures to alleviate drinking water problem	Formation of school safety clubs and training and capacity building programme on DRR and CCA
Implementation of bio-shield programme to conserve and protect mangroves forest through people's participation	Encourage integrated farming method to revive coconut production, traditional fishing sector and paddy cultivation by adopting appropriate breed to withstand climate change
Development of land use zonation plan	Promote adoption of risk transfer mechanism like insurance and saving among vulnerable community
Protection of water bodies using appropriate technologies	Installation of safety gears in all traditional boats which ferries school children
Land development programme for increasing soil fertility through organic method	Equipping volunteers of CBDRM with provision of emergency equipments to facilitate rescue operations
Undertaking afforestation and reforestation programme	Alternative rural livelihood programme
Development of road network, walkway bridges and waterways in most vulnerable and interior locations	Collection of plastic bottles and other non degradable wastes from water bodies and convert it into sources of income

Disaster Response

Disaster response planning help facilitate community and organizational readiness to respond to an emergency situation in an effective manner by judicious management of human; financial, emergency supplies and communication procedures. During an emergency or before onset of an emergency, rapid and effective actions are required. For this to happen, disaster response and contingency plan shall be in place along with necessary supplies. If appropriate actions are not taken on time or if response is delayed, then loss will increase.

Steps of Disaster Response

- ❖ Institutional disaster planning
- ❖ Hazard, vulnerability, capacity and risk analysis
- ❖ Resource identification and mobilization
- ❖ Early Warning System (EWS)
- ❖ Linkages and communications and
- ❖ Sectoral responsibilities

The community structure which has been created at zonal level under CBDRM programme should be used as part of response activity. 97 village volunteers (ERT Members) have been trained in three different domains of First Aid/Basic Life Support; Shelter Management and Search & Rescue. Services of these village volunteers should be used for administering first aid to victims of any disaster occurring in the village or at nearby places. Services of village volunteers who had been trained in “Shelter Management” and “Search & Rescue” can be effectively used for helping The Department of Revenue and Disaster Management and other line departments for smooth running of temporary camps/shelters and to rescue people trapped in disasters.

Recommended Action

- ❖ Activate services of ERT formed under CBDRM programme
- ❖ Refresher training programme for volunteers of ERT on their respective domain
- ❖ Provision for procurement of emergency equipments for rescue and relief operation
- ❖ Training for ERT members on operation and maintenance of emergency equipments
- ❖ Issue identity card to trained volunteers

Early Warning and Alert System

Disaster response planning should have a well coordinated “Watch-Alert-Warning and De Warning” message dissemination system at local level to issue warning to vulnerable communities on tidal heights and take appropriate steps to evacuate to safer locations.

At present such EWS is not available in the village. Technical support from agencies like; Indian Meteorology Department (IMD), District Emergency Operation Centre (DEOC); National Centre for Earth Science Studies (NCESS) and Indian National Centre for Ocean Information Services (INCOIS) can be obtained for receiving warning messages on Geo-Physical and Hydro-Metrological hazard.

Warning messages on health hazard can be received from District Medical Office. Formation of one additional ERT having 8-10 volunteers for EWS and training should be provided to those volunteers

for management of warning dissemination. A Community Radio Stations (CRS) linked with agencies issuing warnings is also a viable method to disseminate alert-warning messages to the community. The service of CRS can also be linked with other social development and educational programmes of the village.

Guidelines for EWS

- ❖ Warning message should be in local language
- ❖ Language used should be simple and non-technical
- ❖ Avoid conflicting messages to avoid ambiguity
- ❖ Message should clearly mention exact nature of the impending threat

Recommended Action

- ❖ Establishment of EWS by linking it with technical agencies
- ❖ Formation of Early Warning ERT
- ❖ Provision for training and capacity building programme for volunteers of EWS
- ❖ Establishment of Community Radio System

Evacuation

Evacuation is an important component of disaster response activity. It involves temporary movement of people as well as animals from area at risk of disaster to safer location. Evacuation should be activated in the community by local authority or by other competent authority based on evacuation route plan already in place and follow procedures and process mentioned in Disaster Management Plan. Special attention should be taken to ensure that, travel times to safer locations should be as short as possible. Intensive planning and resource mobilization is required for safe evacuation which includes; identification of shelters, number of people who can be accommodated; number and type of transport facility; provision for food, clothing and availability of basic sanitation infrastructure.

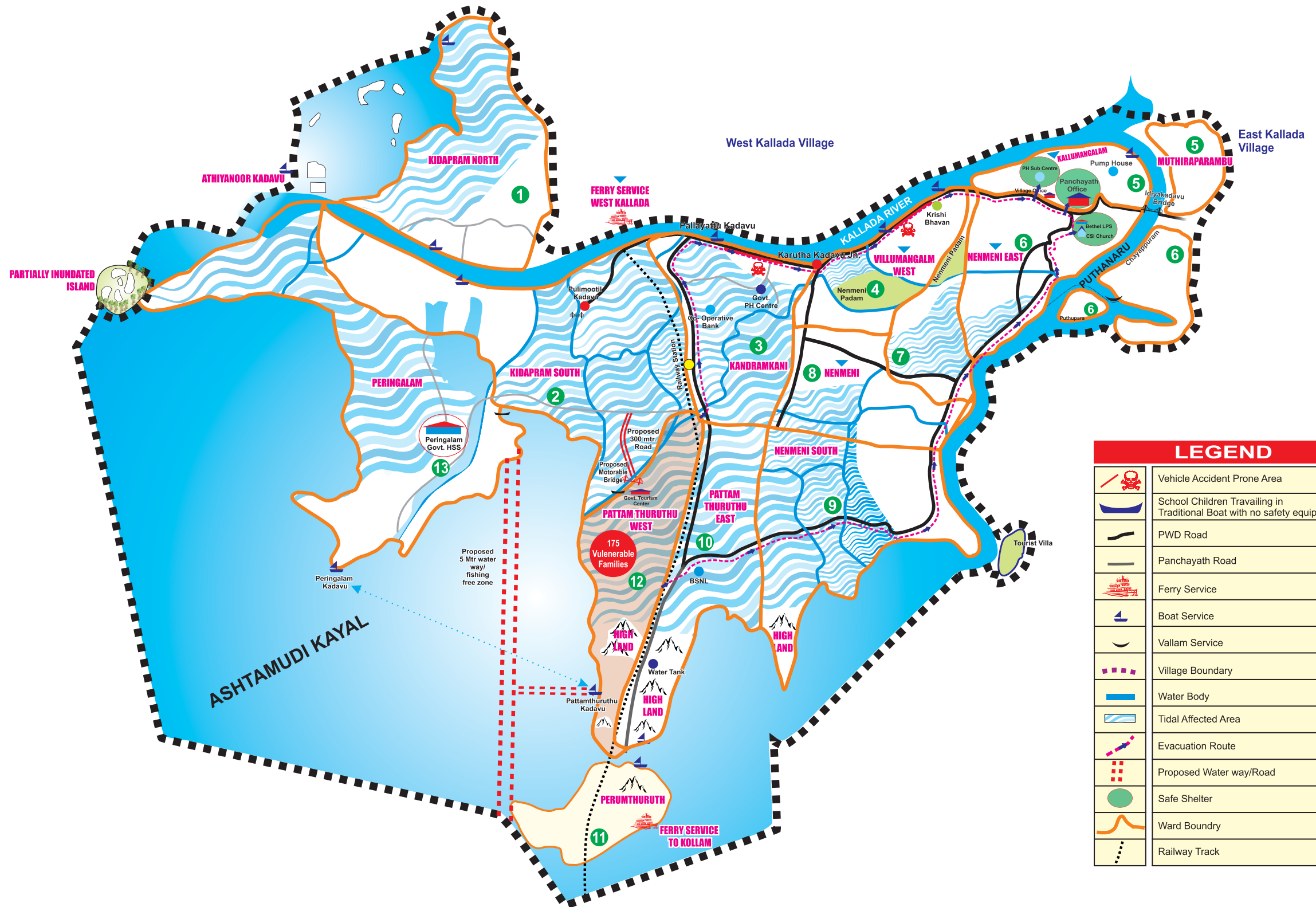
An evacuation route map was prepared for 11 (eleven) flood prone wards of the village with support from PRI members and local community leaders in the PCVA exercise conducted in the Grampanchayath. Narration of evacuation route is mentioned in the table below.

Ward Name and Number	Narration of Evacuation Route
Kidaparam North (1)	People should evacuate to adjoining village of West Kallada
Southern part of Kidaparam South (2); Peringalam (13) and southern tip of Pattamthuruthu West (12)	Proposed 5 meter water way (Fishing Free Zone) interlinking Peringalam; Kidaparam South and southern most tip of Pattamthuruthu West to the adjoining Perummann Grampanchayath. The water way can also be utilized for medical evacuation of people to the district HQ of Kollam during emergency.
Kidaparam South (2); Northern part of Pattamthuruthu West (12); Kandramkani (3) and Villumangalam West (4)	People should evacuate through Public Works Department (PWD) road running parallel to railway track towards Pallayattu Kadavu in ward 3 and travel along the road adjoining Kallada river to reach the proposed temporary shelter at PH Sub Centre in ward 5, which is situated in a higher elevated land.
Pattamthuruthu West (12); Pattamthuruthu East (10); Nenmeni South (9); Nenmeni (8); ward 7 and Nenmeni East (6)	People should evacuate through road from BSNL junction in ward 10 and take the PWD road towards East Kallada village to reach the proposed two temporary shelter sites namely; Bethel Lower Primary School in ward 6 and to Panchayath office compound in ward 5.

PARTICIPATORY LEARNING & ACTION EXERCISE - EVACUATION MAP

Prepared by
 Foundation for
**DEVELOPMENT
 ACTION**
 18 Dec. 2015
 www.fb.com/fdaction
 www.fdaaction.org
 Map not in scale

MUNROETHURUTHU VILLAGE



LEGEND	
	Vehicle Accident Prone Area
	School Children Travailing in Traditional Boat with no safety equipments
	PWD Road
	Panchayath Road
	Ferry Service
	Boat Service
	Vallam Service
	Village Boundary
	Water Body
	Tidal Affected Area
	Evacuation Route
	Proposed Water way/Road
	Safe Shelter
	Ward Boundry
	Railway Track

Village Disaster Management Committee

VDMC was constituted in the village level consultation meeting held on 19-Aug-2015 at Munroethuruthu Grampanchayath Office. Following are the members of VDMC.

S I. No.	Name	Designation / Office	Occupation	Contact Number
1	Shri. Binu Karunakaran	Chairperson	Grampanchayath President	9744982264
2	Smt. Deepthi Nalinakshan	Convener	Village Officer	8547610531
3	Smt. Manju	Member	Grampanchayath Vice President	9645716045
4	Shri. Gopalakrishnan	Member	SCC (Health & Education) & Ward Member	9446902324
5	Shri. Abhijith	Member	SCC (Development) & Ward Member	9567321321
6	Smt. Anumapa	Member	SCC (Welfare) & Ward Member	9048784871
7	Smt. Ajitha Kumari	Member	Ward Member	8129880546
8	Smt. Nithya Babu	Member	Ward Member	9746865902
9	Shri. Sjjju Kumar	Member	Ward Member	8907438096
10	Shri. Shantakumar	Member	Ward Member	9446970003
11	Shri. Rejilal	Member	Ward Member	8943308688
12	Smt. Jyothilakshmi	Member	Ward Member	9605611710
13	Smt. Shyni Krishnakumar	Member	Ward Member	9847369812
14	Smt. Latha Mohanan	Member	Ward Member	9605072453
15	Shri. Joseph. T. E	Member	Secretary	9847482938
16	Shri. Ajith Kumar. P. V	Member	Agriculture Officer, Krishi Bhavan	9447964315
17	Smt. Maya Napolion	Member	CDS Chairperson	8943257963
18	Smt. Sangeetha. P. K	Member	Village Extension Officer	9400194671
19	Dr. Raji Vishwanath	Member	Medical Officer, Govt. Ayurvedic Dispensary	8281143341
20	Shri. Y. Nazerudeen	Member	Health Inspector, Primary Health Center	9496269908
21	Dr. B. Soja	Member	Veterinary Surgeon	9446108541
22	Smt. Sisila. P	Member	ICDS Supervisor	9605429971

Roles and responsibilities of VDMC

- 1) Coordinate, supervise and monitor activities of DM Programme at village level.
- 2) Assist supporting NGO to form ERTs and coordinate training of ERT's.
- 3) Support NGO to mobilize local community for DRR programme.
- 4) Facilitate and support NGO in preparing Village Disaster Management (DM) Plan.

- 5) Presenting Village Disaster Management Plan in the Grampanchayat council for approval.
- 6) Yearly updation of Village Disaster Management Plan.
- 7) Engage ERTs in disaster response activities.
- 8) Evaluate the performance of ERT's.
- 9) Integrating other development activity with VDMP to reduce vulnerability.
- 10) Conduct periodic meetings to review the activities of DRR programme.
- 11) Liaison with government departments like; health, revenue, police, fire force and other agencies for assistance before, during and after disaster.
- 12) Ensure people submit relief application/request to government and ensure they get the benefits and;
- 13) Management of all other DRR activities in the village.

Community sensitization and awareness meetings were conducted in all three zones of the village and three types of ERT's were formed namely; 1) Basic Life Support (First Aid); 2) Shelter Management and 3) Search and Rescue. Members of ERT's were also trained in respective domain. Details of the roles and responsibilities of ERT members in Pre-During and Post Disaster scenario and list of ERT members are mentioned below.

Roles and responsibilities of ERT- Basic Life Support / First Aid

Phase	Roles and responsibilities	
Pre Disaster	1	Maintain list of pregnant women, infants, disabled, sick and old people in the village.
	2	Ensure that victim's medical needs and necessities are met.
	3	Stock first aid box, disinfectants, water purifying tablets, antiseptics, medicines, bandages, scissors, blades, splints, iodine, ointments, antidotes to insect bites, ORS sachets, clean cloths well in advance.
	4	Distribute basic medicines (Chlorine Tablets, Oral Rehydration Solution Sachets) and demonstrate their use to families in advance.
	5	Arrange stretchers for carrying injured people.
	6	Keep regular contact with VDMC.
During Disaster	1	Ensure strict hygiene behavior is practiced in the shelter.
	2	Make arrangement and ensure medicine stock and first aid kits are available in relief camps and in the village.
	3	Access the medical need of the evacuees.
	4	Ensure all injured get medical attention.
	5	Liaison with govt. health department for catering major medical assistance.
	6	Keep regular contact with VDMC.
Post Disaster	1	Informing VDMC about medical supplies that are running short.
	2	Help doctors to shift injured to hospitals.
	3	Attend to injuries and trauma of rescued people.

Phase	Roles and responsibilities	
Post Disaster	4	Adopt proper steps to prevent epidemic from spreading like; cholera, dysentery, gastroenteritis etc.
	5	Create awareness in the community to maintain higher levels of personal hygiene and sanitation.
	6	Disinfect shelter houses.
	7	Keep regular contact with VDMC.

Roles and responsibilities of ERT- Basic Life Support / First Aid

Sl. No.	Name and Address	Ward Name/Number	Gender	Contact Number
1	Sheela.C, Thiyil Padinjattathil, Nenmani	Nenmani (8)	Female	9846019065
2	Sreelatha.R, Sasanka Mandiram, Nenmani	Nenmani (8)	Female	9539156420
3	Usha.S, Uthradam, Nenmani	Nenmani (8)	Female	9746653825
4	Sudharma, Chapprayil, Nenmani	Nenmani (8)	Female	9746653825
5	Kumari.S, Chaithram, Pattanthurathu.P.O	Pattamthurathu East (10)	Female	9526936647
6	Ushakumari, Deepthi Nivas, Pattanthurathu.P.O	Pattamthurathu East (10)	Female	9656857701
7	Rekha.T, Velayudha Madhiram, Pattanthurathu.P.O	Pattamthurathu East (10)	Female	9846337585
8	Priyadevi.T, Thundathil Parambil, Nenmani South	Nenmani South (9)	Female	9497758141
9	Sindhu Sajan, Nedum Thoppil Veedu, Nenmani East	Nenmani East (6)	Female	9496271257
10	Praveena.S, Thulasidharan, Pattanthurathu.P.O	Pattamthurathu East (10)	Female	9645325895
11	Sunitha.G, Pulimuttil, Manrothurath	Kidapram (2)	Female	9645326145
12	Rajamma.G, Ajai Bhavan, Kidabram	Kidapram (1)	Female	9947640823
13	Asha.L, Preetha Bhavanam, Pattanthurathu.P.O	Pattamthurathu West (12)	Female	7561069247
14	Sandhya.S, Lekshmivilasathu Kizhakkathil, Pattanthurathu.P.O	Pattamthurathu West (12)	Female	9544796153
15	Vidhya.U, Karthika, Pezhum Thurah	Pezhumathurath (11)	Female	9048708588
16	Ajusha.L, Panavila Puthuval Pezhumthuruth, Perumom.P.O	Pezhumathurath (11)	Female	9947201393
17	Chandralatha, Thottakarayil	Nenmani South (9)	Female	9645497350
18	Vasanthu Kuamri, Ajitha Vilasam	Kidapram (3)	Female	9497768712
19	Sujatha, Kottavayalil	Kidapram (3)	Female	8129048773

Sl. No.	Name and Address	Ward Name/Number	Gender	Contact Number
20	Sulekha, Sanil Bhvanam	Kidapram (3)	Female	9526213003
21	Rajina.V, Snehalayam	Villimangalam West (5)	Female	9656857731
22	Sunandha.S, Sheeja Bhavan	Nenmani South (9)	Female	8289848273
23	Rejani.R.R, Rajani Bhavanam, Pattamthuruth.P.O	Pattamthurath (12)	Female	8156839254
24	Aisha Kumari.I, Sunil Sadhanam, Pezhumthuruth	Pezhumathurath (11)	Female	9656520260
25	Praveena.P.S, Sopanam	Pezhumathurath (11)	Female	9400953104
26	Surendran.K, Thekke Thoppil Veedu, Nenmani	Nenmani East (6)	Male	8086489002
27	Dilesh Babu.R, Thondam Kandathil Veedu, Nenmani	Nenmani (8)	Male	9447993466
28	Thankamani Sasidharan	Kidapram Thekkum (2)	Female	9497769330
29	Preetha.S, Plavaravayalil	Kandramkani (3)	Female	9562357895
30	Anil Kumar.R, Mullamangalath	Thumbukham (8)	Male	9645388860
31	Vineeth.K	Nenmani East (6)	Male	9947789821
32	Achu, Palathinkada Veedu, Nenmani	Nenmani (8)	Male	7403259506
33	Sabin, Moolakandathil Veedu	Villimangalam West (5)	Male	8137823993
34	Ajay Sivan, Ayodhya, Villimangalam	Villimangalam West (5)	Male	9809054162
35	Sooraj.S, Parvathy Mandhiram, Villimangalam	Villimangalam West (5)	Male	8907839027
36	Arun.K, Kochu Kandathi, Villimangalam	Villimangalam West (5)	Male	9633719095
37	Lillykutty.M, S.S. Bhavanam, Kidapram	Kidapram (1)	Female	9633411435
38	L.Ramany, Mammootti Tharayil, Kidapram	Kidapram (1)	Female	9562354032
39	Subhashini, Thundikadayil, Villimangalam	Villimangalam West (5)	Female	7558951253
40	Rejani Pradeep, Pulivattathil, Kidapram	Kidapram (2)	Female	9847014175
41	Sakunthala, Rajesh Bhavan, Kidapram	Kidapram (2)	Female	9645328391
42	A.V. Ajitha, Prakasha Mandiram	Villimangalam West (5)	Female	9447790413



Roles and responsibilities of ERT- Shelter Management

Phase	Roles and responsibilities	
Pre Disaster	1	Check safety houses and buildings that have been identified to accommodate people.
	2	Consult engineers and make necessary repairs and make the building livable.
	3	Stock food materials, water, utensils, medicines, candles, matchboxes and kerosene for at least one week.
	4	Ensure sanitation facilities for men, women and children are available in the shelter are usable.
	5	Promote community kitchen to avoid too many fires in shelter.
	6	Keep camp site clean and disinfect the area.
	7	Keep regular contact with VDMC.
During Disaster	1	Register evacuees and hand over identification slips to distribute food and medicine to prevent duplication.
	2	Prevent people from moving out of the shelter during or before the disaster is about to struck.
	3	Mobilize adequate stocks of food, clothing and fuel wood from the government.
	4	Keep regular contact with VDMC.
Post Disaster	1	Using shelter house as a center for distributing relief material so that supplies are not hoarded by unscrupulous people.
	2	Replenish stocks of food, clothing and fuel from government store.
	3	Ensure that families do not cook individually for avoiding too many fires in shelter house.
	4	Help damage assessment team in assessing the extent of damage.
	5	Keep regular contact with VDMC.

Members of ERT – Shelter Management3

Sl. No.	Name and Address	Ward Name/Number	Gender	Contact Number
1	Shyala.C, Saramgi, Nenmeni South	Nenmeni South (9)	Female	8129435922
2	Geethakumari (Sangeetha Bhavan)	Pattam Thuruth East (10)	Female	9446979700
3	Sujatha, Kottuvayalil	Kandramkani (3)	Female	8129048773
4	Sulekha (Sanal Bhavan)	Kandramkani (3)	Female	8129048773
5	P.Suresh Babu (Peroorkuzhiyil Villimangalam)	Villimangalam (5)	Male	9446177688
6	Mini.N (Murali Sadhanam)	Pezhumthuruth (11)	Female	8086329196
7	Saritha.K (N.S.Mandiram)	Pezhumthuruth (11)	Female	8086275140
8	Anupama.V (Swamy Sadanam)	Kandramkani (5)	Female	7025423001

Sl. No.	Name and Address	Ward Name/Number	Gender	Contact Number
9	Umedrababu	Kandramkani (4)	Male	9633582017
10	Kailas Dhanapalan	Kandramkani (3)	Male	9633473239
11	Manju.S (Jalaja Mandiram, Nenmeni)	Kandramkani (8)	Female	9645716045
12	Latha Mohan	Kandramkani (13)	Female	9605072453
13	Vasantha Kumari (Ajitha Vilasam)	Kandramkani (3)	Female	9497768712
14	Ambujan (Manakkadavil Puthen Veedu, Nenmeni South)	Nenmeni South (9)	Male	9446360472
15	M.K.Sarvanjan	Nenmeni South (9)	Male	9656584577
16	Ambili (Ambili Bhavan, Villimangalam)	Pattam Thuruth East (10)	Female	9447791313
17	Vijayamma (Pullanthara Kadayil)	Pattam Thuruth East (10)	Female	918607378
18	Anadhavally (Abhithabhavan Mandrothurathu)	Nenmeni South (9)	Female	9946298176
19	Premeela Ashok (Asoka Bhavan Mandrothurathu)	Nenmeni South (9)	Female	7558859594
20	Sasaikumari (Dwaraka Mandiram Mandrothurathu)	Nenmeni South (9)	Female	Nil
21	Sreeleha (Ashok Bhavan, Mandrothurathu)	Nenmeni South (9)	Female	8943257983
22	Rani (Puthen Kadathil, Mandrothurath)	Nenmani South (9)	Female	4712542684
23	Sushama (Bharantheth, Mandrothurath)	Nenmeni South (9)	Female	8129758194
24	Sajini (Moolakandathil, Villimangalam)	Villimangalam (5)	Female	8129712086
25	Sooraj.S (Parvathy Mandiriram)	Villimangalam (5)	Male	8907839027
26	Ajay Sivan (Ayodhya Villimangalam, Mandrothurathu)	Villimangalam (5)	Male	9809054162
27	Santha Kumar.K.T	Villimangalam (5)	Female	9446970003
28	Rajeev.S	Villimangalam (5)	Male	Nil
29	Rajilal.N	Nenmeni South (9)	Male	8943308688
30	Mithran	Nenmeni South (9)	Male	8129670059

Roles and responsibilities of ERT- Search & Rescue

Phase		Roles and responsibilities
Pre Disaster	1	Prepare rescue kit which contains; rope, iron hooks to tow, container to bail out water, torches, anchor, first aid kit or life jackets and other floatable objects.
	2	Keep tools and implements like; hammer, cutting saw and blades, nails etc ready to rescue people stuck under ravaged houses and other building structures.

Phase	Roles and responsibilities	
Pre Disaster	3	Help people to collect their valuables and other belongings before evacuation.
	4	Ensure rescue vehicle is kept ready.
	5	Regular contact with VDMC.
During Disaster	1	Pick up or facilitate to pick up vulnerable people and groups.
	2	Keep records of people rescued.
	3	Regular contact with VDMC.
Post Disaster	1	Inspect village and bring stranded and injured people to safer places and provide and get medical attention.
	2	Clear roads, fallen tree, debris and restore communication and transportation facilities.
	3	Maintain a "Missing Persons" register and update it after each rescue trip.
	4	Carry out a mock drill for evacuating people to have a fair idea of what problems need to be tackled.
	5	Join other groups to help them in implementing their duties.
	6	Regular contact with VDMC.

Members of ERT – Search and Rescue

Sl. No.	Name and Address	Ward Name/Number	Gender	Contact Number
1	Arun . S. Kumar, Murali Sadanam, Pezhumthuruth, Perumon. P.O, Kollam	Perumthuruthu (11)	Male	9567811303
2	Binu. K. B, Kizhakkevilayil, Pattomthuruth PO, Perinadu, Kollam	Perumthuruthu (11)	Male	8086238314
3	A. V. Ajitha, Prakash mandiram, Nenmeni North, Munrothuruth	Nenmeni East (6)	Female	9447790413
4	Vinitha. A, Sujith Bhavanam, Kidapram North, Munrothuruth	Kidapram North (1)	Female	9567070869
5	Seena. V. R, Olatharayil, Nenmeni, North. Munrothuruth	Nenmeni East (6)	Female	8907289797
6	Rajesh. S, Poothakuzhi, Perungalam	Nenmeni (8)	Male	9544597223
7	Binu. Karunakaran, Perungalam	Kidapram South (2)	Male	9744982264
8	Sosamma, Puthenkandathil, Nenmeni Vadakku, Munrothuruth	Villimangalam West (4)	Female	Nil
9	Soudamini, Kochadukkath, Nenmeni, North, Munrothuruth	Nenmeni East (6)	Female	Nil
10	Indira, Puthenkandathil, Nenmeni Vadakku, Munrothuruth	Nenmeni East (6)	Female	Nil

Sl. No.	Name and Address	Ward Name/Number	Gender	Contact Number
11	Radha. K, Puthen Kandathil, Nenmeni North, Munrothuruth	Nenmeni East (6)	Female	Nil
12	Ananthu, Kochayyathu Veedu, Nenmeni, Munrothuruth	Nenmeni East (6)	Male	7356245715
13	P. Suresh Babu, Perrorkuzhiyil, Villimangalam	Villimangalam West (4)	Male	9446177688
14	Shiju Kumar, Nenmeni Kizhakku, Munrothuruth	Nenmeni East (6)	Male	8907438096
15	Prakash. N. Navin Nivas, Nenmeni Vadakku, Munrothuruth	Nenmeni Vadakku	Male	946614670
16	A. Yesudasan, Ajayavilasam, Padappakkara. P.O	Kidapram South (2)	Male	04742529760
17	Dasan S, Kattuvilakodiyil, Padappakkara	Kidapram South (2)	Male	9656111262
18	Nivin Nepolian, Mullasseril, Nenmeni East, Munrothuruth. P.O	Thoompummukham	Male	9645850235
19	Shibin Jose, Manathara Veedu, Nenmeni East, Munrothuruth. P.O	Thoompummukham	Male	9995130297
20	K. Radhakrishnan, Nenmeni, Manalithara Puthen Veedu, Munrothuruth. P.O	Nenmeni	Male	9447502880
21	B. Ambujan, Manakkadavil Puthen Veedu, Nenmeni South, Munrothuruth	Nenmeni Thekku	Male	9446360472
22	Jacob Samuel, Charuvil Bhavan, Munrothuruth. P.O	Villimangalam	Male	9946614680
23	Sasikumar. B, Appu Veedu, Villimangalam, Munrothuruth	Villimangalam	Male	9446908474
24	R. Muraleedharan, Kolloorvilakam, Villimangalam	Villimangalam	Male	Nil
25	Santhosh, Valiattu Varambil, Villimangalam West, Munrothuruth	Villimangalam West (4)	Male	8156841618

Conclusion

Munroethuruthu Village Disaster Management Plan is prepared as part of Community Based Disaster Risk Management Programme under “GoI-UNDP Project on Enhancing Institutional and Community Resilience to Disaster and Climate Change” supported by United Nations Development Programme (UNDP) and The Department of Revenue and Disaster Management, Govt. of Kerala. The ultimate objective of the initiative is to facilitate reduction in disaster risks and factors and components of vulnerabilities through enhancing community and institutional capacities. Community consultation, collective decision, people's involvement and participation were ensured in all its phases of programme implementation. Participatory Capacity Vulnerability Assessment (PCVA) and Participatory Learning & Action (PLA) tool was carried out in various stages. Exposure to hazard, disaster risks and vulnerabilities are all dynamic in nature, hence VDMP need to be updated once in a year. Munroethuruthu village and Grampanchayath shall take the lead to disseminate the plan to the next level and take further steps to implement suggestive actions and recommendations mentioned in the DVMP. “Let collective actions reduce exposure to hazard, risks and vulnerabilities”.

Hospitals	Phone number	Website / E-mail
Upasana Hospital, Q.S. Road, N.H. 208, Kollam	0474-2762887 2762889	Web: www.upasanahospital.com E-mail: upasanahospital@hotmail.com
Ashtamudi Hospital & Trauma Care Centre, NH Bye Pass, Thattamala, Kollam	0474-6565652, 6565653, 2534044	Web: www.ashtamudihospitalandtraumacare.com E-mail: ashtamudihospital@gmail.com
Travancore Medical College, N.H. Bypass Road, Umayanalloor P.O, Kollam	0474-2721999 2729393, 2726161	Web: www.tmc.ac.in E-mail: travancoremecollege@gmail.com
Bishop Benziger Hospital, Beach Road, Kollam	0474-2768201-5 0474-3987000	Web: www.bishopbenzigerhospital.com E-mail: bishopbenzihosp@hotmail.com
Meditrina Hospital, Ayathil, Kollam	0474-2721111	Web: www.meditrinahospitals.com E-mail: info.klm@meditrinahospital.com
Holy Cross Super Speciality Hospital, Kottiyam, Kollam	0474 2530121, 2530122 2530123, 2530124	Web: www.holycrosskottiyam.org
KIMS Hospital, Sitara Junction, Kottiyam, Kollam	0474-3041234 0474-3041000 6616666, 2537000	Web: www.kimskollam.com E-mail: kimskollam@kimsglobal.com
Dr. Nair's Hospital, Residency Road, Asramam, Kollam	0474-2766180 09895559345	Web: www.drnairshospital.com E-mail: mail@drnairshospital.com
R.Sankar Smaraka Hospital, Kadanmukku, Kollam	0474-2743845	
E.S.I. Hospital, Super Speciality Hospital, Asramam, Kollam	0474 - 2742833 2766618	Web: www.esichsuperspecialitykollam.com
Vijaya Hospital, Pulamon P.O, Kottarakkara, Kollam	0474-2650856 2651823	Web: www.vijayahospitalktr.com E-mail: info@mycompany.com
Nanni Memorial Hospital, Oolayil, Kollam	0474-2795145	
Govt. Victoria Hospital. Kollam	0474-2752700	
District Hospital, Kollam	0474- 2742004 2748495, 2768667	
District Hospital, Casualty, Kollam	0474-2750206 2740430	
Taluk Hospital, Kollam	0474-2742004 2750206	
LMS Hospital, Kundara	0474-2522939 2522219	

Important Offices	Contact Person	Contact Number
Collectorate, Kollam	Enquiry	0474-2793473
Collectorate, Kollam	Collector	0474-2794900, 2742666 (R)
Collectorate, Kollam	Dy. Collector (General) & ADM	0474-2795186
Village Office, Munroethuruthu	Village Officer	8547610531
Animal Husbandry, Kollam	Deputy Director	0474-2793464
Veterinary Hospital, Munroethuruthu	Veterinary Doctor	9495003061
Civil Supply Office, Kollam	Dist. Supply Officer	0474-2794818, 9847014473
Civil Supply Office, Kollam	Taluk Supply Officer	0474-2794954, 9842746680
Ration Shop, Nenmeni East, Munroethuruthu	Shri. Pradeep Kumar	9745950310
Ration Shop, Pattomthuruthu, Munroethuruthu	Shri. Sanjeev Chandran	9526804676
Social Justice Department, Kollam	Dist. Social Welfare Officer	0474-2790971
KSEB, Kollam	Dy. Chief Engineer	0474-2740933, 9847074113
KSEB, Kollam	EE, Electrical Division	0474-2740593
KSEB, Munroethuruthu	Sub Engineer	9495055059
Fisheries, Kollam	Dy. Director	0474-2792850
Fisheries, Neendakara	Control Room, Neendakara	0476-2680036
Fisheries, Neendakara	Marine Enforcement Office	0476-2680036
Kerala Fire & Rescue Services	Asst. Divisional Officer, Kollam	0474-2746200
Kerala Fire & Rescue Services	Station Officer, Kundara	0474-2522490, 9497920050
Health Department, Kollam	Dist. Medical Officer	0474-2795017, 9946105473
Home Department, Kollam	Superintendent of Police	0474-2742656
Home Department, Kollam	Police Control Room	100, 0474-2742072
Home Department, Kundara	Circle Inspector, Kundara	0474-2547450, 9497931025
Home Department, East Kallada	Sub Inspector, East Kallada Police Station	0474-2585240, 9497980167
Agriculture Department, Munroethuruthu	Agriculture Officer	9566956932
ICDS, Vellimangalam, Munroethuruthu	ICDS Supervisor	8547610531
Post Office, Vellimangalam, Munroethuruthu	Post Master	9747445588

Important Offices	Contact Person	Contact Number
Primary Health Center Munroethuruthu	Medical Officer	0474-2543448
MGM Arts & Sports Club	Secretary	9633774343
Pullintarayil Clinic	Doctor (BAMS)	9656462519
Sreeram Medicals, Vellimangalam, Munroethuruthu		9995747072
Neethi Medical Store, Vellimangalam, Munroethuruthu		8056536736

Helplines	Contact Number
Police	100
Fire	101
Childline	1098
Crime Stopper	1090, 0474-2763694
Women Helpline	1091
Railway Enquiry	131
Rail Alert	9846200100
BLOOD BANKS	
IMA Centre, Asramam, Kollam	0474-2762837
Holy Cross Super Speciality Hospital, Kottiyam	0474-3041209
Bishop Benziger Hospital, Kollam	0474-2768202
District Hospital, Kollam	9495753221
St. Joseph Hospital, Anchal	0475 271341
AMBULANCE SERVICES	
Holy Cross Super Speciality Hospital, Kottiyam	0474-2530121
LMS Hospital, Kundara	0474- 2522939, 2522219
Travancore Scans, Kollam	0474-2763080
Sankers Hospital, Kollam	0474-2743849
District Hospital, Kollam	0474-2750206
Upasana Hospital, Kollam	0474-2762888
Medicity, Kollam	0474-2531770, 9447129430
MOBILE MORTUARIES	
Holy Cross Super Speciality Hospital, Kottiyam	0474-2530121
LMS Hospital, Kundara	0474-2750206
NS Hospital, Thattamala	0474-9447588705, 2724823

Helplines	Contact Number
SKILLED HUMAN RESOURCES	
Carpenter (Shri. Vinod), Munroethuruthu	9744894191
Concrete Cutter / Welder (Shri. Eliyas), Munroethuruthu	9846267696
Diver (Shri. Manikandan, Thottumughattu, Nenmeni South, Munroethuruthu	9048113070
Diver (Shri. Sivaprasad, Kochu Udakathil, Vellimangalam West, Munroethuruthu)	9656192069
Diver (Shri. Anilkumar, Ani Vilasam, Nenmeni South, Munroethuruthu	9048103435
Doctor Shri. Venugopal, Munroethuruthu	9447162224



Station Officer Kerala Fire and Rescue Services Kollam imparting Life Skill Training to School Children



Process of Project Implementation

Familiarization Visit	16-May-2015 Interaction with PRI members and local community members
Village level consultation meeting	19-August-2015 24 People Participated
Meeting in zone - I	08-December-2015- 38 People Participated 15-December-2015- 23 People Participated
Meeting in zone - II	18-December-2015 46 People Participated
PCVA Exercise	18-December-2015 46 People Participated
Meeting in zone - III	30-December-2015 101 People Participated
Task Force Training Programme (First Aid)	31-December-2015 42 People Participated
Task Force Training Programme (Shelter Management)	15-January-2016 30 Volunteers Participated
Task Force Training Programme (Search & Rescue)	15-March-2016 25 Volunteers Participated
PLA Exercise	16-March-2016 12 People Participated
Submission of VDMP	31-May-2016

URGENT

No. N3-20257/2015

Collectorate, Kollam

Dated: 30.04.15

From

The District Collector,
Kollam.

To

The Head Scientist & Member of KSDMA,
State Emergency Operation Centre.
ILDm, PTP Nagar, Thiruvananthapuram.

Sir,

Sub: Selection of a village for preparation of Disaster Management Plan in Kollam district –Report forwarding of -reg.

Ref: Letter No.SEOC/proj/114/2013, dtd.07.04.15 of the Member, KSDMA & Head Scientist of State Emergency Operating Centre under KSDMA, Tvpm.

Attention is invited to the reference cited. As part of the preparation of a comprehensive village level disaster management plan with a climate change perspective, the district administration recommends Mundrothuruthu Village in Kollam Taluk for the above project.

Mundrothuruthu is one of the most vulnerable villages in Kollam district because most of the low lying places here in are flood prone areas. Its geographical position is the prime reason for its vulnerability to floods as this village is situated on the banks of Kallada river and Ashtamudi Lake. During the high- tide periods, the low lying areas including populated and cultivated areas such as Kidapram, Perungalam, Pattamthuruthu, Kandramkaani are flooded with river water, which is causing much hardships to the normal life of people residing here. Hence, this village is suitable for having a DM plan of its own and recommended to include in the proposed project.

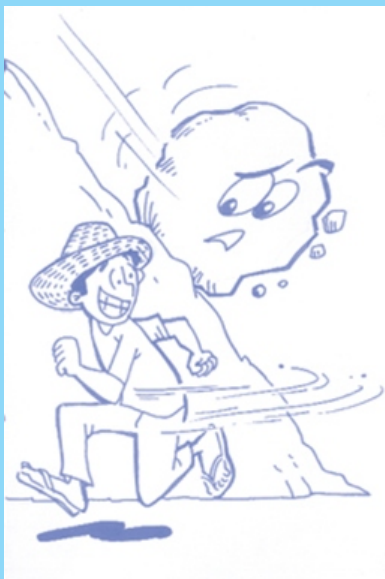
Yours faithfully

Deputy Collector (General)
For District Collector

Addressing hazard through mitigation measures



Addressing vulnerability through enhancing individual survival skills



Addressing vulnerability through community readiness and community support system that helps the individual to survive



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