

Inter-Agency Rapid Needs Assessment Report - Draft

Floods and Landslides, Kerala –
October 2021

State Inter Agency Group (IAG) - Kerala

Acknowledgement

This Rapid Needs Assessment (RNA) would not have been possible without the cooperation and constant support of the volunteers, local member organizations of the Inter Agency groups across Kerala, district officials, line departments, ward members and PRI members from affected areas. We are indebted to all of them, exigencies of the space and time constraints limit us from naming/ mentioning each one of them here.

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And, above all, the communities of affected areas of Districts Kottayam, Pathanamthitta, Idukki and Alappuzha, who, even amidst the adversities took out time and patiently provided answers to all the questions put to them, without reservations.

IAG Kottayam, Idukki, Pathanamthitta, Alappuzha, Sphere India and UNICEF
21st October 2021

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Executive Summary

Kerala is one of India's most vulnerable states to climate change and also one of the most disaster-prone states in India in recent times. The geographical location, land characteristics, number of rivers and dams constructed across them add on to the existing hazards. The change in monsoon patterns, and change in land use pattern makes highlands and coastal areas of Kerala highly vulnerable to natural hazards. Floods are fast becoming an annual phenomenon affecting upto 30% of the state's extreme cases.

Heavy monsoon rains in October 2021, under the influence of low-pressure area over south-east Arabian Sea, the state of Kerala received heavy rainfall across several districts. The heavy rainfall resulted in landslides and flash floods across multiple locations in the state. Massive landslide incidents occurred in Kootickal and Mundakkayam in Kottayam and Kokkayar in Idukki Districts. A total of 54 deaths were reported and 3 missing as of 22th October, 2021. The Government and humanitarian stakeholders supported affected communities and mobilized resources to provide food and non-food items to people in affected areas. However, even though, compared to the 2018 and 2019 monsoon flood, the 2021 floods and landslides is not that widespread, it has impacted many districts, and the distress to the people and disruption created is severe and impact may last for a longer period in these regions. This is notably since the affected region and population were not prepared for it, and the prolonged impact of floods in 2018 and 2019 is still lurking in these areas.

The rapid needs assessment report reveal that there are still persisting needs at the community level. To have an overview on the effects and impact of the disaster, there is a proposal to conduct a 'Post Emergency Response Inter-Agency Joint Needs Assessment' for modalities of further intervention. The worst affected four districts (Pathanamthitta, Alappuzha, Kottayam, Idukki) were selected as assessment area. The objective of this assessment is to present the full extent of the floods and landslides – October 2021 impact, define the current needs, and, in so doing, serve as the basis for designing strategy and guide to prioritized interventions.

The assessment emphasis on the aspects of Water, Sanitation and Hygiene (WASH), Education (Schools), Food and Nutrition (Anganwadi centres, etc.), Protection, Health, etc in the affected areas on the most affected four districts.

The rains still persists and the dams are opened as part of the preparedness measures. As part of the disaster response activities, NDRF, Army and ETF teams are deployed on ground in affected areas. As of 17th October, more than 5000 people from 14 districts were affected and 115 houses damaged.

The reconstruction efforts should be implemented in order to achieve the goal of improving resilience with priority given to other sector specific areas. In addition, new ways of working are needed to better integrate humanitarian and development action in the state.

Overview of the State – Kerala

Kerala is a multi-hazard prone state frequently ravaged by the disastrous consequences of coastal erosion, lightning, landslides, floods, drought and petro-chemical transportation related accidents. Other relatively less frequent but significant phenomenon capable of causing disastrous consequences are windfall of trees, earthquakes, intense rainfall, pest attack, forest fire, chemical transportation and storage related accidents. The high density of population of 860 people/km² (2011 Census), narrow roads, high density of road network, density of coastal population and the general higher standard of living of the public as compared to the rest of the country are factors that increase the vulnerability of the population to disasters.

State is vulnerable to almost all adverse climate change impacts including erratic pattern of rainfall that causes more intense monsoons and longer drier seasons. Risks of both pre-monsoon and monsoon extreme rainfall have become an annual even in the upstream and across the entire peninsula as well, causing several major and unprecedented flooding and landslide events in last 4 years : 2018,2019,2020 and October 2021 in Kerala. Statistically, 2018 flood was the highest recorded flood (in terms if magnitude and water level in many rivers) in 100 years. Ever since, the flooding and landslides due to this has become an annual even in this region.

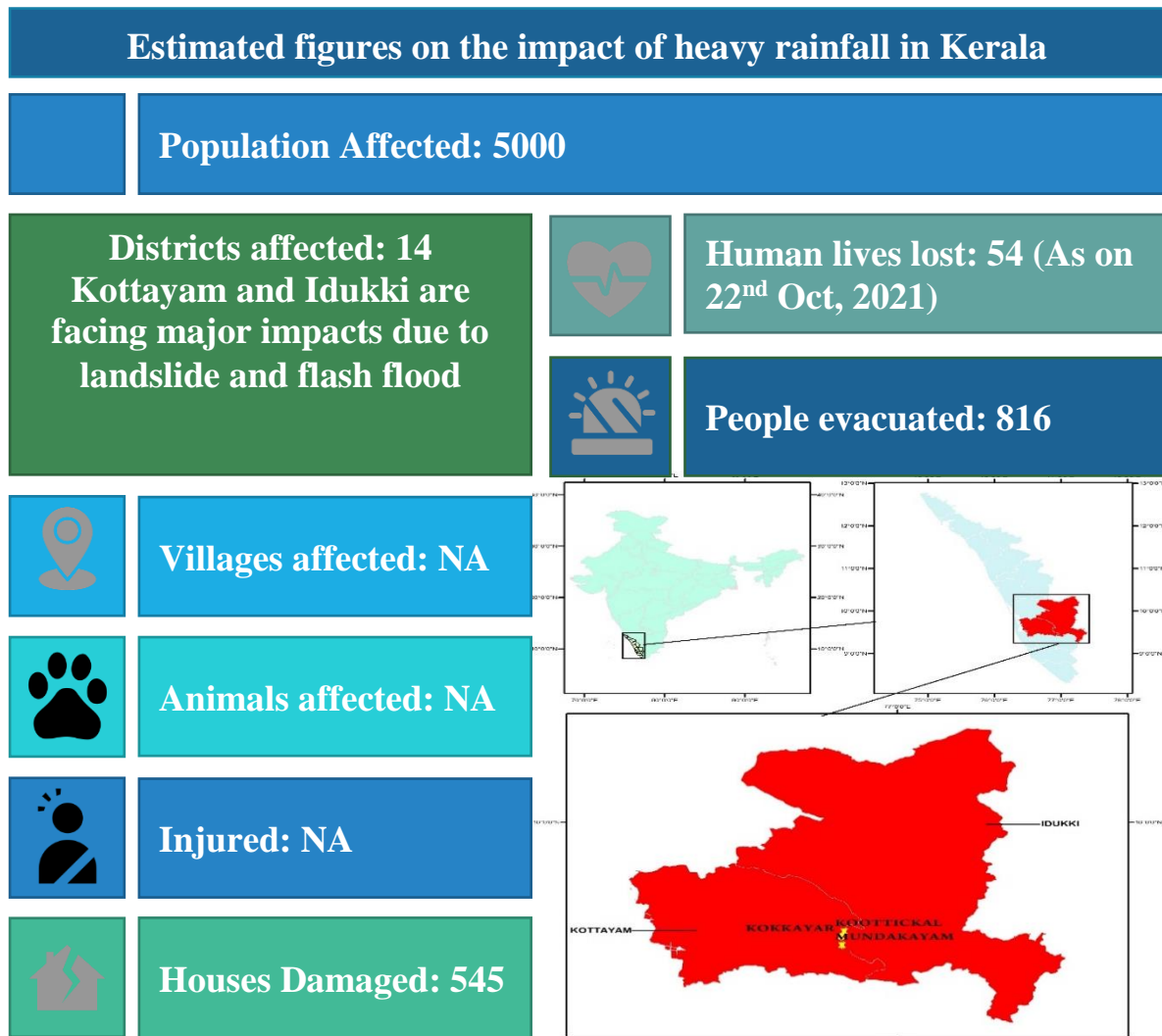
According to a studies 5642.68 km² of area which is 14.52% of the total area of the state is prone to floods. Changing nature of the flood plains both natural and manmade, loss of vegetation in upper catchments and land-use practices that promote runoff are also taken into consideration while assessing flood proneness. The highlands of Kerala experience several types of landslides, of which debris flows are the most common. They are called ‘Urul Pottal’ in the local vernacular. The characteristic pattern of this phenomenon is the swift and sudden downslope movement of highly water saturated overburden containing a varied assemblage of debris material ranging in size from soil particles to boulders, destroying and carrying with it everything that is lying in its path. In the recent past, Kerala has been affected mostly by Floods and Landslides, while there is a rise in the number of disaster events due to other hazards like coastal hazards: Cyclones/tsunamis, coastal erosion, earthquakes etc. The following table gives a risk profile of the other hazards, the probability of occurrence, likely impact and risk index with specific vulnerabilities.

Event – Landslide and Flooding

Indian Meteorological Department (IMD), issued code red alert for 6 of the 14 districts together with Thrissur, Kottayam, Pathanamthitta, Ernakulam, Idukki and Palakkad on. An orange alert was also issued for Thiruvananthapuram, Kollam, Alappuzha, Malappuram, Kozhikode and Wayanad on 16th October. In State Disaster Management Authority (SDMA) as part of disaster response activities, 11 Teams of NDRF, 04 Teams of Indian Army, 01 Team of ETF, Indian Navy and Indian Air Force are deployed and on standby in affected areas.

As of 22nd October, more than 5000 people from the 14 districts were directly affected and 115 houses damaged. The government evacuated 816 people from vulnerable locations and 163 relief centres were opened across different districts by the state government. As on 22nd October there are 30613 inmates in relief camps from 14 districts. The heavy rainfall resulted in landslides and flash floods across multiple locations in the state. Massive landslide incidents

occurred in Kottickal & Mundakkayam in Kottayam and Kokkayar in Idukki Districts. A total of 54 deaths were reported and 3 missing as of 22th October, 2021. Kuttikkal panchayat in Kottayam reported high damages due to landslides with more than 10 persons missing. Kokkayar in Idukki reported a landslide with 3 persons missing and 3 houses washed away. Landslides were reported at Ponmudi in Thiruvananthapuram district also.



Source: Media reports

Owing to the ongoing rainfall and dam openings in the state, the state and central government along with CSO/NGOs are actively responding to the situation through helping in SAR, evacuation, rehabilitation and relief. With the presence of high number of COVID-19 cases in the state, the response measures are in-hand focussing on the multiple associated hazards. The affected community is in high need of humanitarian assistance and the rising needs of the community are being analysed and reported actively by ground teams.

State Government and Development Partners Response - Relief measures by GO and NGOs



Source: Media reports

Response - Central Government

- IMD issued code red alert for 6 of the 14 districts together with Thrissur, Kottayam, Pathanamthitta, Ernakulam, Idukki and Palakkad. Orange alert for Thiruvananthapuram, Kollam, Alappuzha, Malappuram, Kozhikode and Wayanad on 16th October.
- CWC issued red alert for Manimala river, Kottayam at two stations - Manikal and Pullakkayar on 16th October.
- Prime Minister assessed the situation in Kerala with Chief Minister of Kerala and assured support.
- As part of disaster response activities, 11 Teams of NDRF, 04 Teams of Indian Army, 01 Team of ETF, Indian Navy and Indian Air Force were deployed and on standby in affected areas.
- On 17th October, 19 more dead bodies were recovered by rescue teams.
- 11 teams of NDRF have been deployed in affected areas for rescue and relief operation.
- One team of Indian Army deployed at Kottayam and 03 teams on standby at Trivandrum and Kannur.
- One team of ETF has been moved for Kottayam district from Bangalore by road.
- Indian Navy:- One Seeking-C helicopter has taken off with 100 food packets to be dropped at Kottayam and Idukki.
- Two Helicopters of Indian Air Force with full crew including Garud standby at Trivandrum.

Response - State Government

- As of 17th October, more than 5000 people from the 14 districts were affected and 115 houses damaged. The government evacuated 816 people from vulnerable locations and 163 relief centres were opened across different districts by the state government.
- Emergency meetings to assess the situation conducted by Chief Minister of Kerala, Revenue minister and at district levels.
- Relief camps started operating in Kalliyoore of Thiruvananthapuram district and 22 families were shifted to camp.
- Idukki District collector issued landslide warning in the district. Flood forecasts were issued for Idukki dam on Periyar river.
- Tourist destinations have been closed in Thrissur district with guidance from district administration as part of preparedness activities.
- Sabarimala temple visitors are advised not to enter Pamba river due to high inflow in the stream.
- Kuttikkal panchayat in Kottayam reported high damages due to landslide with more than 10 persons missing.
- Kokkayar in Idukki reported landslide with 3 persons missing and 3 houses washed away.
- Landslide have been reported at Ponmudi in Thiruvananthapuram district also.
- Control Rooms have been started in districts for rainfall related queries and management. (Control Room number - 112).
- College reopening dates have been shifted to 20th October in consideration of heavy rainfall situation.
- Alerts are issued across hilly areas in the state with restrictions in travelling at night due to high probability of landslips.

Response - NGO Response

- IAGs of the affected districts are on high alert and in close coordination with district administration for responding to the situation.
- NGOs like BHODHANA, CHASS, Social service society and others are in the ground at Pathanamthitta. People stranded in their homes were evacuated using fishing boats brought in from Kollam.
- UNICEF and Sphere India initiated Rapid Needs Assessment in affected 4 districts – Kottayam, Idukki, Pathanamthitta and Alappuzha. More than 65 volunteers were trained for conducting the assessment through KoBo Collect application to assess the households, villages and relief camps.

CHAPTER 2: PROCESS AND METHODOLOGY OF THE RAPID NEEDS ASSESSMENT

Joint Needs Assessment

The RNA report is a joint collaborative effort of the UNICEF and Sphere India. The objective of the exercise is to undertake a rapid damage and needs assessment and lay the ground for a recovery and reconstruction framework. The need for a rapid assessment is to understand the nature of the damages and to inform immediate recovery and reconstruction planning, which has been prompted by the continued incessant rainfall, limited accessibility, and remote locations of the affected areas.

Assessment Process

A detailed study based on a preliminary Rapid Needs Assessment (RNA) was proposed to be conducted by District IAGs and Sphere India. Joint decision to conduct an initial Rapid Needs Assessment in the 4 most affected districts (Kottayam, Idukki, Pathanamthitta and Alappuzha) by Sphere India and UNICEF. Preparation of RNA survey tools (3 forms) for assessing households, villages and relief camps of the most affected areas in the districts with an emphasis on the aspects of Water, Sanitation and Hygiene (WASH), Education (Schools), Food and Nutrition (Anganwadi centres, etc.), Protection, Health, Livelihood, etc. Preparation of secondary data review report to understand the initial situation through analysing secondary data sets collected from KSDMA, media and IAGs. A set of volunteers (65 field investigators and 4 district coordinators) were mobilized and deployed. Identification, mobilization and training of field investigators (65) and district coordinators (4) on the RNA tools and KoBo Toolbox to conduct the assessment.

Assessment Methodology

A total of 18 villages from the most affected 4 districts were identified with the help of data sets available at Kerala State Disaster Management Authority (KSDMA), feedbacks from local organisations and press releases. An initial meeting of the IAG members working in the affected districts were identified. Based on the inputs given by them, the affected village areas were cross verified. Volunteers from these member organisations were called in for the online training of the KoBo Tool and were deployed on ground to collect the data.

The volunteers were supported by the local representatives at the ward level to assess the area that was affected and a snow ball sampling process was used to select the households in such a way that a uniform spread across the area is represented. The primary data collection was done using 3 tools; namely 1. Village HH tool, 2. Village representative tool, 3. Shelter/Camp tool. The Shelter/camp tool was filled in through focus group discussions and the village representative tool was filled in through in-depth interviews with the village level officers and representatives in charge.

A team of experts processed the collected data with data cleaning, analysis and preparation of bar graph and pie charts for highlighting the situation and needs based on the major sectors.

Table 1: Samples collected from affected areas:

District	Village	No: of household respondents	No: of village representative respondents	No: of Shelters/ camp respondents
Kottayam	Kootikkal	91	7	6
	Poonjar			
	Nadubagham			
	Mundakayam			
	Edukunnam	99	2	5
Pathanamthitta	Puramattom			
	Mallapally			
Alappuzha	Thalavady	150	5	4
	Palamel			
	Ennakad			
	Thriperuthura			
	Venmony			
Idukki	Peruvanthanam	110	4	5
	Elappara			
	Arakulam			
	Idukki			
	Total	450	18	20

Table 2: Assessment Time Frame

Time Period	Activity
17 October	- Meeting with IAGs of Kottayam, Idukki, Pathanamthitta and Alappuzha along with KSDMA, UNICEF and Sphere India to assess the situation. (Decision to conduct Rapid Needs Assessment was done during this meeting).
18 October	- Preparation of RNA Tools for Household, Village and Shelter by UNICEF and Sphere India. - Mobilization of volunteers (65 field investigators and 4 district coordinators).
19 October	- Training on KoBo Toolbox and orientation to field investigators on the RNA tools.
20 October	- Field assessment for RNA in Kottayam, Idukki, Pathanamthitta and Alappuzha
21 October	- Data analysis - Preparation of draft assessment report

Assessment Scope

While the disaster and subsequent rainfall affected 4 districts, entire state was put on alert owing to the rainfalls and release of water from major dams in the following days. The main focus of the assessment was on 4 districts – Kottayam, Idukki, Pathanamthitta, Alappuzha that were most affected by the mini cloud burst and heavy rainfall. Please note that where available

and pertinent, the team has also taken into account the findings from most affected villages identified by the Kerala State Disaster Management Authority from these districts. The following sectors were included in the assessment:

- Water, Sanitation and Hygiene (WASH)
- Shelter
- Health
- Education
- Food security and Nutrition
- Protection

Limitations and Caveats

The interpretations, data, views, and opinions expressed in this report are collected from information available in the media, situation reports, government sources etc. It does not necessarily carry the views and opinions of individual aid agencies, NGOs, Districts IAGs of Kerala, UNICEF or Sphere India platform (Coalition of humanitarian organizations in India) directly or indirectly.

The findings of the rapid needs assessment, which was conducted on October 20, are presented in this report. The assessment is intended to quantify the consequences of the disaster, and to provide a first attempt at identifying immediate and longer term recovery and reconstruction needs. The team's analysis is based on discussions with the stakeholders, and relies on information (through assessments carried out by the team on ground) available at the time of the mission and the information is based on data received on October 20, 2021. As large parts of affected areas are still cut-off and the rainfall is ongoing, it is not possible to make a complete assessment at this stage. As accessibility increases, more damage information may come in and thus the final damages numbers may be much higher than what is assessed in this report.

Since many assessments, surveys and specific sectoral analyses are still ongoing, the figures should be considered as the best estimate possible given available data and time constraints. The massive and continued rainfall as a result of cyclonic activities may further saturate the soil. The continuing heavy rains are thus causing more damages and the region is susceptible to further damages if it continues the same way.

While damages have been estimated for some of the districts, this does not mean that other districts were affected less, nor does it imply that some districts/areas must be prioritized over others. The estimates are also a function of the level of data availability in these regions.

The damage and needs assessment is derived from figures derived from the survey conducted and incorporated into the analysis by the sector teams following discussions with the experts and on the basis of strategic interviews, expert opinions, feasibility considerations and other implementation considerations. Detailed project formulation and project needs may be predicated on pending policy decisions, and subsequent detailed assessments as well as consultation and participation of the affected population.

Given the short time available for this rapid assessment, and the focus of local authorities on rapid emergency response in terms of reconstruction needs, the figures

presented here should not be considered definitive, representative but rather a preliminary understanding to guide the recovery and reconstruction efforts.

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CHAPTER 3: DAMAGE AND NEEDS ASSESSMENT BY SECTOR

The chapter provides the damage and need assessment on a sector-by-sector basis.

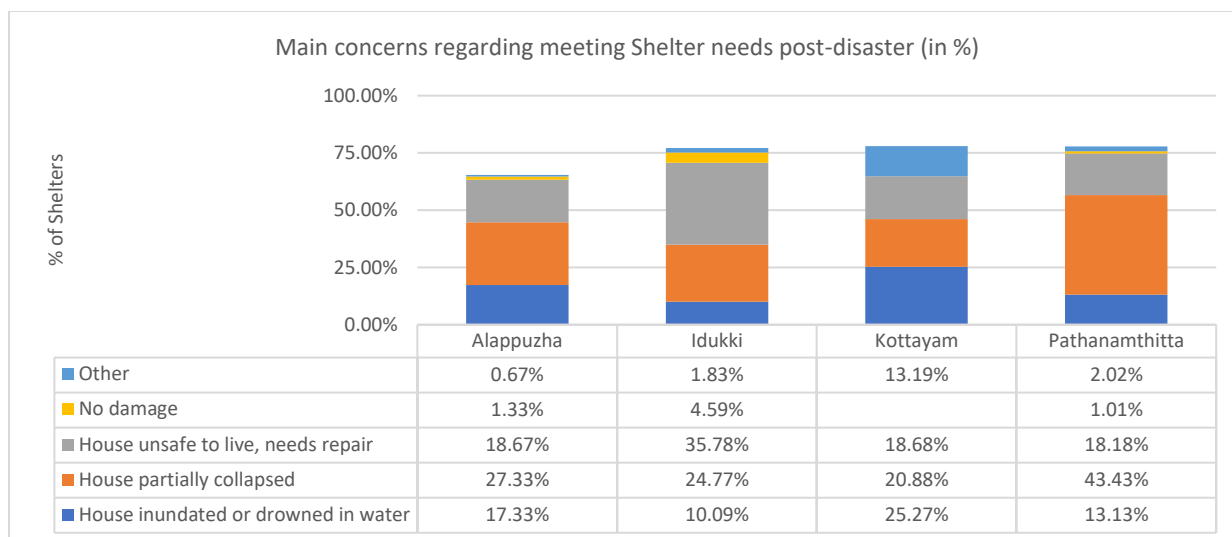
SHELTER

Overview

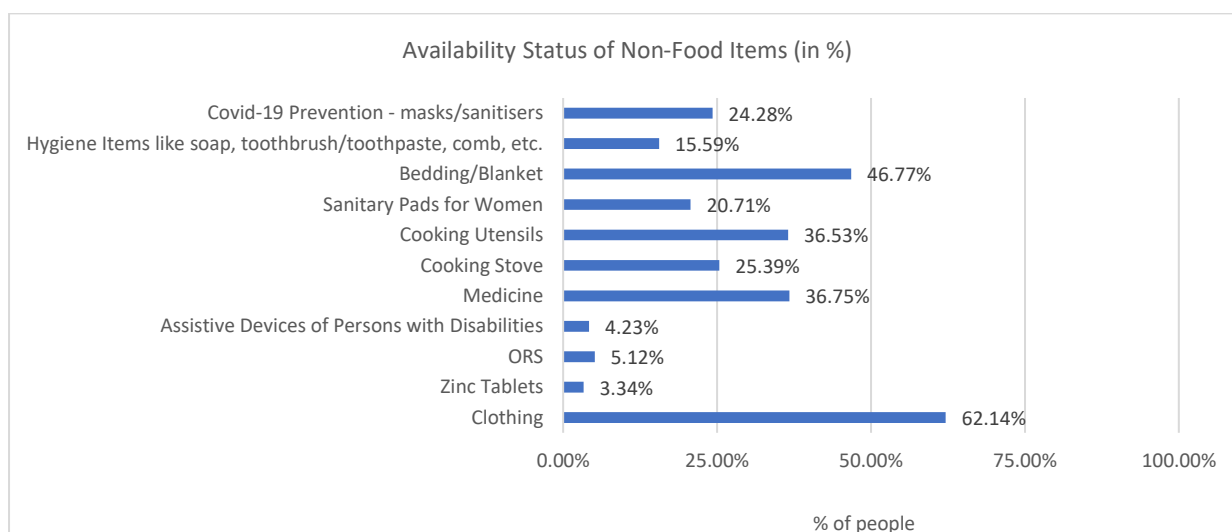
Kerala, the southernmost State in India bordering Tamil Nadu State has been receiving unprecedented rain fall during the monsoon season that began in October 2021. While people in the low lying areas have been battling for life and property, in the various parts of regions of Alappuzha, Idukki, Kottayam & Pathanamthitta districts and continued on for over two weeks. The continuous down pour which started on the 2nd week of October paralysed life. Adding fuel to fire, landslides occurred in few places causing many deaths and devastating over houses, besides wiping out agricultural land of several acres. The continuous inflow of water and rising of water level dangerously into the Idukki, Mullaperiyar, Kallarkutty, Ponmudi, Lowerperiyar, Kundala, Mattupetty and other dams have forced authorities to open the dams which further affected people living in low-lying areas.

Assessment Findings

- A majority of houses has suffered a damage of varied proportions due to incessant rainfall, land sliding and flood leading to displacement of people, damage of properties and assets.
- In Alappuzha 18.67% of shelter are unsafe to live in and requires support to repair. Whereas 27.33% house has partially collapsed and 17.33% houses are flooded or drowned in water which requires immediate support in restoration of lives.
- In Idukki 35.78% of shelter are unsafe to live in and requires support to repair. Whereas 24.77% house has partially collapsed and 10.09% houses are flooded or drowned in water which requires immediate support in restoration of lives.
- In Kottayam 18.68% of shelter are unsafe to live in and requires support to repair. Whereas 20.88% house has partially collapsed and 25.27% houses are flooded or drowned in water which requires immediate support in restoration of lives.
- In Pathanamthitta 18.18% of shelter are unsafe to live in and requires support to repair. Whereas 43.43% house has partially collapsed and 13.13% houses are flooded or drowned in water which requires immediate support in restoration of lives.
- Total number of shelter fully damaged in 18 surveyed villages: 697
- Total number of shelter partially damaged in 18 surveyed villages: 1265
- Number of HHs in need of immediate shelter in 18 surveyed villages: 1311



- Over 24.28% respondents have access to covid-19 prevention-mask/sanitisers, while 15.59% have access to hygiene items like soap, toothbrush, toothpaste etc and 46.77% do have access to bedding/blanket, while 20.71% have access to sanitary pads for women.
- Over 63.47% households do not have access to cooking utensils, 74.61% respondents do not have access to cooking stove and 63.25% households lack access to medicine.



Recommendations

Immediate Support Required:

- Ensure safe living space for families whose houses are completely destroyed following Covid-19 appropriate guidelines.
- Shelter kits need to be prepared and distributed while keeping in mind the local construction practises of the communities in the area.
- The process of reconstructing needs to be an owner-driven process to enable households to rebuild their own houses which requires advocacy with the government.

- Community should be made aware about; not to return home until authorities have advised that it is safe to do so and take extreme caution in terms of electricity and electrical equipment, proper disinfection and ensuring the safe building.

Medium term actions required:

- Semi-permanent temporary housing arrangement need to be made for the affected families where they can stay for a period of 2-3 years. This is because reconstruction of houses & restoration of livelihoods often take time & lack of shelter is an added vulnerability in such situations. For this locally available & existing materials can be used to create structures with elevated plinth, door, roof and walls to ensure safety during long-term housing recovery.
- Linkages with PMAY or any other government schemes for reconstructions of houses.
- Analysis of local construction practices & identify interventions which will ensure disaster resilience features.
- Preparation of database of vulnerable housing stock which should be prioritize for retrofitting or new construction under government support using AI based model & ground verification.

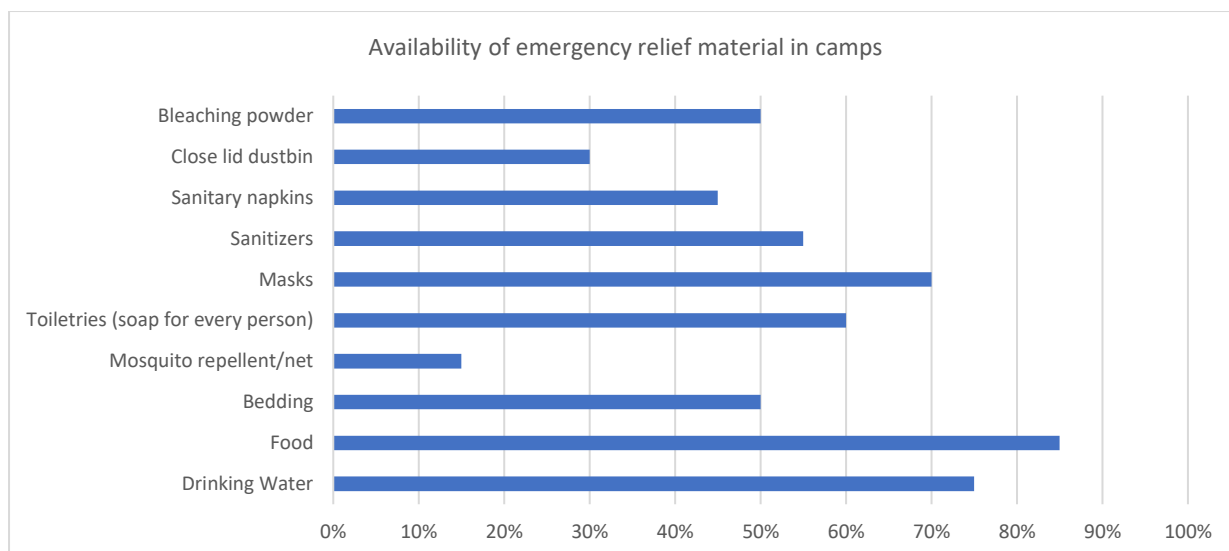
Long term and resilience building:

- The review and revision of the building rules for urban and rural areas needs to be prioritised for enhancing disaster resilience of constructions in various zones.
- Develop awareness materials on safe construction practices for different zones and make them available at the municipal and panchayat levels.
- Community led disaster risk management trainings and programs for various villages and linking it to local development plans.

CAMPS

Key Findings

- 20 camps were surveyed in 4 affected districts with total 2090 people, including 293 children (85 unaccompanied children) and 35 Persons with Disabilities. 16 of these camps were set up in Schools and remaining 4 in Marriage Halls, college, hospital and hostel/ashram respectively. Most of these camps were located 1-2 Km from the residential area.
- All camps surveyed were reported suitable for present weather conditions, 2 camps reported no water connection.



- First aid kit along with Thermometer/oximeter was available in 11 camps out of 20 surveyed.
- Menstrual hygiene materials including sanitary pads, old newspapers, dustbins with lid were available in 12 camps and proper toilet facilities separate for male and female were available in 17 camps.
- Staff were wearing PPE kits in 7 camps and extra PPE kits were available in 7 camps. 17 camps reported that the camp staff trained in cleanliness and infection control
- 14 camps have an in-house mess/canteen and social distancing was practiced in camp during relief distribution, food distribution etc in 19 camps. 12 camps reported lapses in cleanliness at the shelter.
- Health check-up of each family on entry in the camp was conducted in 17 camps and 11 camps have facilities to isolate persons with symptoms.
- 16 camps reported that periodic health check-ups were conducted in camps specific to COVID symptoms.
- Ambulances and other emergency transportation facilities were available in 11 camps and 16 camps had on call physicians.
- Tele-counseling services were present in 11 camps and there was provision for psycho-social support to the camp inmates in 7 camps.
- Initiation of learnings was reported in 10 camps.
- Child friendly spaces were available in 15 camps and counselling and psychosocial support was made available and provided through Childline or other NGOs in 10 camps.
- 8 camps had specific volunteers for providing child friendly services and psycho-social support to children available at the camp.

HEALTH

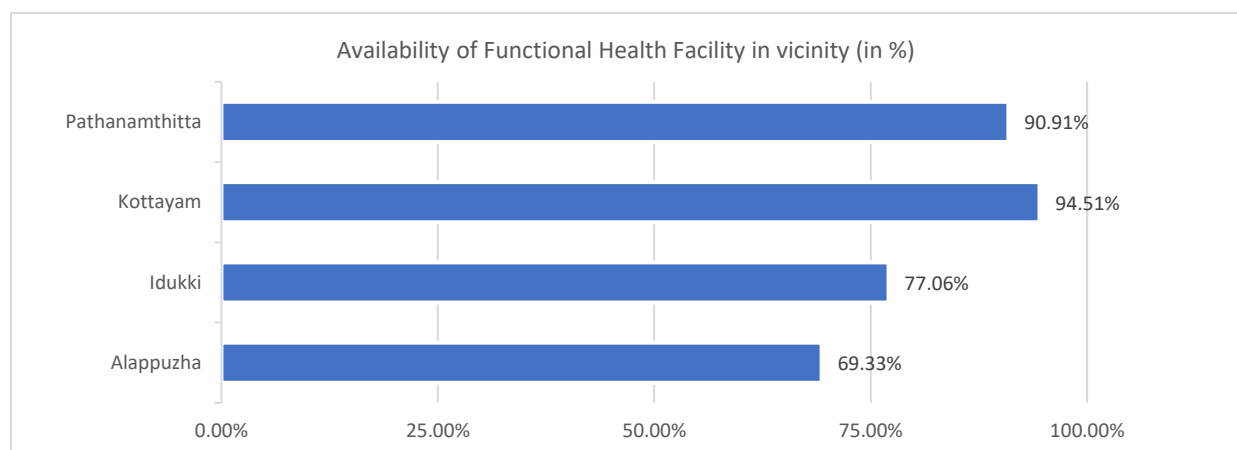
Overview

Kerala is one of India's most vulnerable states in India when it comes to climate induced disasters. Recently the State is witnessing high-intensity floods and landslides due to the incessant rains over the past few days. Roads are swept away; houses are damaged and trees uprooted with several hill areas which were still cut off.

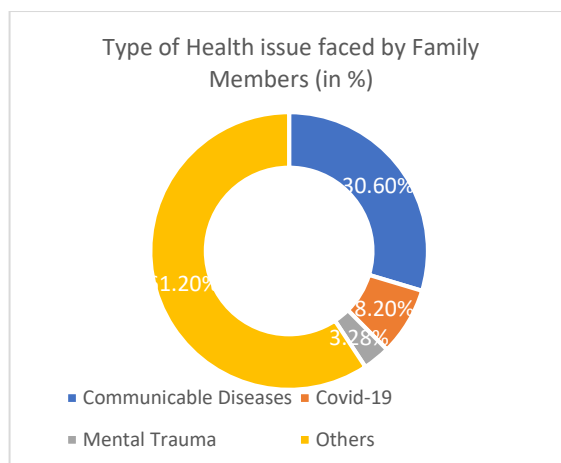
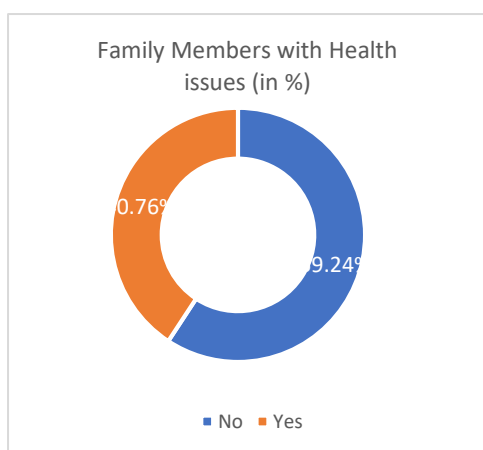
In the past floods in Kerala many healthcare institutions were totally damaged and were temporarily shut down, this year also as per the assessment findings especially in Idukki and Alappuzha districts 22.09% and 30.67% of health care facilities in flood affected vicinity were non-functional. Damage to healthcare infrastructure in addition to damage to drug stocks and documents, displacement of health staff and trained community volunteers, and displacement of patients along with disruption of routines that support adherence to treatment can lead to loss of access to essential healthcare services for the affected population.

Assessment Findings:

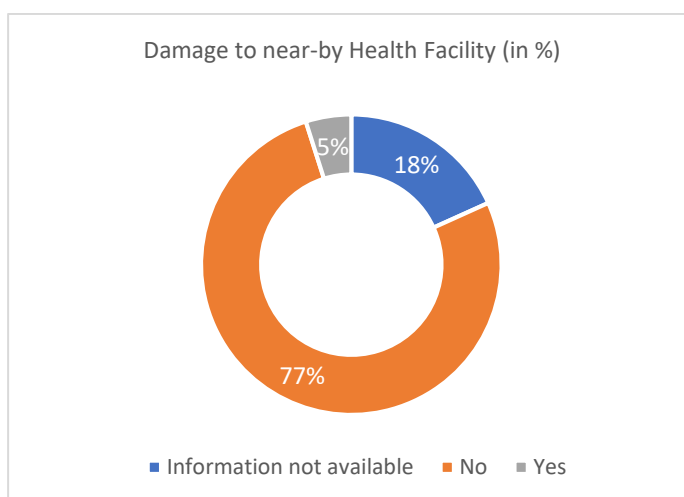
- In Pathanamthitta 90.91% of health facilities are functional, followed by 94.51% with functional health facilities in Kottayam, 77.06% with functional health facilities in Idukki, and 69.33% with functional health facilities in Alappuzha
- Idukki and Alappuzha districts need immediate attention and support in restoring the health care facilities which are non-functional for health service delivery to the affected population in their vicinity



- During the assessment it was found that 40.76 % of family members reported health issues, followed by 59.24 % family members reported with no health issues
- Out of reported family members with health issues, communicable disease contributed to 30.60%, COVID-19 contributed to 8.20%, mental trauma contributed to 3.28%, and other health issues contributed to 61.20%



- In terms of damage to nearby health facility it was reported that 5% of health facilities suffered damage because of floods, followed by 77% of health facilities which reported no damage, and for 18% of health facilities information is not available.



Recommendations

Immediate Support Required:

- Assessment of health care facilities which are non-functional and rendering support to those facilities to provide continuity of healthcare services to the population in their vicinity.
- As per the assessment report communicable disease contributed to 30.60% which is quite high. There is a need to create communicable disease profile, surveillance and reporting of communicable disease of the affected area for immediate healthcare intervention as per the need.
- To conduct mobile health camps in areas where health services are not reached. Availability of basic medicines to treat symptoms of common cold, fever, water-borne diseases etc. for affected population.
- Restoration of immunization services in areas where health facility services are non-functional.
- Adherence to COVID-19 protocols/hygiene needs as per Government advisories to be done extensively in relief camps and crowded locations along with distribution of mask, sanitizers along with better awareness.

- All health institutions to ensure an additional stock of emergency medicines to be distributed to eligible people who lost access to medicines.
- List out individuals on chronic disease medication in flood prone areas. Continuum of care to be provided to people with existing co-morbidities, people with NCD's (hypertension, diabetes etc), patients with TB etc.
- Special care of PWD and the aged in terms of their accessibility and medical needs, link each of them with a healthy individual for any support now.
- Psychological support to affected families and individuals through psychological assessment and counselling.
- Environment cleanliness focusing on safe disposal of debris of dead animals; village/household cleanliness. Distribution of Bleaching powder, and other Disinfectants would be essential with adequate information on usage and demonstration.

Medium term actions required:

- Early restoration of health facilities where sub-centres and PHC have been inundated and/or have been unable to continue the basic health care services.
- Mental Health could be given priority as this time the stress and trauma associated with the disaster caused by the floods is compounded by the ongoing epidemic of COVID-19. Humanitarian aid workers could be trained in core psychological care skills to raise awareness and community support and to refer persons to the primary health care system when necessary.

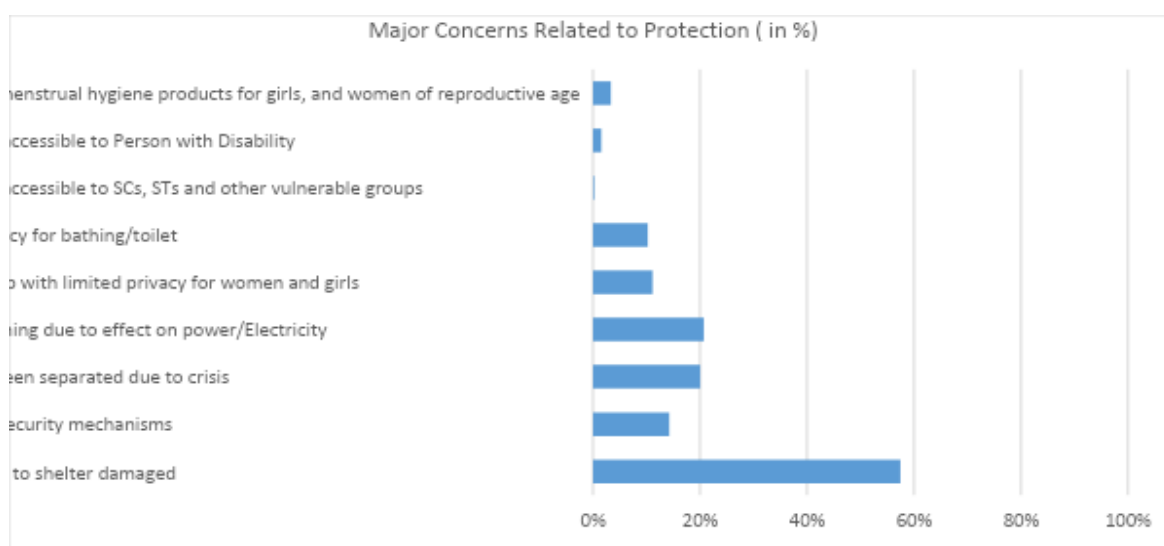
Long term and resilience building:

- List of health facilities located in flood/landslide prone areas and developing emergency preparedness plan for functioning of the facilities for future disasters.
- Structural and non- structural safety assessment of healthcare facilities.
- Establishment of Hospital Networking System for referral of emergency cases in future for such disasters
- A plan to ensure continuity of health facility supply and delivery chain
- Physical rehabilitation and reconstruction of local health facilities, and/or with the required medical provision of essential equipment and supplies, especially in inaccessible flood affected areas will also be necessary while building back better.
- To identify the training needs of healthcare professionals for capacity building in emergency response and disaster management.
- Start working on Climate Change Adaptation measures for health sector on priority to improve health system response during disasters.

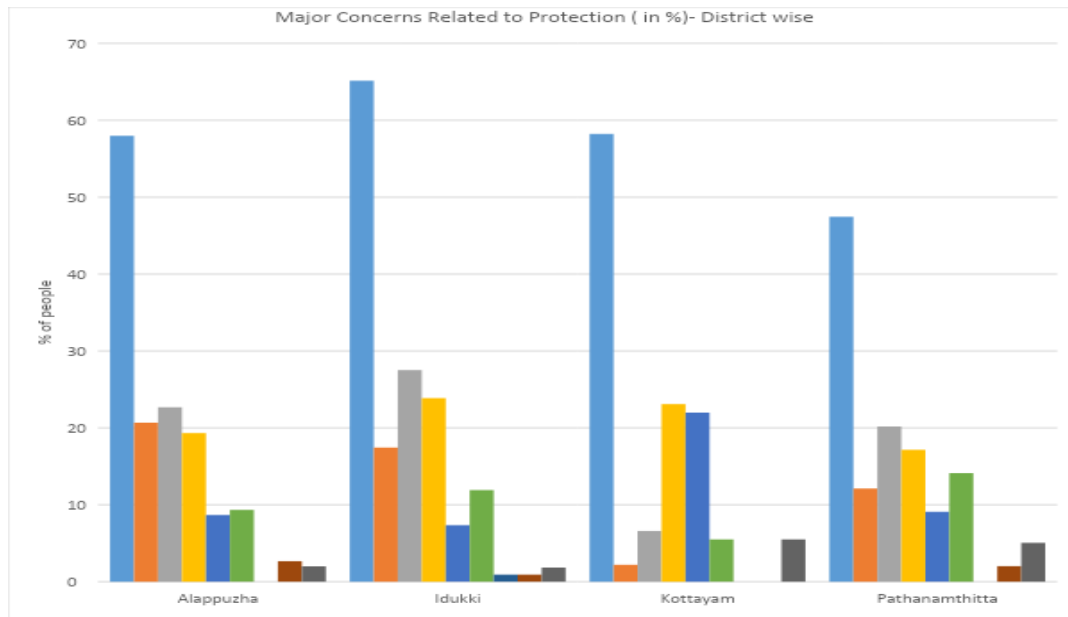
PROTECTION

Overview

Torrential rains battered the coastal state of Kerala causing rivers to swell and flooding roads that left vehicles submerged in muddy waters, with some houses reduced to rubble. The state continues to be the most affected by COVID-19 since its arrival in the country and has now been struck with a deadly flood due to unprecedented rains. Kerala floods this year have caused major damages across 14 districts, with severe affects being seen in four due to landslides and flash floods. Safeguarding the most vulnerable groups in terms of protection is a critical aspect and has to be taken care of by the responding agencies at all levels. It is important for the government to strengthen and activate their existing child protection structures at the state, district, block and village level (even in the relief camps) for such emergency preparedness. Protection should be a priority before, during and after disasters like floods and pandemic.

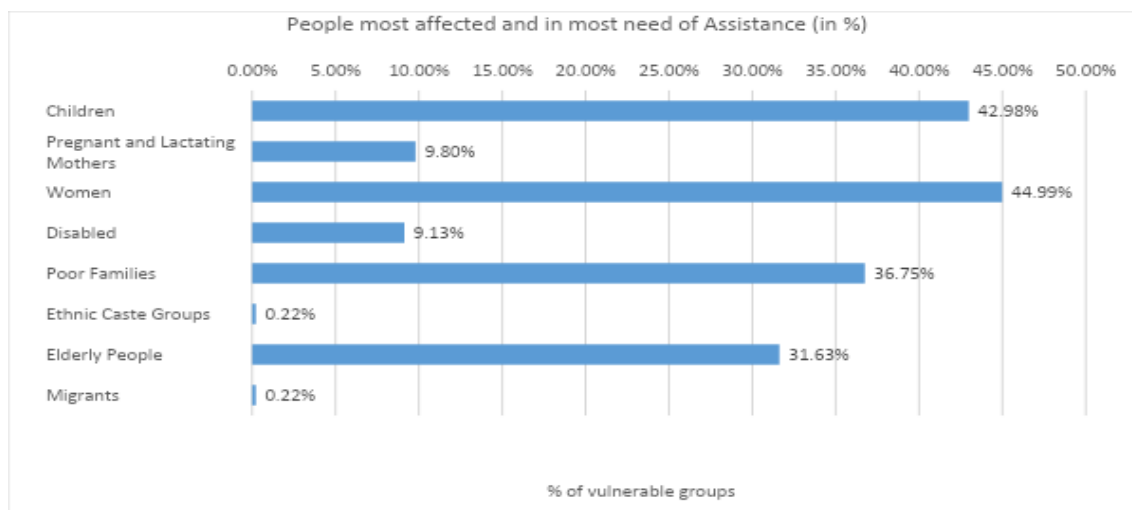


Families have been isolated and stranded due to flood waters, they are struggling to survive and even the basic items of survival are unavailable. In this situation, broadly speaking, those in need of protection are women, children, transgender, elderly, Persons and Disability, and socially and religiously marginalized groups. If these groups are looked at in further detail, it will be noticed that those with overlapping vulnerabilities are most in need of protection. Therefore, the need for social protection is maximum for those groups that are socially, religiously, or economically marginalized and lack social capital. The government and other organizations (NGO's/Faith based) have been supporting the affected families with food, water, sanitation and hygiene; however the protection issues remain an area which generally receives less attention.



Key findings:

Women, children and other vulnerable groups become very easy targets of abuse and violence, loss and destruction of houses render them homeless and exposed to ill treatment and abuse by outsiders. Natural disasters like flood coupled with the pandemic had already left millions jobless and loss of livelihood makes the children and women very susceptible to child marriage, child labour and child trafficking to make ends meet. It is very important for the government to identify these children at the earliest and support them. As natural disasters like floods generally lead to impoverished environments, the long-term effect of living in unhealthy and unsafe surrounding is greater on children than adults. Children also become very vulnerable to sexual abuse and domestic violence and psychological problems such as post-traumatic stress disorders and depression impact their physical and mental health.



Immediate Support Required:

- The state government should activate the existing Child Protection Committees and the Balsabhas constituted at village level through Kudumbshree. . It should be alert on the possible child protection risks in the flood affected areas. Child abuse, violence, labor, psychosocial support are the immediate concerns.
- Reintegrating separated and unaccompanied children with their caregivers and ensure their safe wellbeing. Regular inspections and monitoring need to be established with the Social and Outreach Worker from the District Child Protection Units and the Childline service for sustained outreach and engagements.
- In case there are NGOs working in the areas, Child Protection Committees and children groups should be strengthened towards better gatekeeping mechanisms.
- Information regarding social protection/Family based alternative care schemes including foster care, sponsorship should be provided.
- Setup child friendly spaces for children and promote psychosocial well-being of children. Conduct sessions for children and caregivers on Psychological First Aid and counselling and seek counselling from Govt. setup mental health helplines.
- To identify orphaned children to COVID and floods and provide immediate support of medical treatment, psychosocial support, food, water etc. The children should be kept with their families like extended family and grandparents after proper antecedents check by CWC. Institutionalization should be the last resort. The District Child Protection Unit (DCPU) and Child Welfare Committees (CWCs) should identify such children and link them to the services of central and state government meant for them, to ensure they remain safe, protected and nurtured in their families.
- Ensure shelter camps have separate spaces for the men and women, it must be ensured that families should be able to meet each other frequently. Children below the age of 12 must be allowed with their mothers.
- Include adequate sanitary napkins in the relief materials and take the opinion of women, girls and children while planning for disaster preparedness.
- Toilets and bathrooms for women and men shall be in completely different areas and shall also have adequate light on the way.
- Volunteers from each village need to be identified and oriented regarding Child & women protection issues and engaging children creatively and meaning fully for few hours ensuring all COVID- 19 related protocols.
- Measures to include Persons with Disability in the relief operations and their safety measures must be provided on priority. Persons with Disability need to be provided support for reconstruction of house.
- “One stop relief centers” providing emergency support for medical issues, injuries, sexual and reproductive health, psycho-social support, etc should be established and supported with requisite resources

Mid-term Support Required:

- Conduct in-depth child protection rapid need assessment, collect data by age/gender and disability. Identify major protection issues like dangers, injuries, physical and maltreatment, SGBV issues, mental health distress, child who are engaged in child labour and those children who are separated and unaccompanied.

- Linking families to livelihood opportunities especially relevant government schemes to ensure that at least one member of household is earning, reducing the chances to some extent of desperate moves of pushing women and children to marriage, trafficking and labour to make ends meet. It will also reduce dropping out of children from schools.
- Develop a child protection response plan base on protection principles and protection mainstreaming with other sectors. Support existing child protection system in addressing protection issues and train them on protection issues and response to protection issues through proper channel. Develop a comprehensive child protection information management system.
- Assessment of new widows, women who have been disabled, children who have dropped out from school, children who have been pushed into child labour, children who have been disabled, children who have been orphaned/separated from their families, etc., needs to be done to understand the socio-economic changes in the demography of a region post disaster. This will also help in providing specific targeted relief to households, with full coverage.
- Tracking of transgender population and ensuring their protection through vigilance teams and police also needs to be done.
- Women needing shelter support- materials cost and construction- needs to be identified and provided relevant help. Facilitation for support to women residing on public land also needs to be provided.
- Buddy system can be utilized, where one person is linked with every Person with Disability. This ‘buddy’ should also be trained on how to deal with and help a Person with Disability, without taking away their dignity. This buddy can also be responsible of ensuring that all relief and support for cyclone response and recovery is also received by the person he has been assigned to.

Long Term Support Required:

- A strong GO-NGO and humanitarian agency collaboration network must be established to ensure soft issues like protection and child care. The Non-Government agencies can be guided by the government and used as an ancillary support.
- Inter departmental coordination should be identified and well mapped in times of emergencies especially in dealing with child protection risks and risks related to women as it is imperative for various line departments like health, protection, education, labour, PRIs to work in close coordination.
- Alternative family care/foster care for orphaned children needs to be set up if it doesn’t already exist. ASHA and anganwadi workers can be utilized to conduct an assessment of such children and link them with those services.
- Restoring the functioning of SHGs needs to be done to ensure economic recovery.
- Agricultural inputs, loans and other support to female farmers can be provided.
- Children with Disability might be considered an economic burden now that they are not able to attend school. Therefore, protection mechanism for such children can be developed.
- A Person with Disability Support Network can be established in each Gram Panchayat during the recovery phase so that, not only is there a support mechanism, but also allows for a social capital to form for such persons. This might help in increasing their resilience in a later disaster.
- This network can also be utilized to come up with actions that will make disaster management more inclusive for such groups.

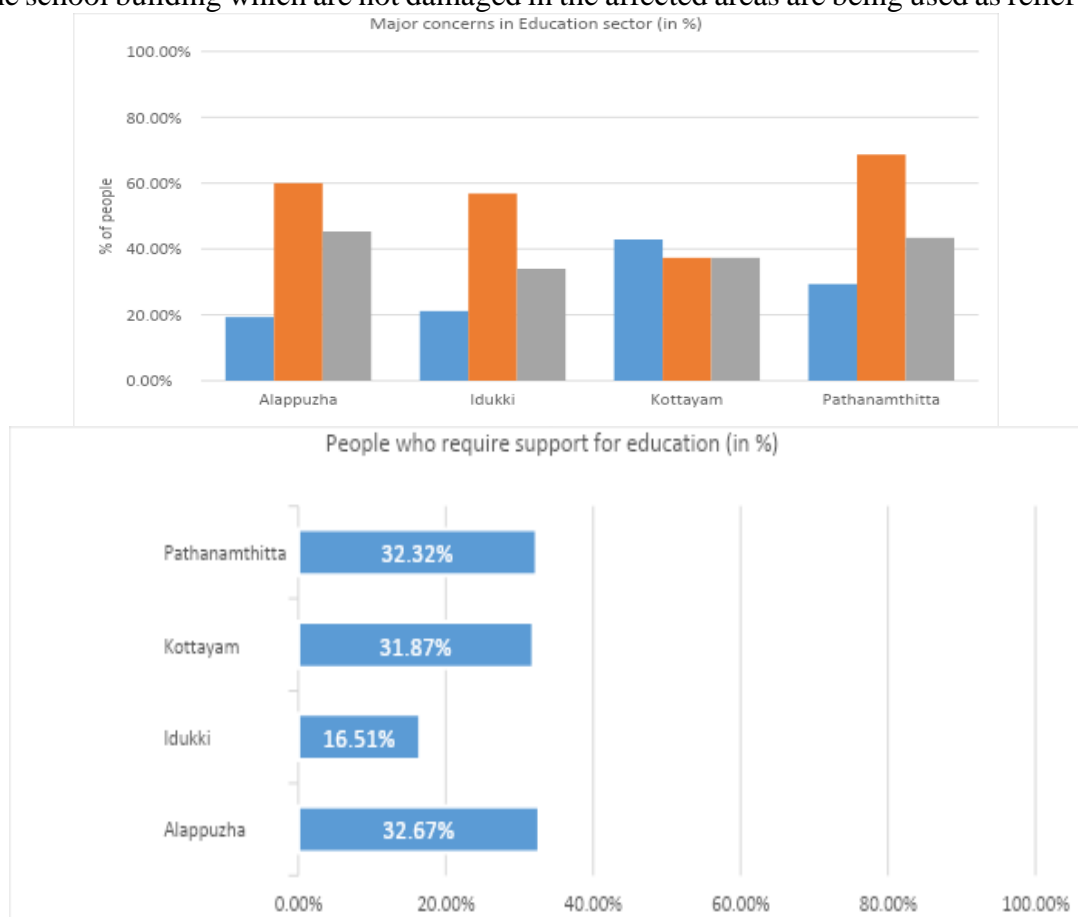
Education

Overview

Kerala continues to be second most affected state by COVID-19 with more than 4.8 million COVID-19 cases and 27,084 deaths reported till 21st October 2021. Schools, ICDS Centers have remained closed since the outbreak of the first wave which continues to date. The pandemic has costed a lot to children in terms of education and co-curricular activities. Kerala having the high literacy rate has helped in better penetration of knowledge and awareness among people, thereby creating more alert and response in the civil society. Children have been out of school attending the online classes since the onset of COVID-19 pandemic. The twin disaster Pandemic and flood in parts of Bihar further exacerbate the poor learning outcomes. This added another misery into the education as most of the students during floods do not have access smartphone, laptop, television, etc which prevent them to attend the class. Apart from this technical shortcoming at the teacher's level also add woos into online education.

Key findings

Infrastructural damages to schools have been highest in Alappuzha (45.33%), followed by Pathanamthitta (43.43%), Kottayam (37.36%) and Idukki (33.94%). Study materials, Boards, computers etc. have also been damaged. As access to schools were anyway limited due to Covid restrictions, these damages matter only to the extent of online education being affected. The school building which are not damaged in the affected areas are being used as relief camps.



Immediate Support Required:

- A thorough damage assessment of school infrastructure for repair and rehabilitation.
- Ahead of the resumption of offline classes in Kerala schools on 1st November, Schools which are used as relief camps must be sanitized and then handed over for reopening.
- As many schools had water logging, disinfection to prevent outbreak of communicable diseases is also necessary.
- As drinking water sources such as wells, Hand Pumps and piped water supply have faced damages and contamination, establishing safe drinking water and potable water facilities (age appropriate) in schools is required to ensure water quality for drinking and cooking purposes.
- The school infrastructure such as buildings, toilets, bathrooms, hand wash stations, boards, benches, etc. Education material such as books, sports equipment, art material, etc. must be replaced before the schools reopen.
- Repair and restoration of water supply in toilets and reconstruction of damaged toilets (separate for boys and girls) in schools is essential for hygiene and sanitation needs of both girls and boys.
- The toilets in schools need to have adequate safety and privacy for girls and boys. Potable water is a key element to ensure menstrual hygiene management for adolescent girls in schools.
- Waste management and excreta disposal in schools need to take into account school water source to ensure non-contamination of water source and sustainability of water needs.
- AWCs must be stocked with sufficient basic medicines needed for post flood outbreaks.
- While restarting the Mid-Day meals kitchens must follow CAB+.
- Promotion of Hand washing and provision of Hand washing facilities.
- Establish temporary learning centres and child friendly spaces for at least 30% of the affected population with the maintained of COVID-19 appropriate protocol.
- Sanitization facilities (Equipment's, Material at school level) is need at school level for classroom, office sanitization.
- Mask, Sanitizers are needed for students, teachers.
- Thermometer (IR) is needed at school level to regular temperature check-up of students who are coming to schools.
- Provide learning and teaching material to students and teachers.
- Strengthening the e-learning platform at community and household level till the offline classes are started

Mid-term Support Required:

- There is a need for Coordination for ensuring inter-sectoral linkages among, Education, WASH, food & nutrition, shelter & health at schools/learning spaces.
- Water logging has damaged the school buildings and some damages may not be visible. Post a structural audit, retrofitting of the existing school buildings must be done to avoid any immediate risk.
- These were flashfloods; in case there is a recurrence in the near future, children must be prepared for the same. Using the School Safety Policy of the Union Ministry, capacity building of the children and teachers must be done.
- In flood affected areas toilets and drinking water supply must be refurbished in a manner that few feet of flood water does not affect the functioning.

- Rehabilitation and/or repair of school infrastructure and material.
- Since many of the students have lost / damaged their education material during flood there should be provision of replacing course materials to students.

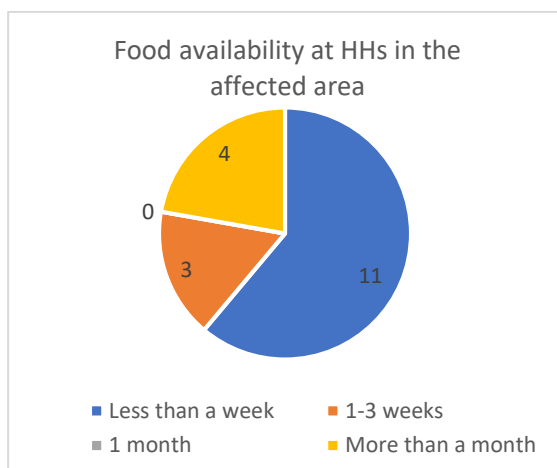
Long-Term Support Required:

- All the affected districts must be surveyed by the Education department and the Revenue Department for the flood risk to the school buildings. All the buildings in the low-lying areas and/or around rivers must plan a relocation, so that children have a safe space even during emergencies. At the time Government is planning reopening of the schools, as a part of pre-opening preparations, the stated safety risks need to be accounted for.
- Integrating DRR measures in school construction in view of the flood situation in these districts.
- Mainstreaming DRR education and Inclusion of appropriate Social and behavior change communication (Promotion of hand washing, wearing of mask, appropriate physical distancing) in the light of COVID-19 into the school education curriculum.

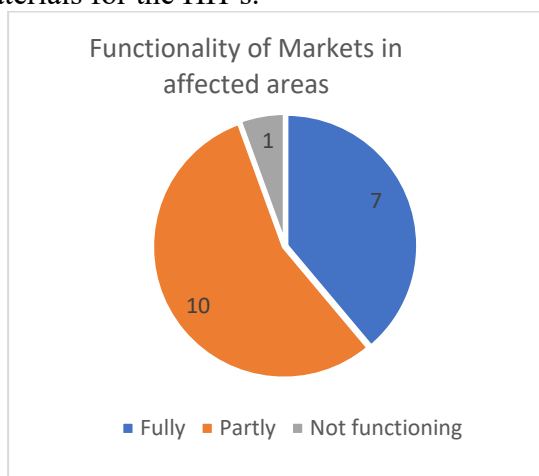
FOOD SECURITY AND NUTRITION

Assessment Findings

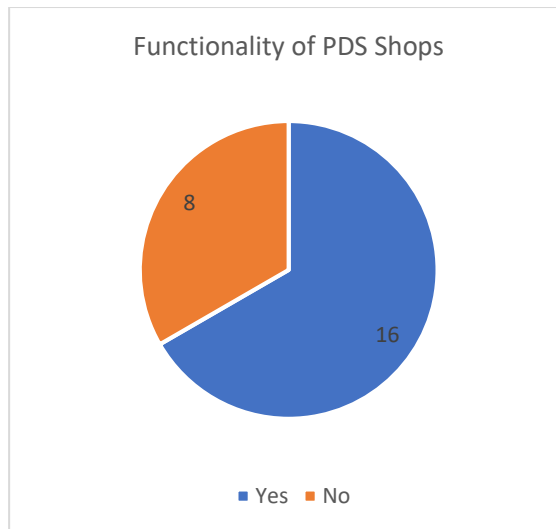
Food availability is a matter of concern as the majority of the respondents (11/18) confirmed the availability for less than a week and another 3 said they have the same for about 1-3 weeks. Only 4 confirmed that they have food availability for more than a month.



The non-availability of markets in the flood-affected areas significantly impact the HH food availability in the target areas. This is evident as survey results indicate that majority of the respondents confirmed the partial functioning of markets. Only 7 respondents have confirmed that the markets in their area are fully functional and this might have averted the non-availability of food materials for the HH's.



The majority of the respondents (16) confirmed the functional PDS in their locality which is a positive sign as this ensures food material supply.

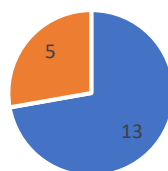


The rapid assessment indicates changes in the quantity of daily food intake among the community members. The majority (14/18) of the respondents confirmed that there are changes in the quantity of food intake whereas only 4 affirmed no changes.



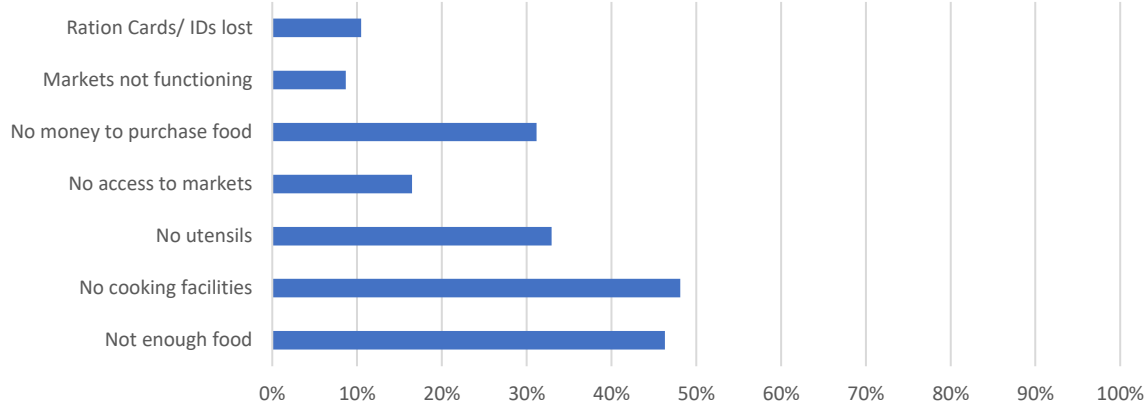
The survey outcome indicates that the majority of the respondents confirm that there are special efforts to meet the food requirements of the vulnerable population such as pregnant and lactating mothers and children. However, 5 of the respondents confirmed that there are no such provisions for pregnant and lactating mothers and children. This is one of the areas in which humanitarian organisations can choose to intervene.

Special efforts for pregnant and lactating mothers and children and their food and nutrition requirement is being taken

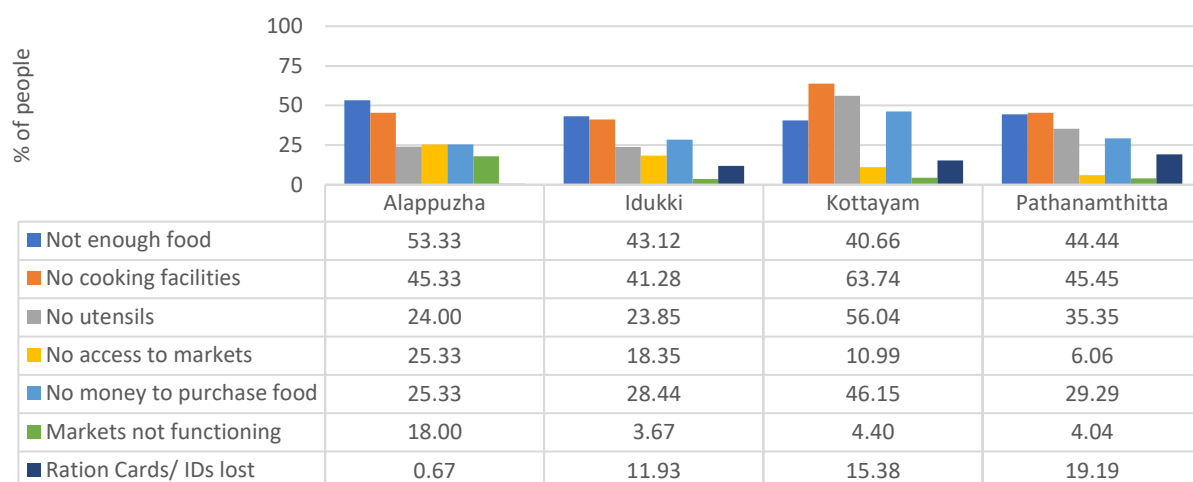


■ Yes ■ No

Major Concerns related to Food and Nutrition (in %)



Major Concerns related to Food and Nutrition (in %)- District wise



The rapid assessment indicates different major concerns in the flood-affected areas of the 4 districts.

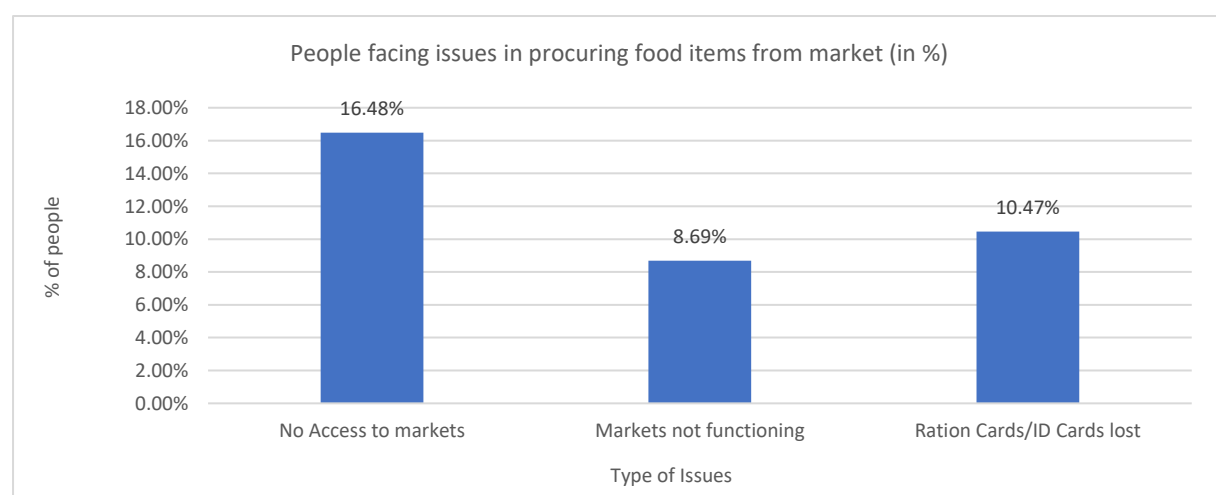
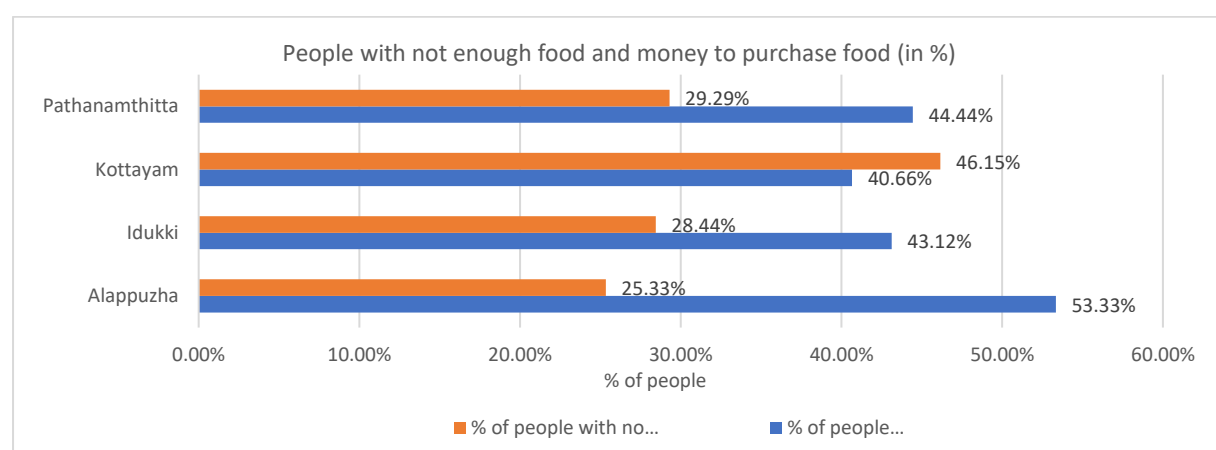
In Alappuzha, not enough food materials is the major concern for over half of the respondents (53%) followed by no cooking facilities (45%) and no access to markets (25%) or having no money to buy food materials (25%). There are about 18 per cent confirm the no market facilities whereas less than a per cent have lost their ID cards.

No cooking facilities (67%), no utensils (56%), not enough food (41%) and no money to buy food materials (46) are the major concerns of the majority of the respondents in Kottayam district. It is imperative to notice that a significant number of respondents (15%) have lost their ID cards and this could hamper the families to access food materials through PDS and ultimately impact the food intake.

In Idukki, not enough food is the major concern for a majority (43%) of the HH's followed by no cooking facilities (41%), no money to purchase food (28%) and no utensils. Here too, about 12 per cent have lost their ID cards.

In Pathanamthitta, almost one-fifth of the respondents have lost their ID cards and this is a matter of concern. Apart from this, there are about 45 per cent confirm no cooking facility as a challenge followed by not enough food (44%). No utensils (35%) and no money to buy food materials (30%) are the other major concerns shared by the respondents.

Overall, lack of food materials, lack of resources to buy food materials (money, market, identity cards) and lack of cooking facilities are the major concerns of the respondents. The survey outcome indicates that the humanitarian organisations that wish to intervene during this disaster must address the aforementioned issues as this is the need of the hour.



Recommendations

Immediate Support Required:

- There is an urgent need to provide the dry food provision for a period of one month to ensure the food security and special focus to Pregnant and lactating mothers and children with nutritional supplements.
- NFI like utensils, clothes and bedding will be an immediate need apart from the HHs who have lost their shelters.
- Unconditional cash to beneficiaries' accounts would help the HHs to purchase their choices of items wherever markets are functional.
- State is high prevalent of covid-19 cases recommended to promote the CAB awareness and provision of safety gears to community and aid workers.

Medium term actions required:

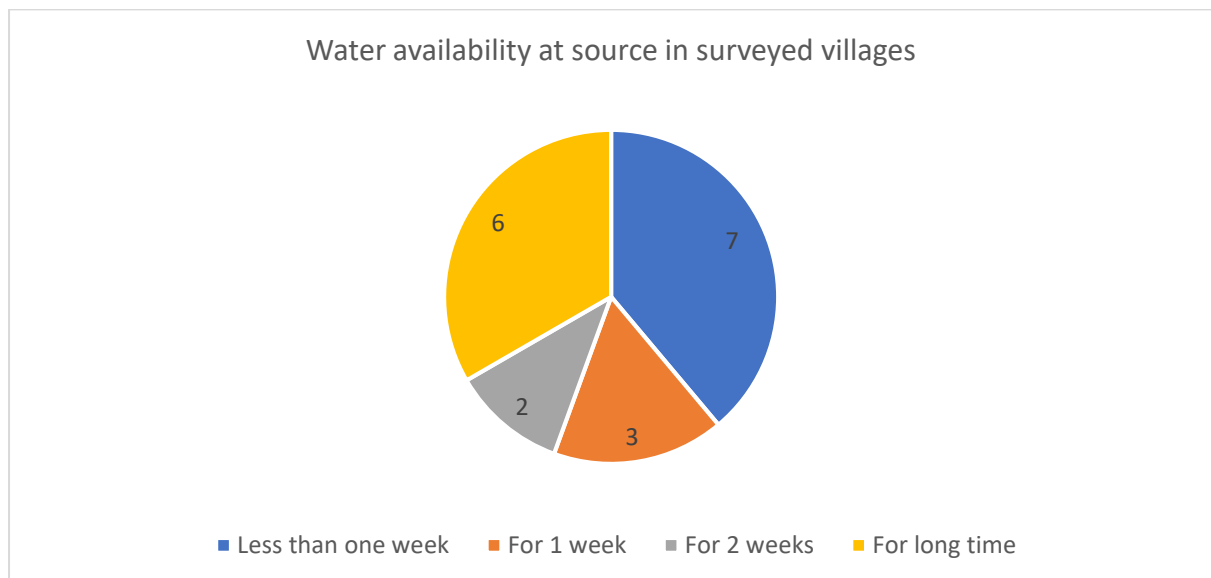
- Facilitate to avail the Ration cards, ID proof to get their rights and compensation.
- Provision of livelihood opportunity for the sustainable.
- Repair and reconstruction of houses that are fully and partially damaged to help the people to resettle.
- Establish the GO-NGO coordination to facilitate to avail the rights and compensation declared by the govt.
- Promote and sensitize the disaster resilience technologies to ensure the household level preparedness and strengthen the localization.

Long term and resilience building:

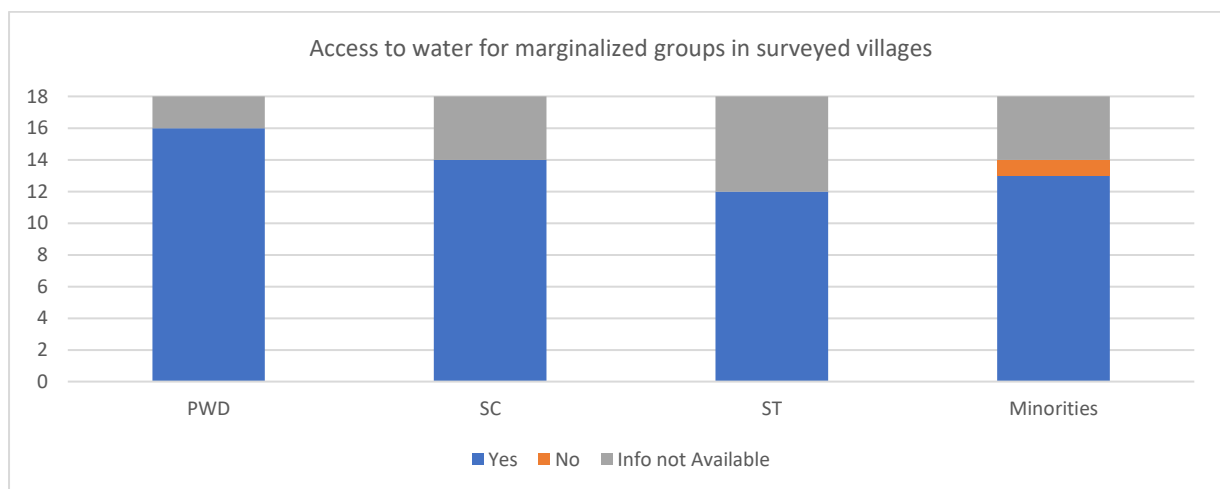
- Develop community resilience action plan by strengthening PRI as part of local resource group.
- Participatory planning on community risk resilience and its implementation.

WATER SANITATION AND HYGIENE PROMOTION (WASH)

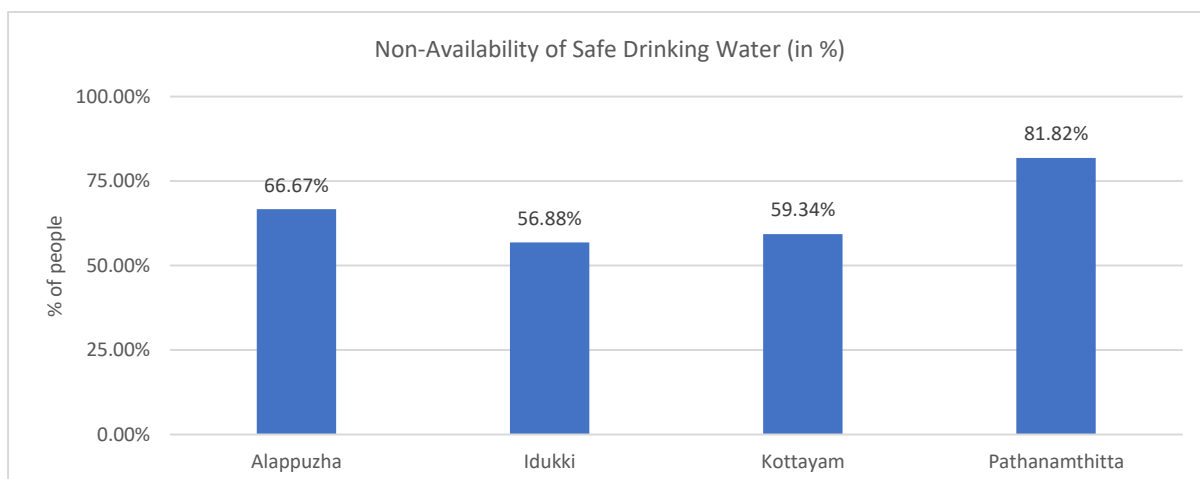
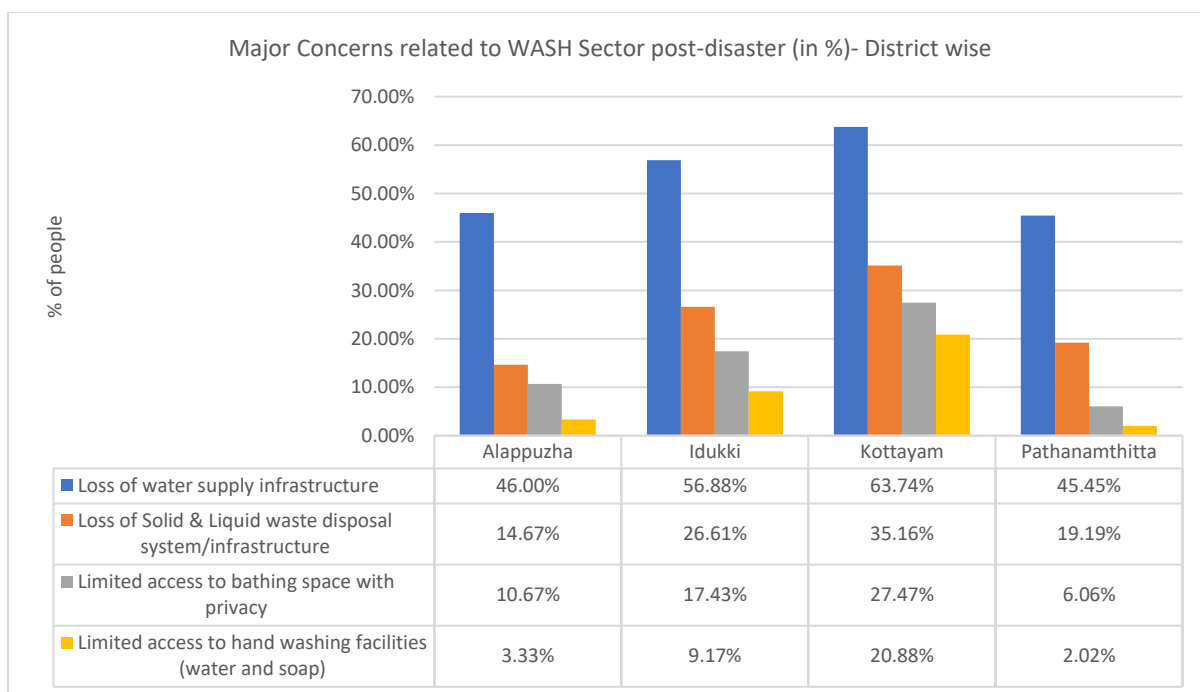
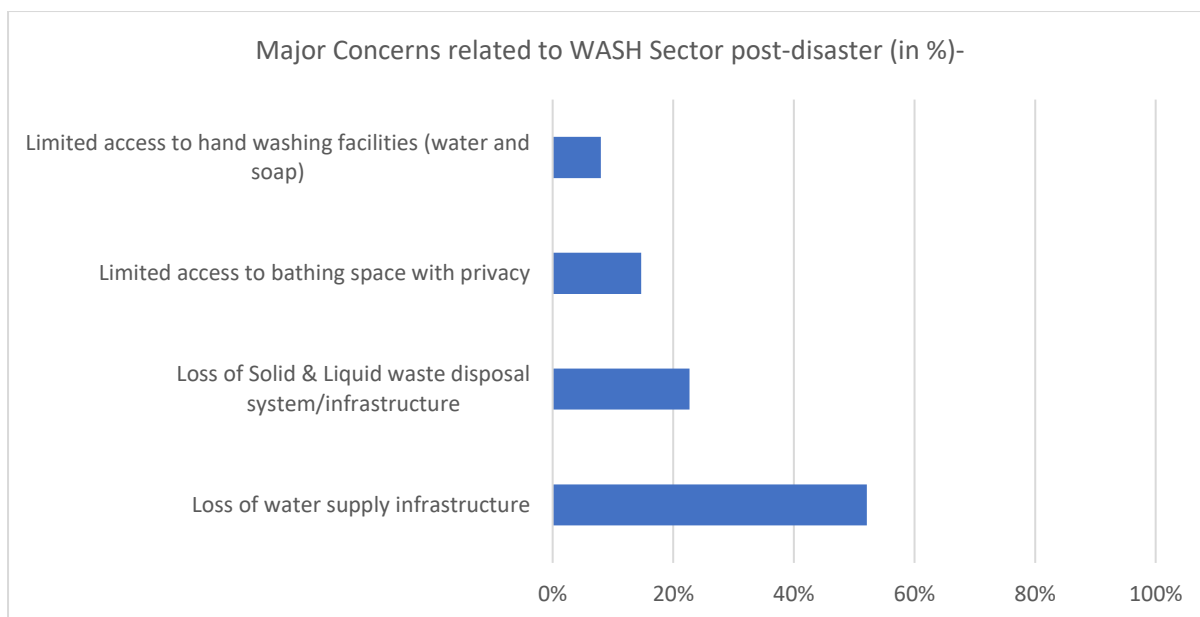
Assessment Findings:

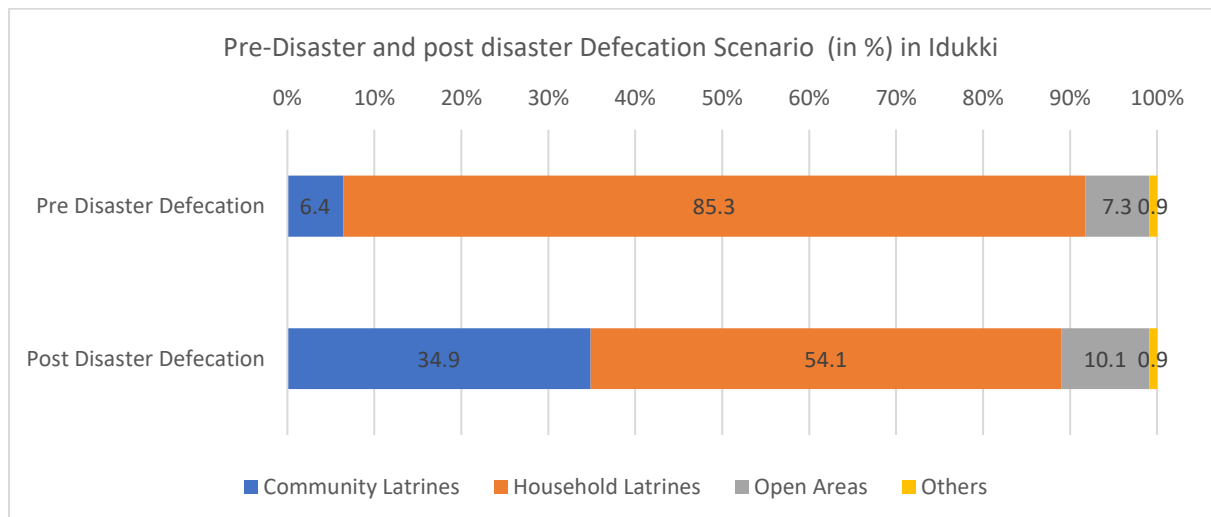
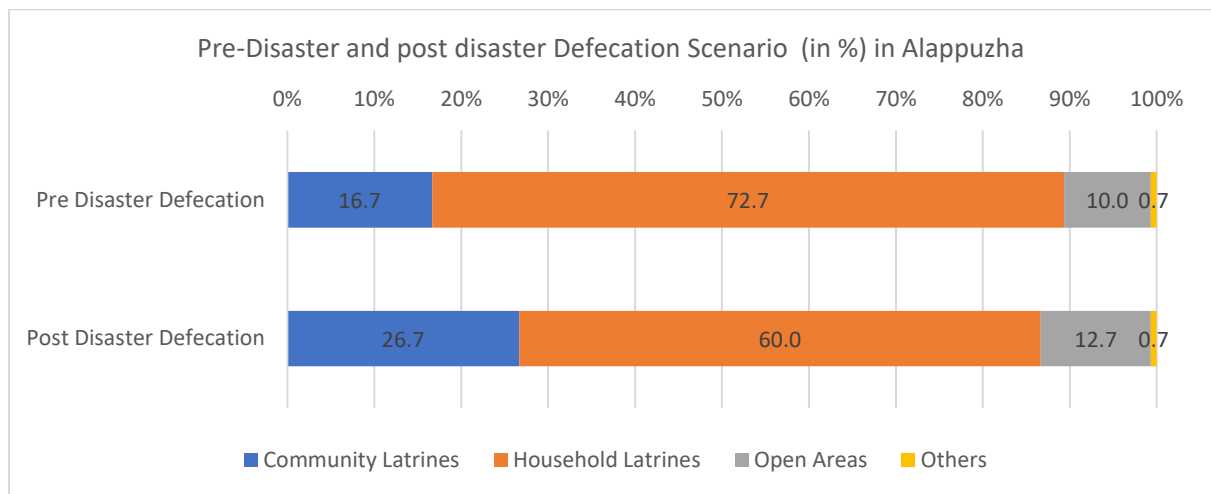
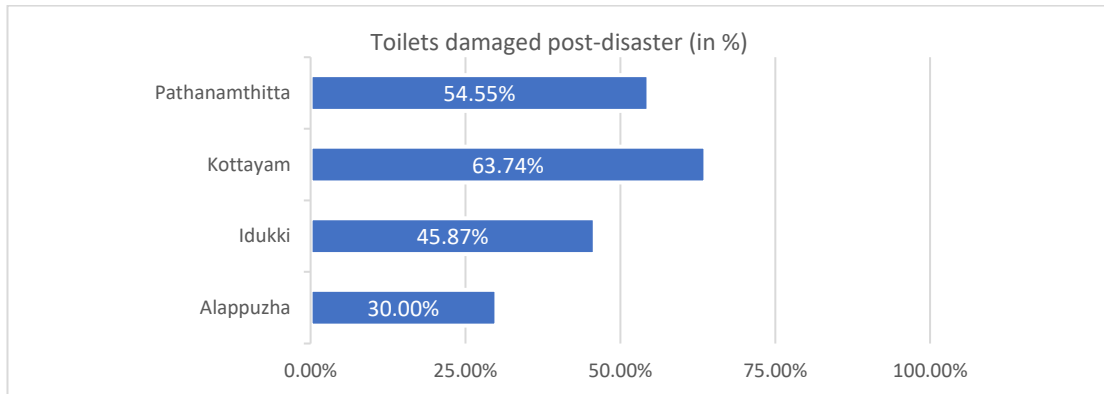


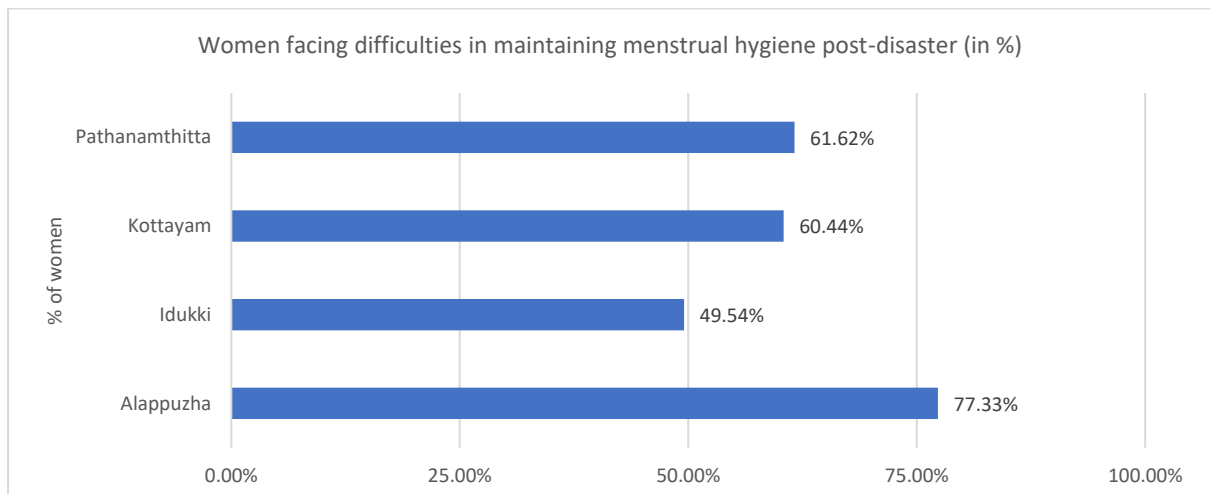
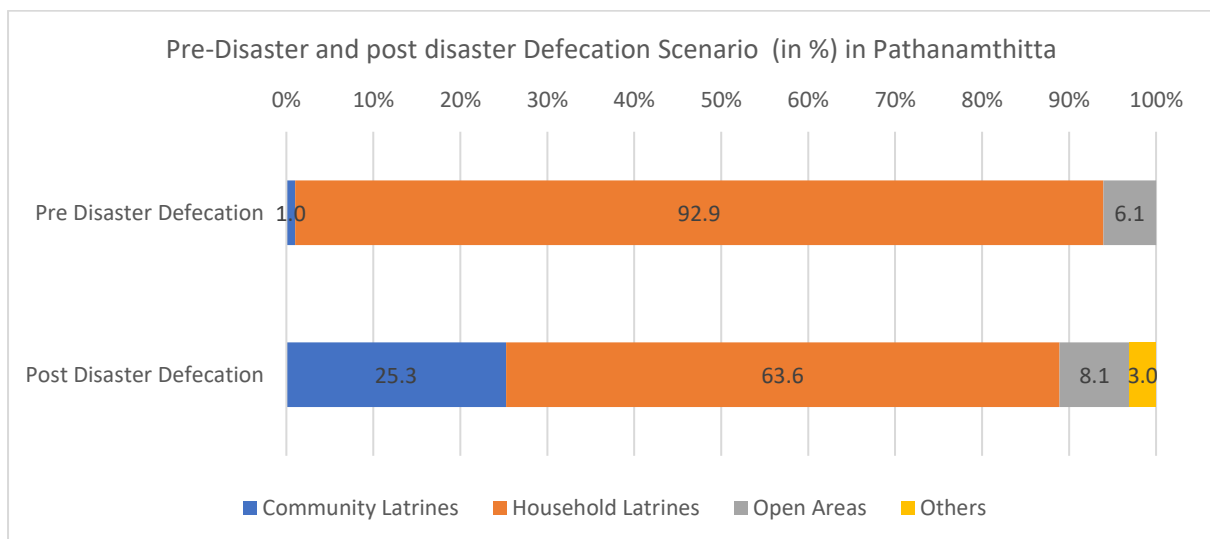
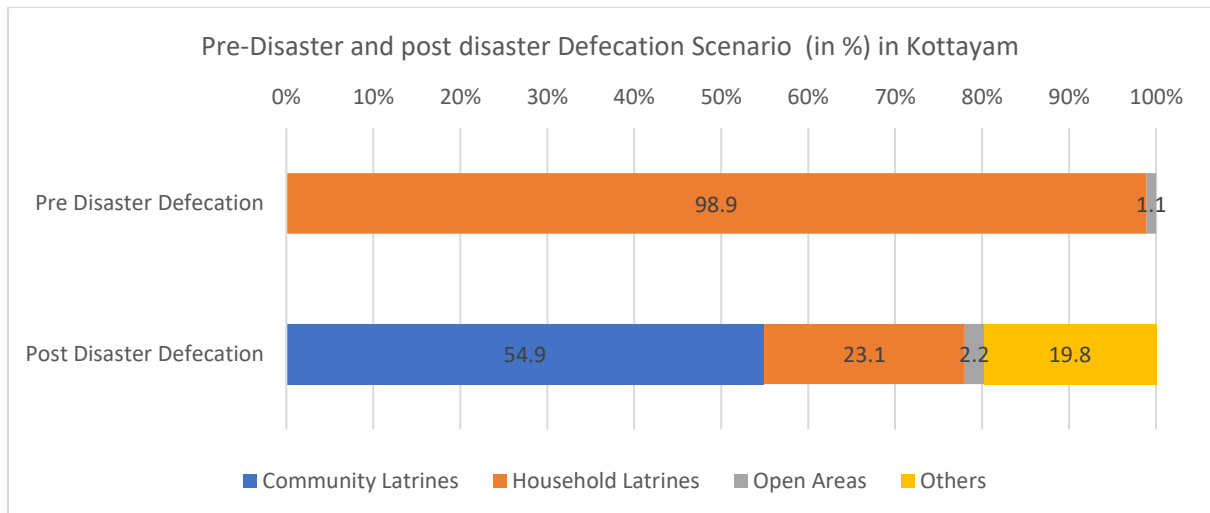
- Out of 18 villages surveyed, 4 villages reported that current functional water source(s) were contaminated.



- Number of fully damaged HH toilets in 18 surveyed villages: 174
- Number of partially damaged HH toilets in 18 surveyed villages: 317







Recommendations

Immediate Support Required:

There is serious lack of safe drinking water especially in the kottiyam districts. Immediate need to provide drinking water through tinkering to the camps and also to the villages. Chlorination of hand pumps and well will be done immediately if water receded from that area. NADCC/Chlorine tablets will be used for safe drinking water. Community water filter of automatic/ manual community water filter will be most helpful for ensuring safe drinking water to the people. Well, hand pump and piped water supply if repair and rehabilitation will be done on immediate support.

Sanitation facilities like installation of temporary latrine will be very much helpful to the camps as well as villages. Clearing of HH and community toilets, desludging and use of bleaching powder.

Cleaning of villages that includes debris, mud, roads, and houses. Distribution of mosquito nets, Hygiene kit (Bucket, mugs, chlorine tablets, sanitary napkins, Diapers, soap, mask, towel, bleaching powder) will be helpful. There could be awareness on public health promotion and COVID-19 behavior in all the affected villages.

Medium term actions required:

WASH committee to be formed in different affected villages there is need to have capacity building of the members around safe drinking water, safe sanitation, personal hygiene, mensural hygiene, solid and liquid waste management. There is also rehabilitation of water sources pre-existing one to be raised one.

Long term and resilience building:

Kerala are experiencing flood second time in three years and there is need to create resilient WASH infrastructure as high raised pump, community hand pumps or piped water supply. There is also training of communities on repair and maintenance of safe drinking water facilities. Some of the community based water filter plant can be equally important and community will trained on both repair, maintenance as well as installation of locally filtration system. Keeping in mind that all the infrastructure should be away from bank of river at least 150-200 m and made to be high raised as per HFL. Sanitation facility like community toilets

ANNEXURES

1. People involved in the Rapid Needs Assessment

RNA Report

Sectoral Experts, Report Writers and Editors			
Mr. Sriram A	LSG DM Plan Coordinator	Mr. Sunny Borgohain	Doctors for You
Mr. Alex Varghese	HFH India	Mr. Harshan K Y	EFICOR
Mr. Chandan	Oxfam India	Mr. Imran Majid	ADRA
Dr. Pratheesh C Mammen	UNICEF	Mr. Mahendra Rajaram	UNICEF
Data Collection and Analysis			
Ms. Nupur Tyagi	Sphere India	Ms. Lekha Chacko	Sphere India
Ms. Riya Sethia	Sphere India	Ms. Varsha Chaudhary	Sphere India
Coordination			
Mr. Vijeesh P	Sphere India	Dr. Henna Hejazi	Sphere India
Mr. Midhun P Chandrababu	Sphere India		

District Coordinators and Field Investigators

District: Pathanamthitta			
Sibi	District coordinator – FDA	Anjaly	Volunteer
Rijo	Volunteer	Jwala	Volunteer
Shijo	Volunteer	Aryadevi	Volunteer
Alan	Volunteer	Sneha	Volunteer
Vismaya	Volunteer	Roshni	Volunteer
Justy	Volunteer	Faseela	Volunteer
Athira	Volunteer	Stephy	Volunteer
Gopika	Volunteer	Jeswin	Volunteer
District: Alappuzha			
Monisha	District coordinator - ADS	Sanjay	Volunteer
Deric	Volunteer	Amal	Volunteer
Clinton	Volunteer	Ajith	Volunteer
Jithin	Volunteer	Rajesh	Volunteer
Sebastian	Volunteer	Abraham	Volunteer
Aneesh	Volunteer	Alexander	Volunteer
Jeevan	Volunteer	Jaison	Volunteer
Abhijith	Volunteer	Arun	Volunteer
District: Kottayam			

Ginu Mathew	District coordinator – FDA	Sai Vishak	Volunteer
Deepu	Volunteer	Syam	Volunteer
Vishnu	Volunteer	Vinayakan	Volunteer
Dr. Sarun	Volunteer	Amaljith	Volunteer
Vineetha	Volunteer	Amalkrishna	Volunteer
Sufail	Volunteer	Nihal	Volunteer
Hareesh	Volunteer	Ajithkumar	Volunteer
Gireesh	Volunteer	Ramesh	Volunteer
Sreejith	Volunteer	Saju	Volunteer
District: Idukki			
Sijo Thomas	District coordinator	Binto	Volunteer
Joji	Volunteer	Thomas	Volunteer
Prince	Volunteer	Jisto	Volunteer
Jayakrishnan	Volunteer	Sterin	Volunteer
Ajaykrishna	Volunteer	Anoop	Volunteer
Jithin	Volunteer	Lijo	Volunteer
Dinu	Volunteer	Abhimanue	Volunteer
Bibin	Volunteer	Solbin	Volunteer
Jeswin	Volunteer		

2. Field Photographs









3. The primary data collection tools - Questionnaire

- i. [RNA Village Survey Tool](#)
- ii. [RNA HH Survey Tool](#)
- iii. [RNA Shelter Survey Tool](#)

Supported by,

