VIRTUAL CADRE TRAINING PROGRAMME FOR THE OFFICIALS FROM SIX DEPARTMENTS ON DRR, GOVERNMENT OF KERALA

Training Needs Assessment Report

December 2020

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Title: Virtual Cadre Training Programme for the officials from six departments on DRR, Government of Kerala

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Executive Summary

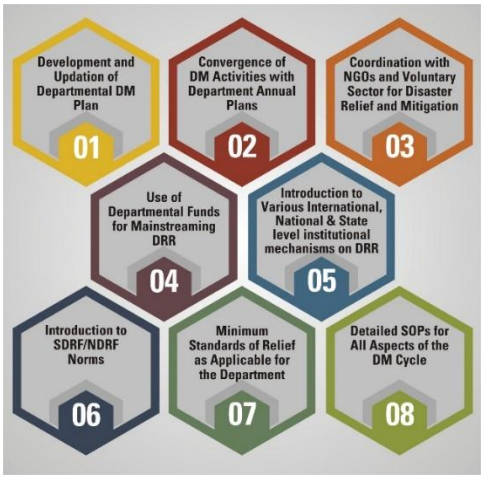
This report has been complied based on the findings and recommendations of the Training Needs Assessment (TNA) conducted under the ambit of the project '**Virtual Cadre Training Programme for the Officials from Six (6) Departments on DRR, Government of Kerala**'. It represents the findings of the training needs assessment (TNA) exercise conducted with the virtual cadre (VC) officials of six departments of the Government of Kerala (GoK), viz. Fisheries, Education, Civil Supplies, Panchayat, Tourism and Groundwater in December 2020. This TNA exercise was carried out under the guidance of Kerala Disaster Management Authority (KSDMA) and UNICEF, while the All India Disaster Mitigation Institute (AIDMI) provided the technical assistance.

As part of this TNA exercise, an online meeting was organized by KSDMA with the virtual cadre officials of these six departments to orient them about this project and upcoming trainings. Following this, a TNA survey was conducted online with the VC officials from the aforesaid six departments along with a detailed review of relevant DRR literature to understand the training needs of these departments. The key findings and processes of this TNA exercise have been collated into this TNA report. The key findings from this report are highlighted below.

A. The total number of respondents who participated in the TNA survey (Department-Wise)

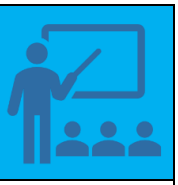
Total Responses: 63

B. Common Training Needs of All Six Departments



C. Department Wise Key Training Needs

Education



- Introduction to school safety plans.
- Training on how to conduct school safety assessment (structural and non-structural).
- Training on how to conduct mock drills at school level with students, teachers and other school stakeholders.
- Training on piloting psychosocial counselling for students after a disaster or emergency.
- Training on child protection measures in schools during emergencies.

Fisheries

- Training on how to arrange necessary equipments / lime / CIFAX etc. necessary for response measures.
- Identification of reliable suppliers of departmental supplies such as lime, CIFAX (Medicine), feed/rice bran and ground nut oil cake, fish seed within the district and pre-contracting for supplies in case of emergencies.
- Training on constitution of incident response teams (IRTS) at all levels to tackle any disaster event.
- Assessment of loss and damage to borne by fisherman and fish farmers at the block level in case of a disaster.
- Establishing a strong coordination mechanism with NGOs and voluntary sector such as NCC, NSS, Nehru Yuva Kendra and village level SHGs Primary Fishermen Cooperative Societies and other welfare organizations for rescue and relief purposes.
- Training on piloting risk transfer schemes such disaster microinsurance for vulnerable fishers and fish farmers.

Tourism

- Introduction to sector/department specific intrinsic as well as extrinsic hazards.
- Training to map out key departmental resources and capacities.
- Detailed SOPs for all aspects of the disaster management cycle for domestic and foreign tourists during emergencies.
- Training on Loss and Damage Assessment.
- Training on how to disseminate the information to all the departmental staffs and stakeholders who are closely related to in the department on departmental DM measures.

Civil Supplies

- List out items to be provided by Food and Supply department during emergencies.
- Decide upon the places where the Response Base for Food, Fuel, Raw material, etc., is to be set up.
- Check for the supplies of food grains through the Public Distribution System.
- List out warehouses of the State and Central Government.
- Prepare a list of NGOs, CBOs, NCC/NSS volunteers who can help in food distribution and other activities of the Civil Supplies department.
- Introduction to sector/department specific intrinsic as well as extrinsic hazards

Groundwater

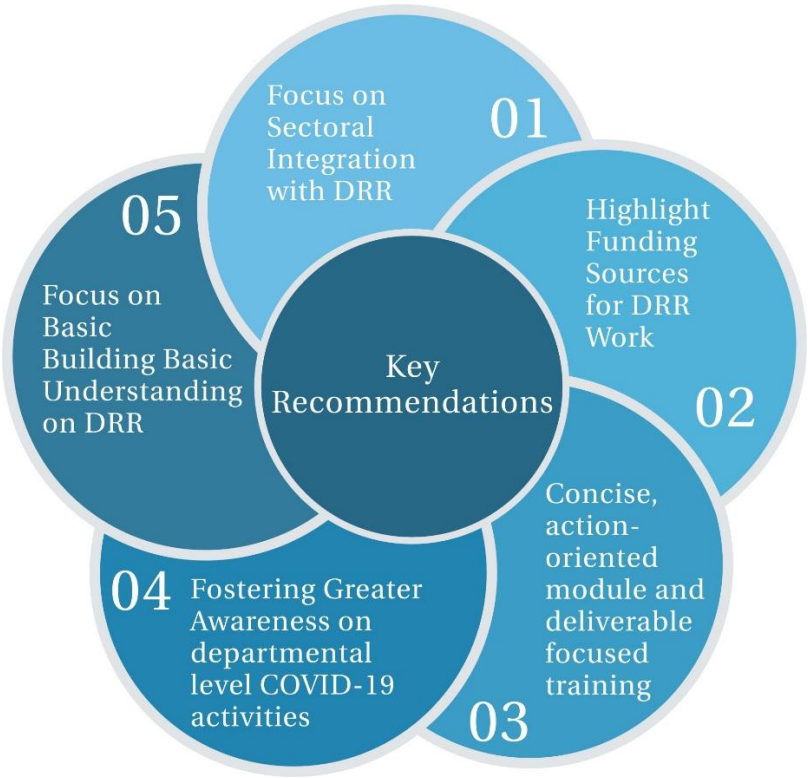
- Training on how to plan and equip the Distts. to have latest technologies to assess the continuation of water supply, with reference to probable disaster.
- Awareness on Geomorphological, Geological, Hydrological and other factors which trigger natural calamities.
- Imparting psychological preparedness training to the virtual cadre officers for facing the challenges and to cope up with the panic.
- Ensure that regular feedback is taken indicating seriousness of disaster, level of distress, condition of hand pumps & platforms.
- Create awareness among local people on various kinds of threats.

Panchayat

- Check inventories of items required at short notice for rescue and relief operations.
- Identifying the resource gaps both physical and manpower required for DM functions.
- Training on coordination with NGOs and voluntary sector to provide relief and assistance during disasters.
- Training on how to organize district level DM task forces.
- Training on organizing of interagency meeting including NGOs.
- Training on organizing disaster management awareness campaigns at the district level.

D. Expectations from the VC Training Programme

E. Key Recommendations for Designing Module and Training Program for Virtual Cadre Officials



1. Project Background

Kerala is frequently ravaged by the disastrous consequences of numerous hazards and hence it is a multi-hazard prone State. Natural hazards are part of the natural evolutionary system of the earth which turned into 'hazards' when the human system started interacting with it. The human system itself was subjected to significant transformations over its history. These transformations and their links to the natural system have served as templates of the dynamics of naturally triggered hazards and therefore, of disasters (Alcantara-Ayala, 2002). This 'template of disasters' is particularly apparent in the state of Kerala where, within a short period of last 80 years, there has occurred a rapid socio-economic transformation from an agrarian society to a highly urbanized consumerist society. [1]

Parallel to this societal transformation, the population pressure along the coastline forced the then marginalized sections of the community to migrate from the coastal belt to the relatively inhospitable terrain of the Western Ghats (George and Chattopadhyay, 2001). A study conducted on migration suggested that in the past 80 years the coastal plains recorded a population growth of 306%, whereas the highlands, foot hills and uplands together experienced a growth of 1342% (Nair et al., 1997). This population with a density of ~819 people/km2 (Census of India, 2001) is more or less widely distributed across all geomorphic units of the state, exposing them to multiple hazards.

Kerala is prone to high incidence of lightning, especially during the months of April, May, October and November. Apart from floods the mountain regions of the state experience several landslides during the monsoon season. It is known that a total of 65 fatal landslides occurred between 1961 and 2009 causing the death of 257 individuals (Kuriakose, 2010). Between 1871 and 2000, the state experienced 12 moderate drought years. The 570 km long coast line of Kerala is prone to erosion, monsoon storm surges and sea level rise. Land subsidence due to tunnel erosion or soil piping which is a slow hazard, is recently noticed to be affecting the hilly areas in the state. This often goes unnoticed and is a hazard with potential of causing landslides, infrastructural damages and crop loss covering vast areas in the high land regions of the state.

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

[1] Kerala State Disaster Management Plan 2016

compared to the rest of the country are factors that increase the vulnerability of the population to disasters.[2]

KSDMP identifies thirty-nine (39) phenomena with potential to cause disasters requiring L2 attention that the state is susceptible to and they are grouped under two categories based on the major triggering factors, they being Naturally Triggered Hazards (Natural Hazards) and Anthropogenically Triggered Hazards (Anthropogenic Hazards). Not all of these hazards turn into disasters that are 'beyond the coping capacity of the community of the affected area'.

However, the 2018 floods which affected the entire state as well as the unfolding of the current COVID-19 pandemic has highlighted the need for a robust preparedness, response and recovery mechanism to mitigate the impacts of such disasters. As highlighted above, the enhanced vulnerability of Kerala necessitates a high level of disaster preparedness too. Such disaster preparedness can be achieved through concerted capacity building efforts of individuals and institutions. Kerala's exposure to disasters is further aggravated by environmental degradation, climate change, change in land use pattern and shifting of populations on unsafe locations. All these debilitating factors need to be countered by building local level capacities.

The Section 38(2) (g) of the Disaster Management Act mandates the preparation of departmental Disaster Management Plans and Section 39 to integrate measures of disaster preparedness and mitigation in developmental plans in accordance with the NDMA and SDMA guidelines. However, the departments do not have the needed expertise to prepare Disaster Management Plans and the Disaster mitigation concerns are not integrated in the developmental plans. The Virtual Cadre once full capacitated will be able to support the departments in doing the above-mentioned tasks.

The State Disaster Management plan 2016 of Kerala envisages setting up a virtual cadre for all departments in which officials from different departments will be trained to act as respondents to disaster management related issues. Hence, the idea of creating human resources groups within the departments becomes a necessity. Govt. of Kerala vide GO Rt no. 56/2017/DMD dated 25th November 2017 and vide GO Rt No. 111/2018/DMD dated 28th February 2018 issued under the section 16 of DM act 2005, had formalized the virtual cadre for officials from 26 departments.

To take this process forward, the Kerala State Disaster Management Authority (KSDMA) in conjunction with UNICEF is implementing

[2] Kerala State Disaster Management Plan 2016

"Virtual Cadre Training Programme for the officials from six departments on DRR, Government of Kerala". The All India Disaster Mitigation Institute (AIDMI) is the technical agency that is implementing the project. These departments include:

- Fisheries
- Groundwater
- Panchayat
- Education
- Civil Supplies
- Tourism

Under this project, 15 officers from each of the six departments, i.e. 90 officers will be selected by the departmental heads to undergo the training on disaster management that will help them in the preparation of departmental disaster management plans. The main objective of the project is to develop and enhance the capacity of the virtual cadre members of the department at districts and state to act as champions/ agents of 'Disaster Management'. In this regard, a project inception meeting with the virtual cadre officials from the aforesaid six departments was organized on 24th November, 2020 (Project Inception Report attached as Annexure 9.4). However, before conducting the capacity building trainings with the selected officers, a detailed training needs assessment (TNA) was carried out with the relevant officers to highlight the pedagogical and training related needs of the cohort of virtual cadre officers.

2. Training Needs Assessment

As mentioned above, under the aegis of the project of imparting training to the virtual cadre officers of 6 departments of Kerala government, a concerted training needs assessment was held to identify the capacity building gaps and bridge them through adequate training and instruction. Successive disasters have revealed the gaps in the existing process and systems as well as lack of capacities of various stakeholder groups. Increasing frequencies and intensities of disasters pose additional challenges to development and overall wellbeing of communities. Given the huge capacity gaps, a systematic approach towards long term capacity building across governance levels and stakeholder groups is required.

What is a Training Needs Assessment?

A training needs assessment (TNA) can be defined as the method of determining if a training need exists and, if it does, what training is required to fill the gap. TNA seeks to identify accurately the levels of the present situation through target surveys, interview, observation, secondary data and/or workshop. The gap between the present status and desired status may indicate problems that in turn can be translated into a training need.

Training Needs = Desired Capacity – Current Capacity

The Training Cycle

Thus, TNA can be defined as identifying the training needs at individual or organizational level in order for the organization to perform effectively. In this case, individual level is about virtual cadre officers, the organizations are the six departments (Fisheries, Education, Groundwater, Tourism, Panchayat and Civil Supplies) of Kerala Government, and the purpose is to make these departments perform effectively on disaster management planning outcomes.

Thus, the TNA should be able:

- To understand the current level of knowledge of the virtual cadre officers on disaster management planning outcomes.
- To understand the ways in which departmental level work is affected by disasters in the state.
- To understand the gap between existing level of knowledge, skills and competency.
- To map the expectations of the virtual cadre officers from the training on disaster management that they are to receive.
- To design the training modules and delivery mechanisms according to the feedback received.

The TNA for Virtual Cadre is, therefore, a process through which the capacity development requirements of the concerned departments are understood. A systematically done TNA culls out the training needs of the virtual cadre officers based on various categories, background, roles and positions. From such a TNA emerges a training design, leading to a plan which addresses many of the capacity needs of the six departments and thus strengthening their disaster management capacities.

3. TNA Methodology

The methodology includes a strong process oriented and participatory approach involving major stakeholders at all levels as against an academic and technical approach. The following steps were taken for carrying out TNA:

3.1 **Desk Review:** The literature review was done for SDMP, NDMP, SFDRR, operational setting of the departments; government orders, policies and plans; cross-sectoral review and prevalent hazard in the state.

3.2 **Inception Report Preparation:** Based on meetings and consultations with KSDMA and UNICEF, an inception report was finalized to be shared with the participants of the virtual cadre meeting. This report also contained the TNA Tool (survey questionnaire).

3.3 **Inception Meeting and TNA Tool Explanation:** An Inception Meeting with all the participants of virtual cadre from the 6 departments as well as representatives from KSDMA, UNICEF and AIDMI took place on 24th November, 2020. This meeting also introduced to the online TNA tool which is a survey questionnaire to be filled in by the participants through a Google Form link.

3.4 **Data Collection through Survey:** A TNA survey questionnaire was circulated among all the officers of the virtual cadre from the six departments to capture their existing level of knowledge, awareness and skills on various aspects of disaster management in Kerala and India.

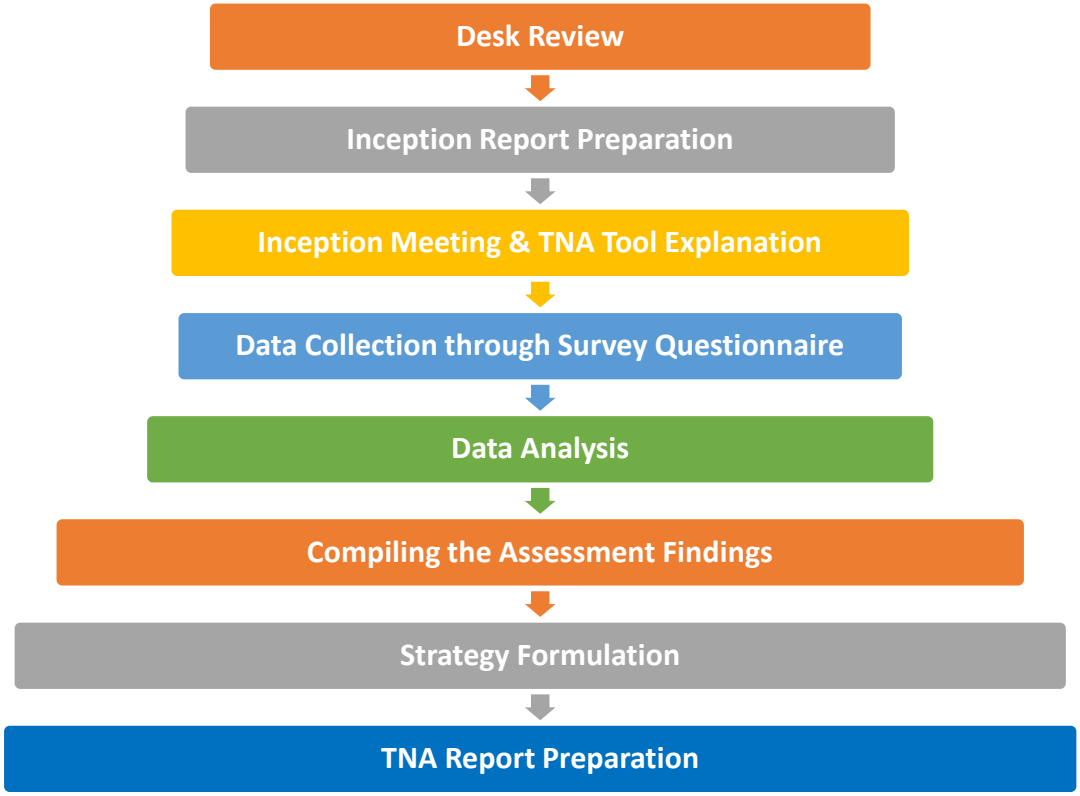
3.5 **Data Analysis:** The data analysis was done based on the data and information collected through the TNA tool and documents provided by UNICEF as well as by the relevant government departments.

3.6 **Compiling the assessment findings:** The data and information were analyzed to what are the training gaps and needs of virtual cadre officials for disaster management planning.

3.7 **Strategy formulation:** Based on the assessment findings, strategy and training needs were derived for six different departments of government of Kerala.

3.8 **TNA Report Preparation:** After carrying out the above activities, a TNA report was
prepared to bring together all the pieces of activities done together for training needs assessment.

TNA Methodology Graphic



4. Departmental Training Needs Assessment for Disaster Management

The following six departments were selected for carrying out training needs assessment:

- Education
- Fisheries
- Groundwater
- Tourism
- Civil Supplies
- Panchayat

4.1 Education

Brief Profile of the Department

One of the main successful stories of Kerala's development is education. Kerala has been able to reduce the regional and gender gaps in education, literacy and enrolment at all level of education. The state has made considerable strides in providing access to not only schools but higher education and technical education to rural students at a reasonable distance. It is

important to protect the education sector in Kerala from the onslaught of disasters. The government of Kerala – KSDMA with education department and UN agencies initiated several key measures that promote and strengthen safety measures in educational institutions. The above-mentioned capacity building inputs will consider the so far progress and needs in coming time to prepare the education department to incorporate disaster management into department functions effectively.

Role of Department as in the SDMP

- Attempt to incorporate subject wise and general concepts of disaster risk reduction in the curriculum and syllabus from lower primary to professional education.
- Organise camps in school and colleges for awareness of dos and don'ts of possible hazards in the state.
- Ensure preparation of school disaster management plans and first aid kits in all schools and colleges.
- Facilitate and conduct mock drills in collaboration with Fire and Rescue Services and DDMAs.
- Facilitate basic life support and first aid training in collaboration with Sports and Youth Affairs Department.
- Identify safe schools and colleges which can be used as relief shelters for short duration of time in the aftermath of any disaster and communicate it to DEOCs and SEOC.
- Ensure that vulnerable schools and educational institutions as identified in the vulnerability assessment annexures are made disaster resilient.

Training Needs of Education Department

- Training on preparation of departmental DM plan.
- Training on review and updation of departmental DM Plan.
- Preparing list of schools to be utilized as shelter during floods and other emergencies.
- Preparing list of schools to be utilized as training centres.
- Introduction to school safety plans.
- Training on how to conduct school safety assessment (structural and non-structural).
- Training on how to conduct mock drills at school level with students, teachers and other school stakeholders.
- Training on piloting psychosocial counselling for students after a disaster or emergency.
- Training on child protection measures in schools during emergencies.
- Introduction to sector/department specific intrinsic as well as extrinsic hazards.

- Training to map out key departmental resources and capacities.
- Use of departmental resources and funds for mainstreaming DRR activities.
- SDRF/NDRF Norms of Relief.
- Minimum standards of relief as applicable for the department.
- Detailed SOPs for all aspects of the disaster management cycle.

4.2 Fisheries

Brief Profile of the Department

This department is extremely important as it directly deals with the local people across state and has a direct impact on the income of the people. The sector has to deal with climatic hazards effectively. Aquaculture and marine fisheries are considered as the food basket for a considerable size of the families in Kerala state. Kerala is a pioneering state of seafood exports in the country. The state initiated a number of activities to deal with related risks. The good practices from other countries will be very useful for training participants. It is crucial to incorporate disaster management into departmental functions for effective response and recovery as well as risk reduction in the fisheries department. The TNA will capture the existing process related to risk reduction from the departmental officials. This process will be valuable to address relevant capacity building gaps during module development and delivery of training.

Role of Department as in SDMP

- Prepare a contingency plan for in sea accidents of fishermen in consultation with Land Revenue, Coastal Police, Coast Guard, Navy and Police.
- Create a mass messaging facility for dissemination of warnings issued by KSDMA, INCOIS, IMD, etc. to all sea faring fishermen.
- Develop early warning in all harbours based on colour flags and display boards for informing sea state to fishermen, in collaboration with INCOIS.
- Ensure at least one high speed search and rescue boat in all fishing landing sites for fishermen rescue through rate contract, particularly during the fishing seasons (in addition to the search and rescue boats of the department and that of Coastal Police).
- Ensure distress signal beacons in all ocean going mechanised vessels.
- Ensure that wind, cyclone and heavy rainfall early warnings reach all the fishermen through SMS and popularise the use of Ocean State Forecast from INCOIS by setting-up display boards in all fishing hamlets in the state.
- Ensure adequate emergency response equipment such as floating buoys with 100 m ropes attached, scuba diving gear, oxygen cylinders and first aid kits at all fish landing sites.
- Develop trained civil defence volunteers from amongst the fishermen community to assist in deep diving and search and rescue with equipment provided by the department.
- Ensure insurance for all sea faring fishermen, boats, catamarans and nets.
- Ensure safe harbour and facilities for anchoring boats and catamarans and storing nets in all fishing harbours.

Training Needs of Department

- Training on preparation of departmental DM plan.
- Training on review and updation of departmental DM Plan.
- Training on how to arrange necessary equipment / lime / CIFAX etc. necessary for response measures.
- Identification of reliable suppliers of departmental supplies such as lime, CIFAX (Medicine), feed/rice bran and ground nut oil cake, fish seed within the district and pre-contracting for supplies in case of emergencies.
- Training on constitution of incident response teams (IRTS) at all levels to tackle any disaster event.

- Assessment of loss and damage to borne by fisherman and fish farmers at the block level in case of a disaster.
- Establishing a strong coordination mechanism with NGOs and voluntary sector such as NCC, NSS, Nehru Yuva Kendra and village level SHGs Primary Fishermen Cooperative Societies and other welfare organizations for rescue and relief purposes.
- Training on piloting risk transfer schemes such disaster microinsurance for vulnerable fishers and fish farmers.
- Introduction to sector/department specific intrinsic as well as extrinsic hazards.
- Training to map out key departmental resources and capacities.
- Use of departmental resources and funds for mainstreaming DRR activities.
- Training on SDRF/NDRF Norms of Relief.
- Training on Minimum standards of relief as applicable for the department.
- Training on Detailed SOPs for all aspects of the disaster management cycle.

4.3 Groundwater

Brief Profile of the Department

The department provides solutions to the irrigation needs as well as domestic and industrial needs. The district context of ground water and disaster risk is highly important as it is different for different parts of the state. The department is implementing several schemes that requires good linkages with disaster management component in the functions of the department – mini water supply schemes, conservation and management of groundwater resources and so on.

Groundwater Department is the nodal agency for groundwater investigation and construction of groundwater extraction structures in the State. The department has started functioning as a part of Agriculture Department and later evolved as an independent department in the year 1978. The initial focus of the department was to provide solution to the irrigation needs and later extended to domestic and industrial needs also. Ever since its inception, Groundwater Department has been dealing with various groundwater related issues and has been a key service provider to all the sectors across the State. The department is also presently engaged in implementing mini water supply schemes, conservation and management of groundwater resources and groundwater regime monitoring.

The department is functioning under Ministry of Water Resources; Government of Kerala. The Department is headed by the Director and has officers in various wings to assist him. There are 14 district officers to implement the different schemes of the department and in addition there is an analytical lab level II+ in Thiruvananthapuram and 2 regional analytical lab level II in Ernakulam & Kozhikode and a central workshop and stores, Kollam.

Role of Department in DRR

- Groundwater Department is the nodal agency for groundwater investigation and construction of groundwater extraction structures in the State.
- To conduct Rapid risk assessment for Kerala State Disaster Management Authority.
- Preparation of monthly Groundwater Drought Index.
- Providing scientific and technical support to three tier panchayats, government, quasi government and other organizations for the site selection and implementation of groundwater based drinking water schemes.
- DDMAs shall ensure that prior to issuing license for land and coastal excavation/mineral excavation/mining a No Objection Certificate of Ground Water Department is obtained so as to ensure that vadose zone [is the part of Earth between the land surface and the top of the phreatic zone, the position at which the groundwater (the water in the soil's pores) is at atmospheric pressure ("vadose" is from the Latin for "shallow")] is preserved and water table is lowered by excavations.
- No Objection Certificate of Ground Water Department should be obtained for landfilling, waste treatment plants and cemetery so as to ensure that ground water is not contaminated by such activities.
- Local Self-governments shall ensure that prior to sanctioning license for all ground water based industry (soda, ice, mineral water plants, flats, hollow bricks manufacturing and hotels) a no objection certificate from the Ground Water Department is produced for tapping ground water.

Training Needs of Department

- Training on preparation of departmental DM plan.
- Training on review and updation of departmental DM Plan.

- Training on how to plan and equip the Distts. To have latest technologies to assess the continuation of water supply, with reference to probable disaster.
- Awareness on Geomorphological, Geological, Hydrological and other factors which trigger natural calamities.
- Imparting psychological preparedness training to the virtual cadre officers for facing the challenges and to cope up with the panic.
- Ensure that regular feedback is taken indicating seriousness of disaster, level of distress, condition of hand pumps & platforms.
- Create awareness among local people on various kinds of threats.
- Introduction to sector/department specific intrinsic as well as extrinsic hazards.
- Training to map out key departmental resources and capacities.
- Use of departmental resources and funds for mainstreaming DRR activities.
- Training on SDRF/NDRF Norms of Relief.
- Training on Minimum standards of relief as applicable for the department.
- Training on Detailed SOPs for all aspects of the disaster management cycle.

4.4 Tourism

Brief Profile of the Department

Tourism is a very important sector for Kerala as it is an internationally recognised tourist destination and one of the most popular tourist destinations in India. The tourism industry promotes ecologically sustained tourism. The state is actively promoting tourism in domestic and international markets. Public spending in Kerala focuses on infrastructure development, marketing, human resource development, publicity and hospitality. The tourism sector in the state is also highly vulnerable to disasters and extreme events. The floods of 2018 and the current COVID-19 pandemic have severely impacted the sector. The training needs assessment (TNA) and the subsequent trainings on DRR would focus on contextualizing mitigation and adaptation actions for the tourism sector of the state to make it more resilient.

Role of Department in SDMP

- Prepare a departmental disaster management plan for inbound tourists and outbound tourists.
- Prepare and publish safety guidelines for tourists in all recognized tourist destinations.
- Prepare a departmental SOP for handling inbound foreign tourists in the times of disasters.

Training Needs of Department

- Training on preparation of departmental DM plan.
- Training on review and updation of departmental DM Plan.
- Introduction to sector/department specific intrinsic as well as extrinsic hazards.
- Training to map out key departmental resources and capacities.
- Use of departmental resources and funds for mainstreaming DRR activities.
- SDRF/NDRF Norms of Relief.
- Minimum standards of relief as applicable for the department.
- Detailed SOPs for all aspects of the disaster management cycle for domestic and foreign tourists during emergencies.
- Training on Loss and Damage Assessment.
- Training on how to disseminate the information to all the departmental staffs and stakeholders who are closely related to in the department on departmental DM measures.

4.5 Civil Supplies

Brief Profile of the Department

The sectoral risk of department comprises the overall potential risks to food storage and supplies by certain hazards in the Kerala state. The impact of a disaster can be categorized as direct, indirect or tertiary. The response experience in recent disasters including floods in 2018 and 2019 and current pandemic (COVID-19) will be incorporated into the above-mentioned actions – TNA, module development and training.

Role of Department in SDMP

- Department of Civil Supplies, Supply Co and Consumer Fed shall arrange calamity reserve stocking of rice (100 kg), cereals (two kinds; 50 kg each), cooking oil (10 lts) and kerosene (75 ltrs) per taluk and the provisions shall

be made available to any location within the district as per the direction of the District Collector.

- Horti Corp shall ensure necessary vegetable supply to the camps.
- Additional supplies shall also be arranged in short notice.
- Civil Supplies Department shall ensure that LPG and Kerosene required for operating the relief camps are provided as per need without any hindrance to the DDMA as per demand.
- Food Safety Commissionerate shall ensure preparedness, response, recovery and mitigation plans for addressing mass food poisoning.

Training Needs of Department

- Training on development of departmental disaster management plan.
- Training on updation of departmental disaster management plan.
- List out items to be provided by Food and Supply department during emergencies.
- Decide upon the places where the Response Base for Food, Fuel, Raw material, etc., is to be set up.
- Check for the supplies of food grains through the Public Distribution System.
- List out warehouses of the State and Central Government.
- Prepare a list of NGOs, CBOs, NCC/NSS volunteers who can help in food distribution and other activities of the Civil Supplies department.
- Introduction to sector/department specific intrinsic as well as extrinsic hazards
- Training to map out key departmental resources and capacities.
- Use of departmental resources and funds for mainstreaming DRR activities
- Training on SDRF/NDRF Norms of Relief.
- Training on Minimum standards of relief as applicable for the department.
- Training on Detailed SOPs for all aspects of the disaster management cycle.

4.6 Panchayat

Brief Profile of the Department

Panchayat is the most important of all the local bodies. Kerala initiated very good examples for capacity building of the

department and local bodies. The state has demonstrated good examples of its decentralized and devolved financial and administrative powers through a tiered structure from the district downwards right up to the village level. The departmental capacity building inputs will be valuable for building understanding of officials to tackling disasters through different aspects of disaster management from early warning system to long term recovery and mitigation aspects with stronger engagement of stakeholders. Under Section 30 (2) (vi) of the DM Act, 2005 all local self-governments are to formulate disaster management plans for their respective jurisdictions as directed by the DDMAs.

Role of Department in SDMP

- Detailed enlisting of dangerous and accident prone tourist sites in the respective panchayaths should be identified and local community and tourists should be warned of probable accidents in such sites.
- Under the Rebuild Kerala Initiative, a campaign called *Nammal Namukkayi* has been launched which focuses on extensive campaign with active participation of the people to identify the required corrections and policy changes to ensure resilience;
- Similarly, the preparation of Disaster Management Plan at every local self-government institutions is to be ensured as well.
- Annual plans of Panchayaths need to include and approve local level projects formulated for disaster resistance, mitigation and management for comprehensive disaster resilience at the local level.

Training Needs of Department

- Training on development of departmental disaster management plan.
- Training on updation of departmental disaster management plan.
- Training on convergence of disaster management activities with annual plans.
- Check inventories of items required at short notice for rescue and relief operations.
- Identifying the resource gaps both physical and manpower required for DM functions.
- Training on coordination with NGOs and voluntary sector to provide relief and assistance during disasters.
- Training on how to organize district level DM task forces.
- Training on organizing of interagency meeting including NGOs.

- Training on organizing disaster management awareness campaigns at the district level.
- Use of departmental resources and funds for mainstreaming DRR activities.
- Training on SDRF/NDRF Norms of Relief.
- Training on Minimum standards of relief as applicable for the department.
- Training on Detailed SOPs for all aspects of the disaster management cycle.

5. Key Findings from Data Analysis of TNA Survey

A detailed Training Needs Assessment (TNA) questionairre was shared with the virtual cadre members from the aforementioned six departments with the objective of mapping out the gaps and their awarness and knowledge on disaster risk reduction systems as well as to capture their existing capacities on the same. A total of 63 respondents from the six departments responded to the online TNA questionnaire. The following table provides an overiew of the department wise list of respondents:

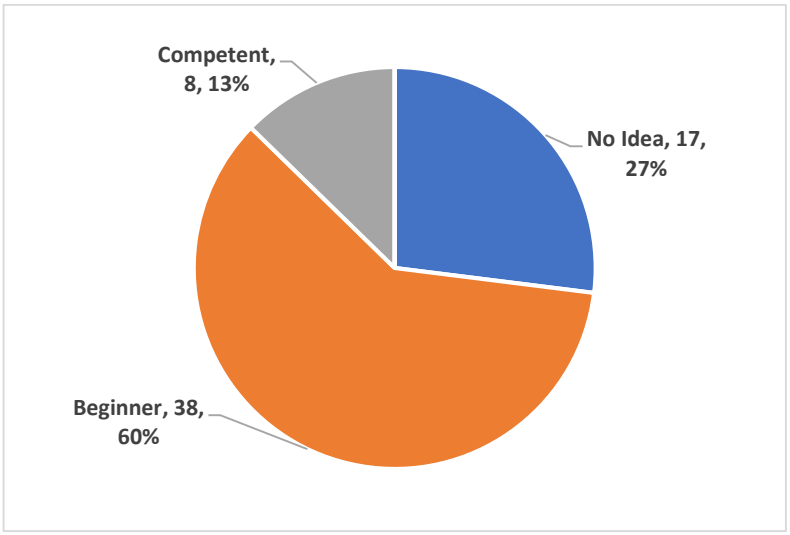
Sl. No.	Name of Department	No. of Responses
1.	Panchayat	12
2.	Groundwater	10
3.	Tourism	11
4.	Civil Supplies	10
5.	Fisheries	8
6.	Education	12
	Total	**63**

The analysis of the responses from the questionnaire yielded the following key findings. The key findings highlighted below will help in the production of training modules and the eventual training programme.

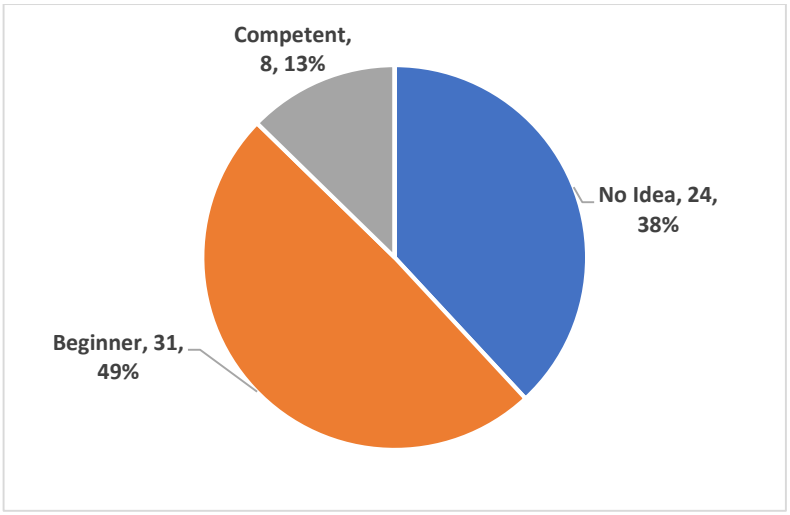
a. Mapping the Level of Expertise on Various Disaster Management Aspects

The following charts map out the existing awareness levels of the respondents of the questionnaire on various aspects of disaster management. All the responses have been graded on the scale of “No Idea”; “Beginner”; “Competent”; “Proficient”; and “Expert”. Blank responses have been considered as “No Idea”.

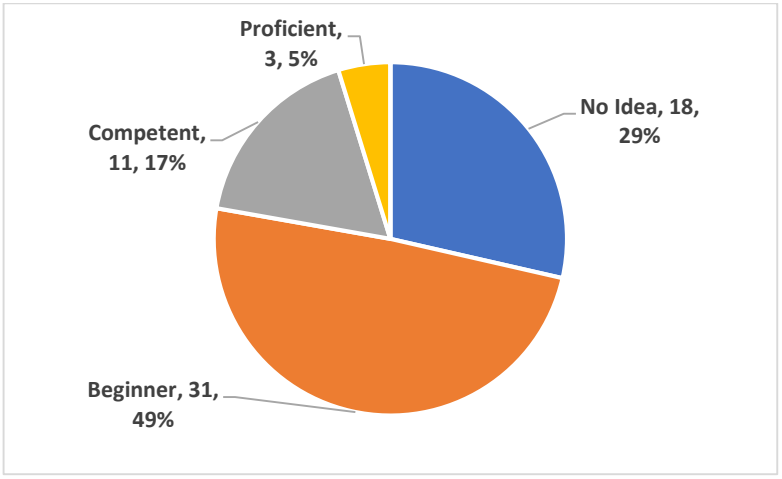
i. **Disaster Management Act**



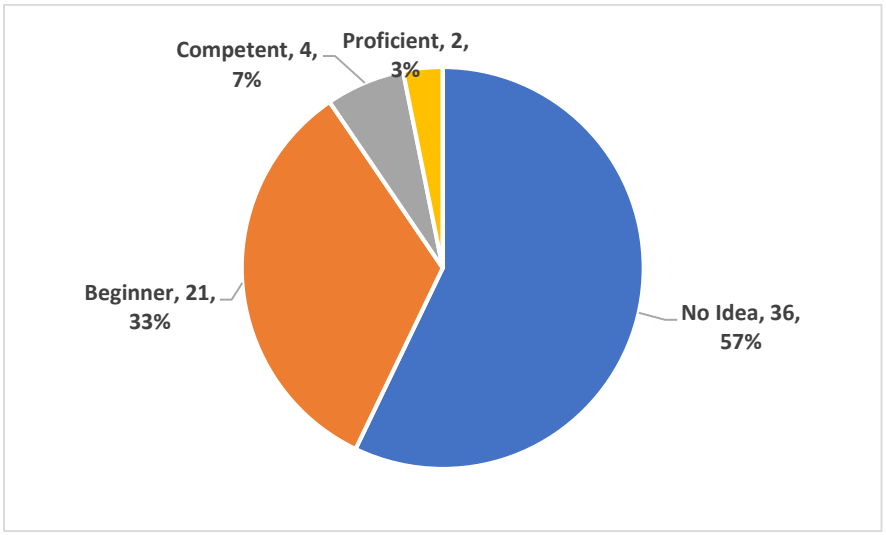
ii. **State Disaster Management Plan of Kerala 2016**



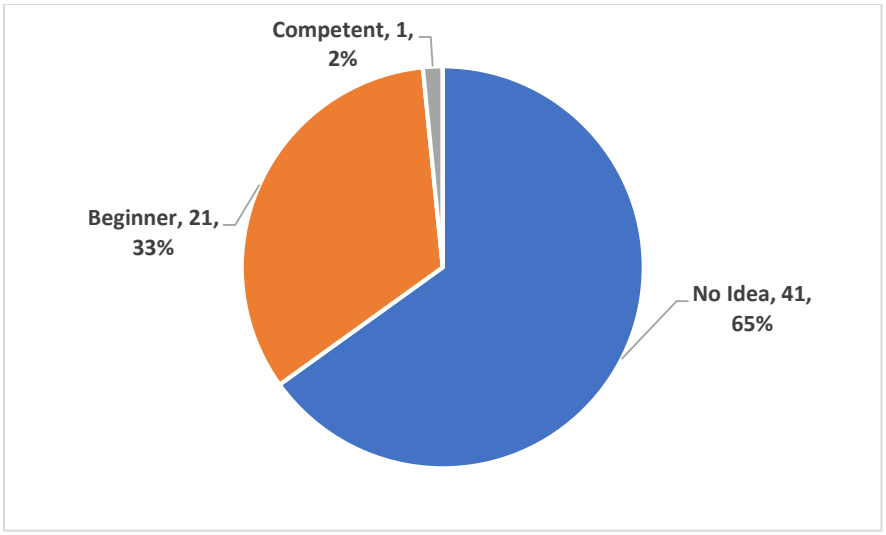
iii. **Possible Disaster risk reduction interventions in your department**



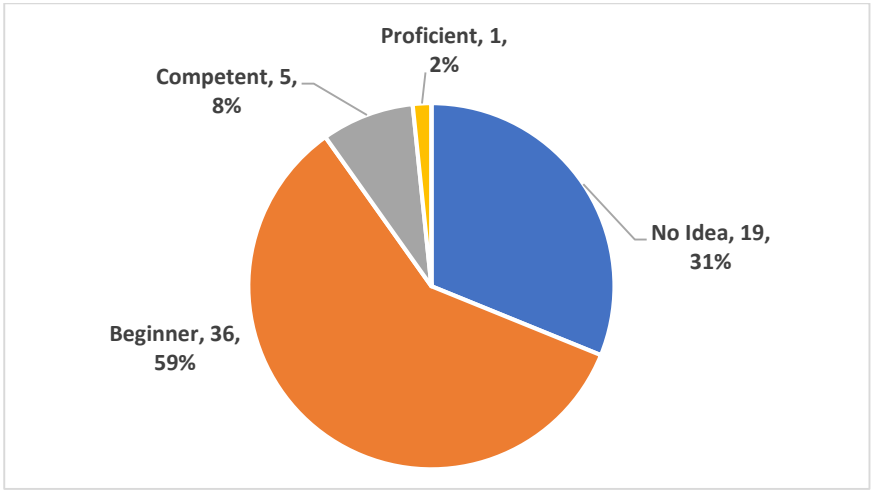
iv. Incident Response system (IRS) in Disaster Management



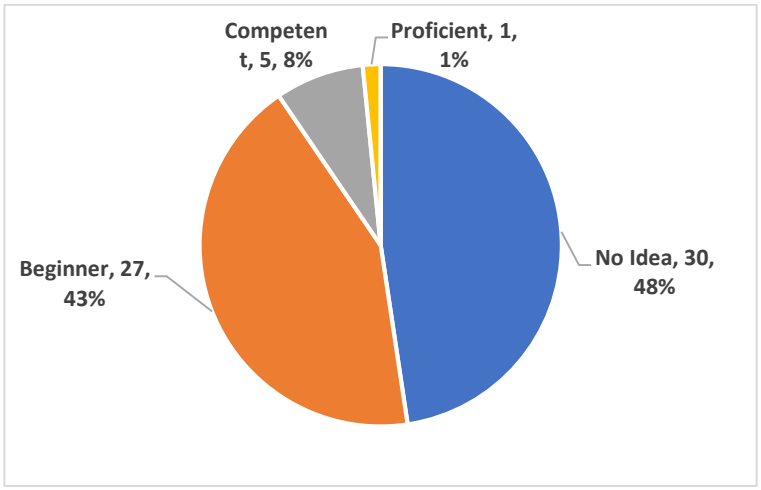
v. India Disaster Resource network (IDRN)



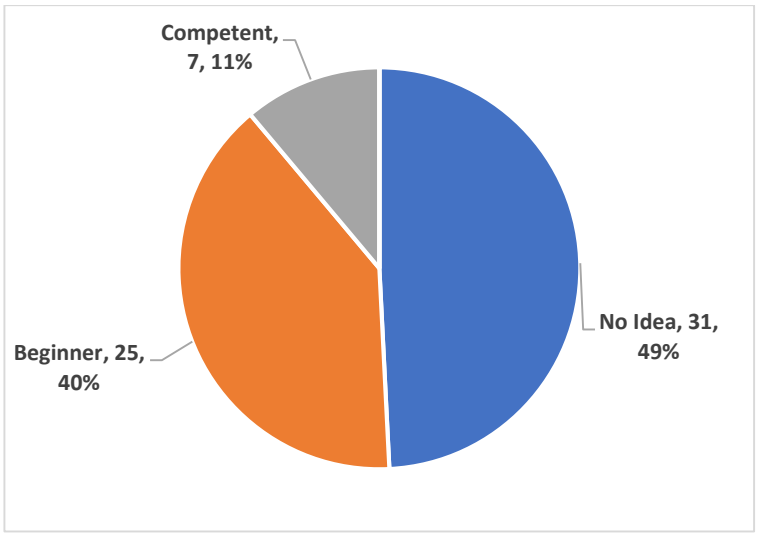
vi. Early Warning Systems



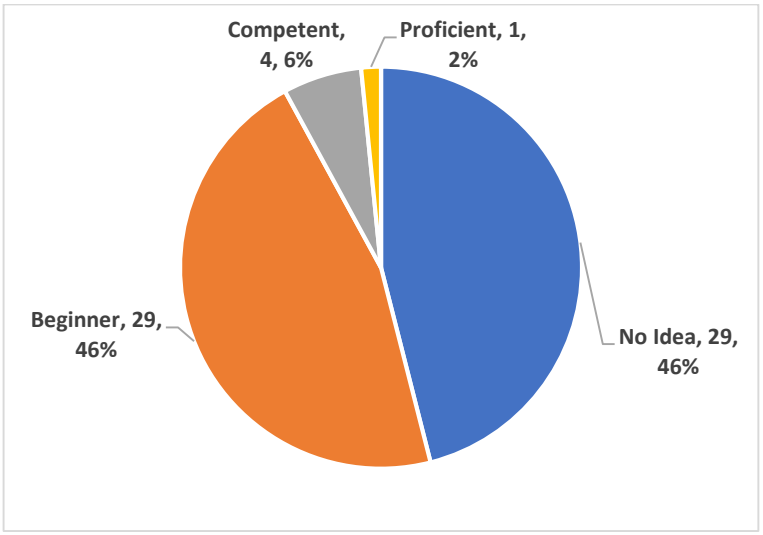
vii. **Relief norms (National/State)**



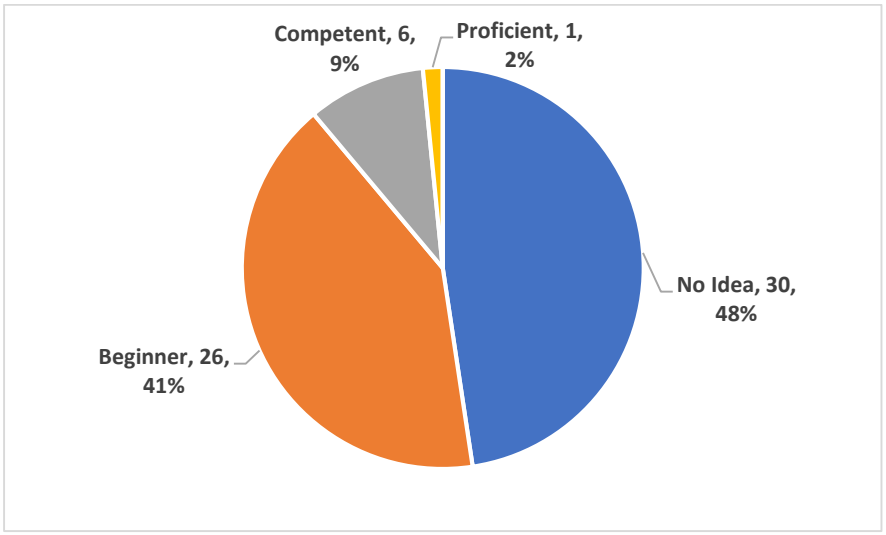
viii. **Orange book of disaster management 2020**



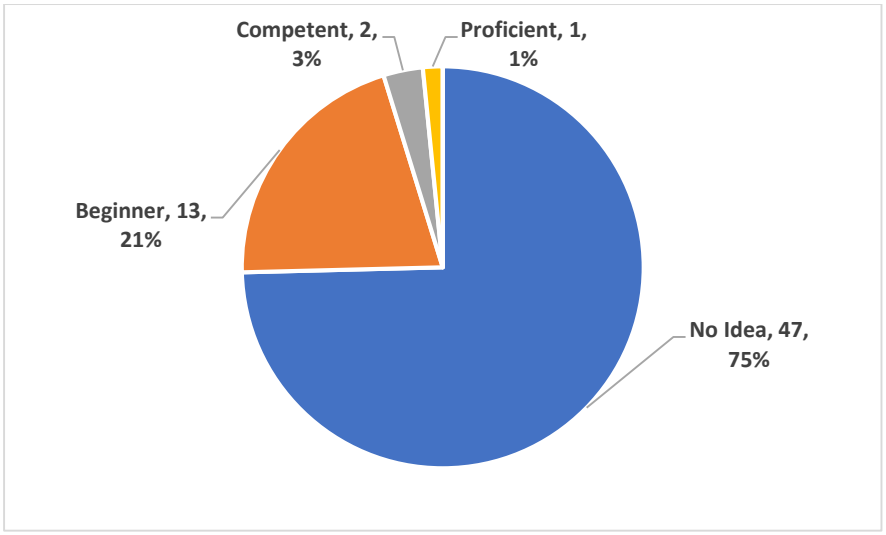
ix. **Minimum standards of relief**



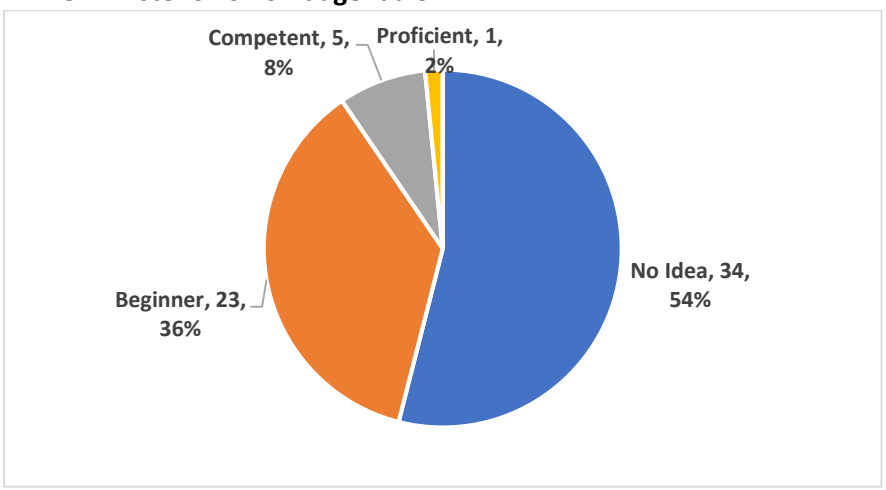
x. Damage loss assessment



xi. Sendai framework for Disaster Risk Reduction



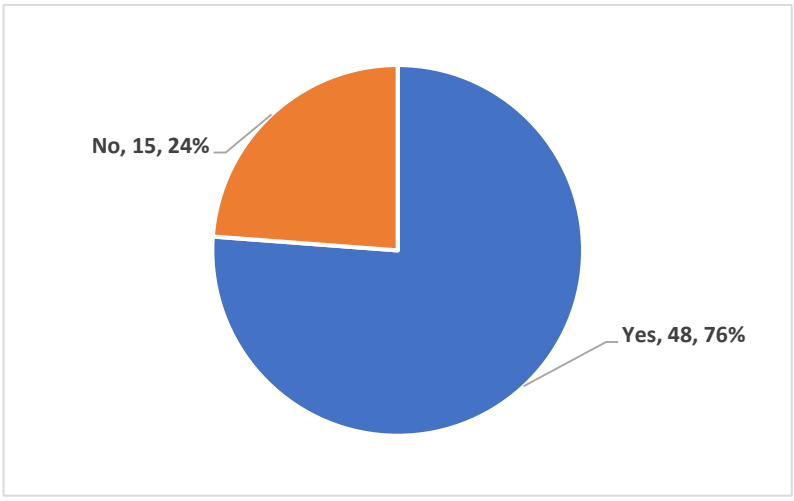
xii.Prime Minister's 10 Point agenda on DRR



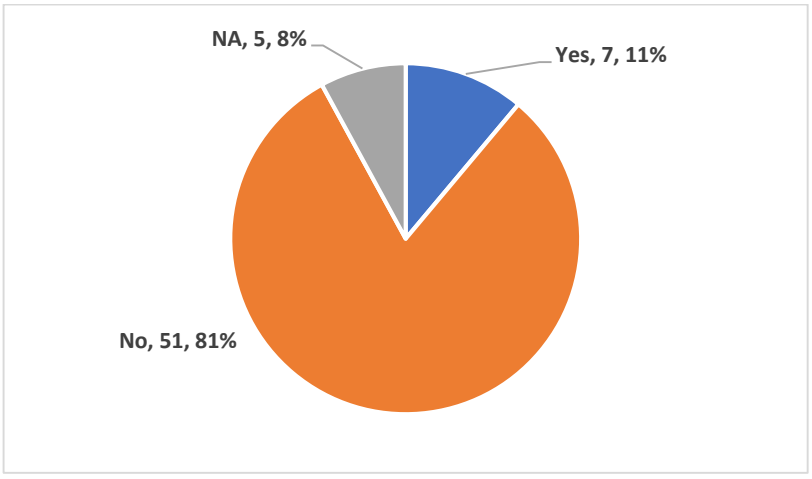
b. Key information related to training needs

The following section contains findings from section C of the online TNA Survey. This section specifically deals with the questions related with the training needs of the participating VC officers. The answers of these questions in the form of "Yes"; "No": and "NA" have been depicted in the following charts. NA stands for Not Applicable and is used to highlight a non-response.

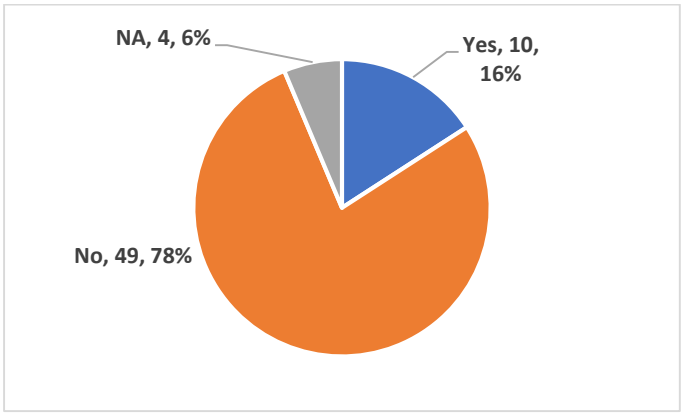
i. Were your department's functioning affected by disasters in the past?



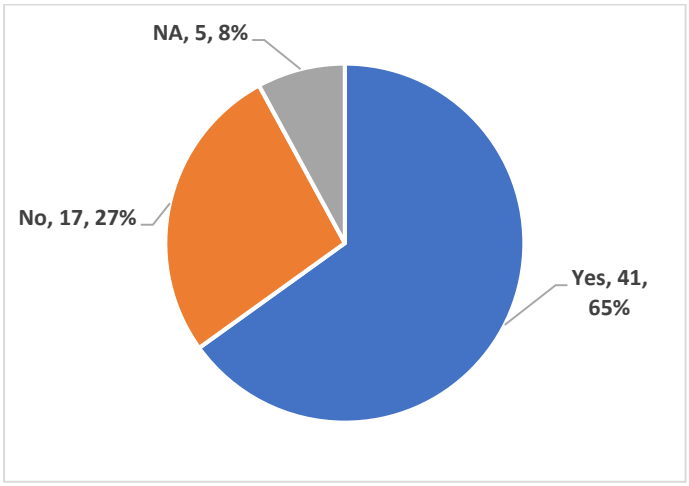
ii. Are you aware of any funds within your department that may be used for disaster mitigation and capacity building activities?



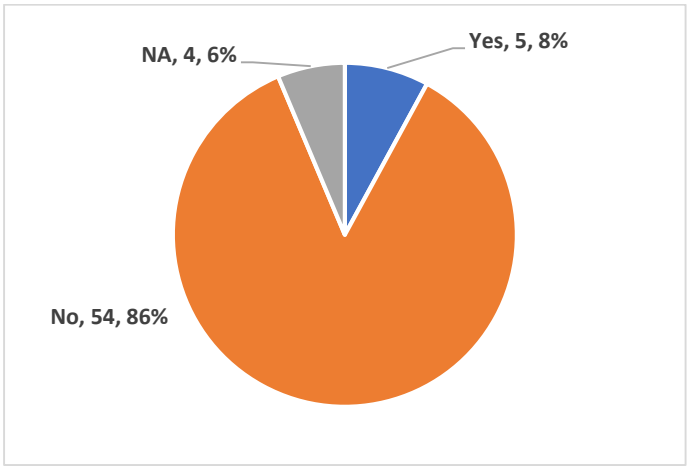
iii. **Were you involved in preparing departmental annual plans, in the past?**



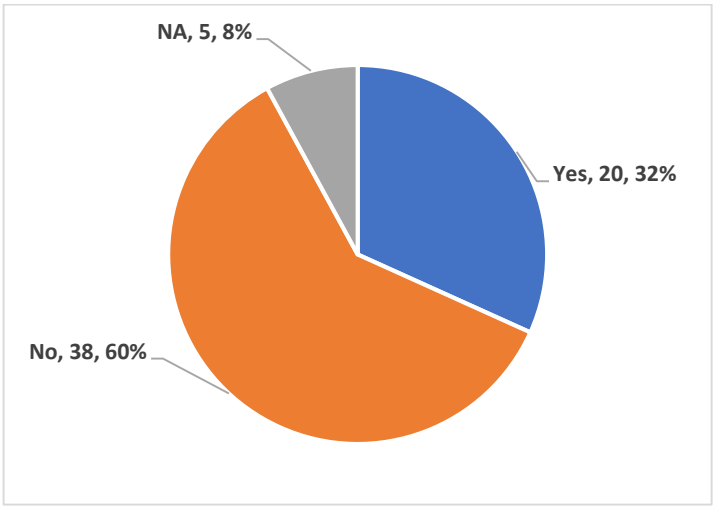
iv. **Has there been a COVID-19 specific action plan at your departmental level?**



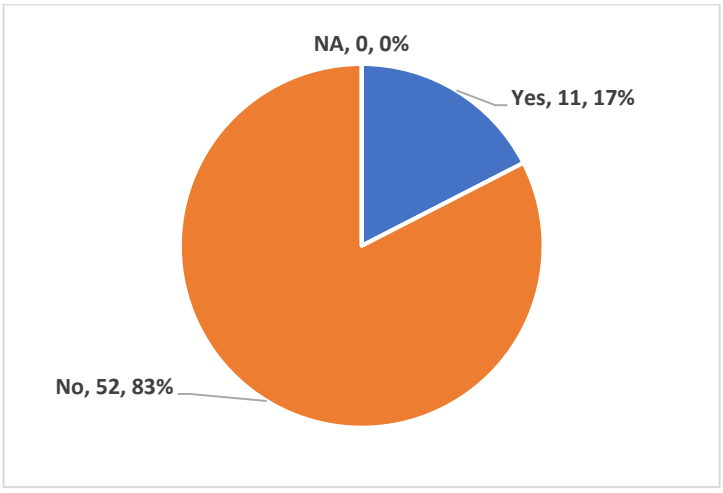
v. **Have you undergone any training on Disaster Risk Reduction?**



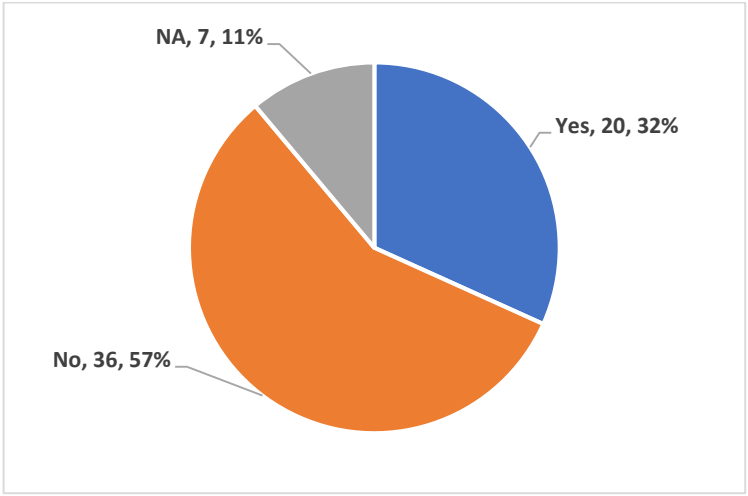
vi. **Does your department have a fully functional training institution (s) to train the officials of your department?**



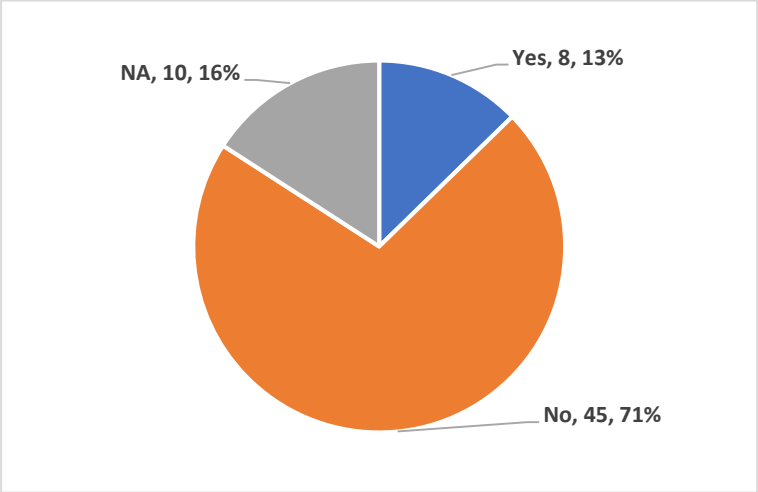
vii. **Have you conducted / facilitated any training session(s) in your department?**



viii. **Does your department have a departmental disaster management plan?**



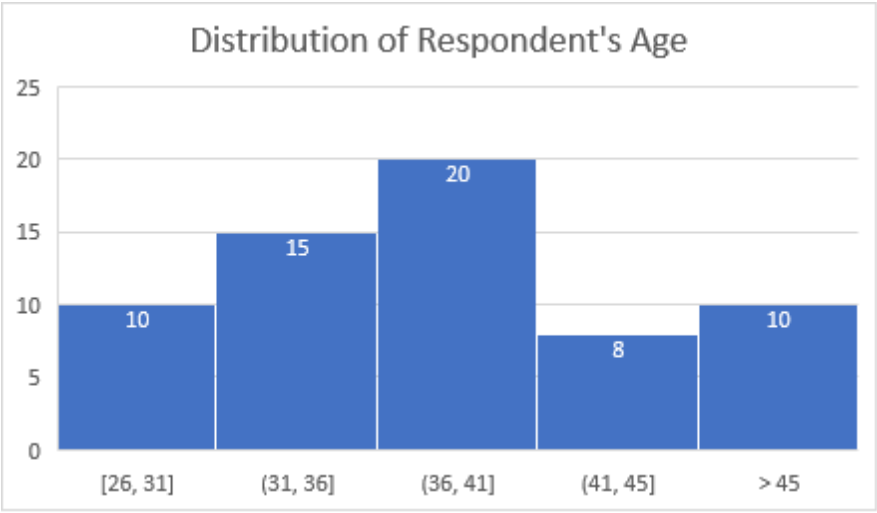
ix. Does your department have a standard operating procedures w.r.t disasters or emergencies?



c. Mapping Open Ended Questions in the TNA Survey

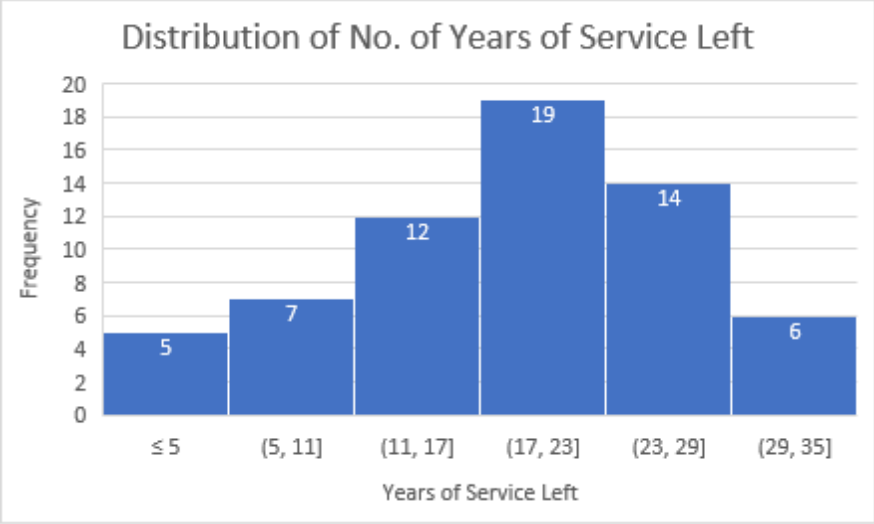
i. Sustainability and Future of VC Training Participants

The purported objective of the virtual cadre (VC) program is to mainstream disaster management at the departmental level through the creation of 'champions of disaster management' within each department. This can only be achieved in a sustainable fashion if the majority of the VC officers are aged below 45 years as this would give them ample time to get trained on various aspects of DRR and implement the same in their respective departments. The following histogram captures 'distribution of respondents' ages' **and shows that 53 respondents (84.13%) are less than or equal to the age of 45 years.**



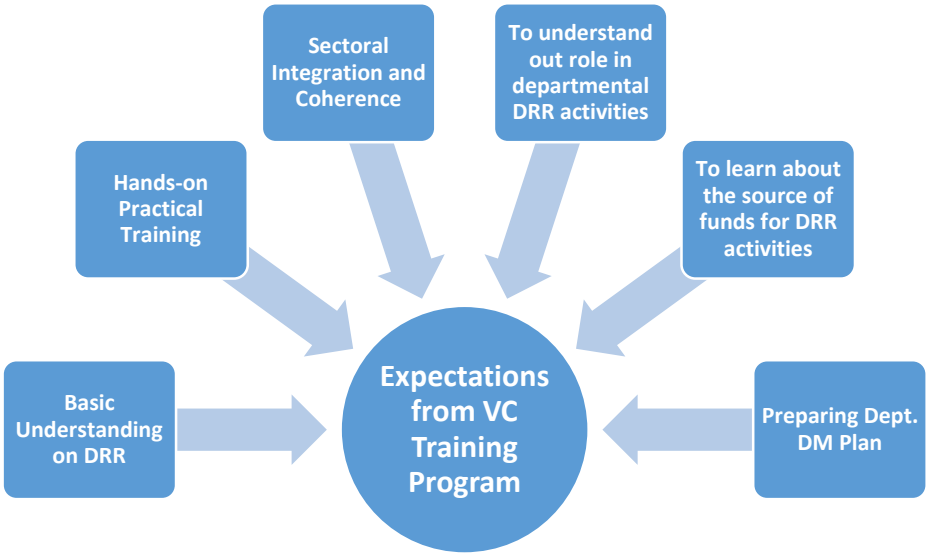
Similarly, when a frequency distribution of the number of years left in service of the various respondents is plotted, the following histogram emerges. **This histogram clearly shows that 58 VC officers (92.06%) who participated in the TNA survey have more than or equal to 5 years of service left.**

This majority clearly highlights that the training provided to this set of VC officers will have long term implications on their respective departments taking up and mainstreaming DRR.



ii. Expectations from the VC Training Programme

The TNA survey also contained some open-ended questions, which asked the respondents their own responses to an individual question. For instance, the respondents of the TNA survey were asked about their expectations from the VC training programme. All the respondents answered this question, in their own words. After analysing these responses, the following themes emerge:



iii. Key Cross Tabulations

In order to understand the participant's responses better, a couple of cross tabulations of between key questions of section A of the TNA survey. Some of the results of these cross tabulations are presented below.

- **Expertise on Disaster Management Act vs Expertise on Sendai Framework for Disaster Risk Reduction (SFDRR)**

Count of 1. Disaster Management Act 2005	Column Labels	Sendai Framework for Disaster Risk Reduction				
Row Labels	**Beginner**	**Competent**	**No idea**	**Proficient**	**(blank)**	**Grand Total**
Beginner	11		26		1	38
Competent	2	2	3	1		8
No Idea			16		1	17
Grand Total	**13**	**2**	**45**	**1**	**2**	**63**

- **Expertise on Kerala State Disaster Management Plan Vs Expertise on Relief Norms (State/National)**

Count of 2. State Disaster Management Plan of Kerala 2016	Column Labels	Relief Norms (State/National)			
Row Labels	**Beginner**	**Competent**	**No Idea**	**Proficient**	**Grand Total**
Beginner	18	1	12		31
Competent	2	4	1	1	8
No Idea	7		17		24
Grand Total	**27**	**5**	**30**	**1**	**63**

- **Expertise on Incident Response System Vs Expertise on Early Warning Mechanism**

Count of 4. Incident Response system (IRS) in Disaster Management	Column Labels					
Row Labels	**Beginner**	**Competent**	**No Idea**	**Proficient**	**(blank)**	**Grand Total**
Beginner	18	1	1		1	21
Competent	2	2				4
No Idea	16	1	18		1	36
Proficient		1		1		2
Grand Total	**36**	**5**	**19**	**1**	**2**	**63**

6. Key Recommendations for Designing Module and Training Program for Virtual Cadre Officers

I. **Focus on Basic Building Basic Understanding on DRR**

The modules and training programs for the virtual cadre officers from the six departments should be focused on providing them a basic understanding of disaster risk reduction (DRR). DRR in itself is quite a large field, therefore there is the risk of making the modules and the trainings bulky. As revealed by the TNA survey, an overwhelming majority of **86%of VC officers (from these six departments) haven't undergone any prior training on DM.** Therefore, it is important to focus on helping these officers understand the basics of disaster management well in a **simple language that is devoid of jargons** so that they may apply the learnings from this experience in devising their respective departmental DM plans.

II. **Focus on Sectoral Integration with DRR**

The modules and training sessions for the virtual cadre officers from six the departments should be focused on sectoral integration with DRR. The objective of the VC program is to mainstream disaster management at the departmental level through the creation of 'champions of disaster management' within each department. In order to achieve this objective, the modules and training sessions should necessarily focus on the integration of the department with DRR outcomes. Similarly, better coordination and integration among various departments for achieving DRR outcomes should also be given impetus.

III. **Highlight Funding Sources for DRR Work**

An important finding from the TNA survey among the VC officers from six departments was that an overwhelming majority of respondents **(81%) weren't aware of the existence of any funds within their department that may be used for disaster mitigation and capacity building activities.** This clearly highlights a gap in their understanding which can be easily bridged through appropriate training, instruction and information. Therefore, the training module and the sessions should necessarily focus on highlighting departmental sources of funds for DRR activities.

IV. **Concise, action-oriented module and deliverable focused training**

The efficacy of any training is dictated by how well have the participants imbibed the learnings from it. In order to devise effective trainings that train these virtual cadre officers well, it is

important to **devise action-oriented and concise training modules**. The VC officers are already burdened with their normal departmental activities and could lose interest if the training module is made out to be exceedingly verbose and lengthy. It is also important to design the training sessions in a way to help the VC officers from each of the six departments **to effectively take up the work of preparing their department's disaster management plan.**

V. **Fostering Greater Awareness on departmental level COVID-19 activities**

Kerala has emerged as the model state for its response to COVID-19 pandemic. However, the awareness level on department level actions against COVID-19 in the state is a bit low. **Almost 35% of the respondents of the TNA survey did not know their department's action plans on COVID-19**. Therefore, the training module and sessions must necessarily address this and improve their awareness.

7. Role of Various Departments in DRR Specific Activities in Kerala

Section 38 and 39 of the DM Act, 2005 enlists the responsibilities of the State Government and the Departments of the State Government. All departments shall ensure that their departmental disaster management plans are submitted to KSDMA for approval within 3 months of approval of this plan.

Table below shows the nodal departments that will be responsible for each hazardous phenomena/event. These nodal departments shall prepare the Departmental Disaster Management plans.

Sl. No	Category	Type	Preparedness	Response	Recovery	Mitigation
1	Natural Hazards	Flood	WR	LR	LR	WR
2		Landslides	LSG	LR	LR	LSG
3		Drought	WR	LR	LR	LSG & Agri
4		Coastal hazards	WR & Fi	LR & Fi	LR & Fi	WR & Fi
5		Wind	LSG	LR	LR	LSG
6		Lightning	LSG	LR	LR	LSG
7		Earthquakes	LSG	LR	LR	LSG
8		Human epidemics	HS	HS	HS	HS
9		Plant disease epidemics and pest attack on crops	AGD	AGD	AGD	AGD
10		Avian epidemics	AH	AH	AH	AH
11		Animal epidemics	AH	AH	AH	AH
12		Pest attack of human habitations	AGD	AGD	AGD	AGD
13		Forest Fire	FD	FD	FD	FD
14		Meteorite/asteroid impacts	LR	LR	LR	LR
15		Soil Piping	LSG	LR	LR	LSG
16		Heat wave/sunburn/sunstroke	LR & LD	HS	HS	LR & LD
17		Natural background radiation	HS	HS	HS	HS
1	Anthropogenic Hazards	Stampedes	P	P	P	P
2		Fire cracker accidents	LR & P	P & FS	P & FS	LR
3		Petro-chemical transportation	P & OC	P & OC	P & OC	P & OC
		accidents				
3		Industrial accidents	PB & FB	PB & FB	PB & FB	PB & FB
4		Dam break	KSEB & WR	KSEB & WR	KSEB & WR	KSEB & WR

5		Dam spillway operation related floods & accidents	KSEB/WR	KSEB/WR	KSEB/WR	KSEB/WR
6		Oil spill	PCB, OC, OHA	PCB, OC, OHA	PCB, OC, OHA	PCB, OC, OHA
7		Road accidents involving civilian transport vehicles	P	P	P	P
8		Human induced forest fire	FD	FD	FD	FD
9		Human-animal conflicts	FD & LSG	FD & LSG	FD & LSG	FD & LSG
10		Fire accidents in buildings and market places	LSG & FS	LSG & FS	LSG & FS	LSG & FS
11		Boat capsizing	TD, IND & KWTC	TD, IND & KWTC	TD, IND & KWTC	TD, IND & KWTC
12		Accidental drowning	SYW & TD	FS	FS	SYW & TD
13		Building collapse	LSG & PWD	FS	FS	LSG & PWD
14		Hooch accident	E	E	E	E
15		Air accidents	AAI	AAI	AAI	AAI
16		Rail accidents	IR	IR	IR	IR
17		Terrorism, riots and Naxalite attacks	P	P	P	P
18		Nuclear and radiological accidents	RS & BARC	RS & BARC	RS & BARC	RS & BARC
19		Space debris impacts	P	P	P	P
20		Biological accidents	HS, FSa	HS, FSa	HS, FSa	HS, FSa
21		Occupational hazards and recreational-area related hazards	LSGD, LD & TD	LSGD, LD & TD	LSGD, LD & TD	LSGD, LD & TD
22		Accidents in Armed Forces premises and assets	AF	AF	AF	AF
Disaster occurring outside the state's administrative boundaries in which tourists from Kerala of non-residential Keralaites are affected			SDMA of the Respective State and NORKA		As decided by SEC or KSDMA	

AAI: Airport Authority of India; AF: Armed Forces (Indian Army, Navy, Air Force, Coast Guard, Indo-Tibetan Board Police, Central Reserve Police Force; Defence Security Corps); AG: Agriculture Department; AH: Animal Husbandry; BARC: Baba Atomic Research Centre; E: Excise Department; FB: Factories and Boilers Department; FD: Forest Department; Fi: Fisheries; FS: Fire and Rescue Services; FSa: Food Safety; HS: Health Services; IND: Inland Navigation Department; IR: Indian Railway; KSEB: Kerala State Electricity Board Ltd.; KWTC: Kerala Water Transport Corporation; LD: Labour Department; LR: Land Revenue Department; LSG: Local Self-Government; P: Police; WR: Water Resources Department; OC: Oil Companies; OHA: Oil Handling Companies; PCB: Pollution Control Board; PWD: Public Works Department; RS: Radiation Safety Department; SYW: Sports & Youth Welfare Department; TD: Tourism Department.

8. Departmental Interlinkages for Disaster Management

The following Matrix covers the departmental interlinkages for disaster management among various departments.

Departments	Education	Fisheries	Groundwater	Civil Supplies	Panchayat	Tourism
Education					X	
Fisheries	X		X		X	
Groundwater		X		X	X	
Civil Supplies	X	X			X	
Panchayat	X	X		X		X
Tourism					X	

9. Annexures

9.1 TNA Tool (Questionnaire for Virtual Cadre Officers)

Training Needs Analysis for Virtual Cadre Officers

Kerala State Disaster Management Authority

2020 – 21

(To be filled by virtual cadre officers of Tourism, Civil Supplies, Fisheries, Education, Ground Water and Panchayat)

Virtual Cadre Link - https://sdma.kerala.gov.in/virtual-cadre-2/

- This TNA form can be filled either in the word format or can be filled over the link - https://docs.google.com/forms/d/e/1FAIpQLScSkpEpVsU3n7ilaNVNAf89RzWnlxKcMudxD_tKjYzvAdmtxA/viewform. given above.
- The filled in format in word or pdf format shall be sent to virtual.cadre.training@gmail.com.
- It requires around 15 – 20 minutes to fill this form.

A) Personal & Professional Information*

Sr. No:	Particulars	Response
1	Name	
2	Department	
3	Designation	
4	District (If State level virtual cadre officer, write State)	
5	Sex	
6	Age	
7	Years of experience in the current department	
8	No: of years of service left	
9	Highest Qualification	
10	Additional Qualification (If any)	

Sr. No:	Particulars	Response
11	Telephone No: (Office)	
12	Telephone No: (Mobile – WhatsappNo: preferred)	
13	Email id (Personal)	-------Preferred for further communication*
14	Email id (Official)	------Preferred for further communication*

*Please tick as appropriate

B) Expertise Mapping (Mark your response in the following questions by a tick mark or by writing YES)

Sr. No:	Description	No Idea	Beginner	Competent	Proficient	Expert
1	Disaster Management Act 2005					
2	State Disaster Management Plan of Kerala 2016					
3	Possible Disaster risk reduction interventions in your department					
4	Incident Response system (IRS) in Disaster Management					
5	India Disaster Resource Network (IDRN)					
6	Early Warning Systems					
7	Relief Norms (National / State)					
8	Orange book of disaster management 2020					
9	Minimum Standards of Relief					
10	Damage & Loss Assessment					
11	Sendai Framework for Disaster Risk Reduction					
12	Sustainable Development Goals					
13	Prime Ministers 10 point agenda on Disaster Risk Reduction					

c) Other information related to training needs.

1. Were your department's functioning affected by disasters in the past? (E.g.: Floods 2018)*

   Yes ____ No ____

2. If yes, please write briefly about the impacts?

3. Name the schemes / programmes implemented by your department in relation to disasters or emergencies, if any?

4. Are you aware of any funds within your department that may be used for disaster mitigation and capacity building activities?

   Yes ____ No ____

5. If yes, then please list them out.

6. Were you involved in preparing departmental annual plans, in the past?

   Yes ____ No ____

7. Has there been a COVID-19 specific action plan at your departmental level?

   Yes ____ No ____

8. Have you undergone any training on Disaster Risk Reduction?

   Yes ____ No ____

   If yes, please list out the sessions attended

Session Title	Organized by	Year

9. Have you conducted / facilitated any training session(s) in your department?

   Yes ____ No ____

10. If yes, write down your expertise in training sessions. (list down the sessions)

11. What are your expectations from the virtual cadre training programme?

12. Does your department have a fully functional training institution (s) to train the officials of your department?

    Yes ____ No ____

    If yes, please provide more details like – Name of the institute, place, contact details etc.

13. Does your department have a departmental disaster management plan?

    Yes ____ No ____

14. Does your department have a standard operating procedures w.r.t disasters or emergencies?

    Yes ____ No ____

    If yes, mention the details of GOs / SOPs / Guidelines / Orders / Circulars issued by your department w.r.t disasters or emergencies.

15. Write down training sessions on disaster risk reduction which you prefer to be included in this training programme

Note:

- Wherever needed, please use separate sheets.
- Should you need more details, please feel free to contact programme coordinator, UNICEF – KSDMA @ 9400251570 or email: virtual.cadre.training@gmail.com.
- Signature is not necessary.

9.2 Outline of Training Module

I. General Training for all departments

A. Introduction to hazard vulnerability of India and Kerala along with the list of major disasters affecting the state.

B. Introduction to Key Terminologies in Disaster Risk Reduction.

C. Introduction to international, national and state level frameworks on DRR.

D. Mechanism and governance related to DRR at the state level in Kerala.

E. Role of specific departments in DRR activities- Kerala specific

F. Introduction to IRS/IDRN

G. Best practices in DRR across the world and in India

II. Department/Sector Specific Training

A. Vulnerability of the specific department to disasters.

B. Aim and vision of the department.

C. Organizational structure of the department.

D. Capacity of the department to deal with various disasters.

E. Measures to be undertaken by the specific department for effective mitigation, prevention and preparedness.

F. Provision of funds for mitigation, preparedness and capacity building.

G. Preparing a response plan for different types of disasters.

H. Relief, rehabilitation and reconstruction measures.

I. Measures for Knowledge Management.

9.3 List of Participants for TNA Tool (Questionnaire)

A total of 63 respondents participated in the online TNA questionnaire.

Sl. No.	Name	Department
1.	Jishnu Prasad T	Civil Supplies
2.	Rajeesh Kumar T A	Civil Supplies
3.	Paurnamy Prabhakaran	Civil Supplies
4.	Hima K M	Civil Supplies
5.	Krishnapriya P S	Civil Supplies
6.	Shinoj Mundaplakkal	Civil Supplies
7.	Roopesh R. Shenoy	Civil Supplies
8.	Junaid M	Civil Supplies
9.	Appu K A	Civil Supplies
10.	Suresh P	Civil Supplies
11.	Subhash Chandran K R	Education
12.	Rahul Suresh	Education
13.	Chithra Mahadevan	Education
14.	A.Shajahan	Education
15.	Santhosh Krishna	Education
16.	Yatheendrajith T	Education
17.	K.R.Subash Chandran	Education
18.	Sreeja.S	Education
19.	Sriraj C V	Education
20.	Vinod Kumar Kc	Education
21.	Chithra Mahadevan	Education
22.	Santhosh Kumar S	Education
23.	Jijomon V C	Fisheries
24.	Pratheesh T P	Fisheries
25.	Sofji S Bhadran	Fisheries
26.	Joyal James	Fisheries
27.	Judine John Chacko	Fisheries
28.	Shyam Chand	Fisheries
29.	S Prince	Fisheries
30.	Benson K	Fisheries
31.	Varun N	Groundwater
32.	Sudheer A S	Groundwater
33.	Arun Chand	Groundwater
34.	Praveen Kumar K A	Groundwater
35.	Anoop S S	Groundwater
36.	Sreejith Ap	Groundwater

Sl. No.	Name	Department
37.	Bijilal B S	Groundwater
38.	Anish M. Ali	Groundwater
39.	Dr Vidhya G S	Groundwater
40.	Leena K	Groundwater
41.	Prem Sankar S	Panchayat
42.	Jishith>R	Panchayat
43.	Sreeraj R	Panchayat
44.	Biju K	Panchayat
45.	Jishith.R	Panchayat
46.	Subhash K.C.	Panchayat
47.	Naveen Rajan	Panchayat
48.	Vinodkumar. M. P	Panchayat
49.	Ajith Kumar	Panchayat
50.	Unnikrishnan V	Panchayat
51.	Sajeesh Raj S	Panchayat
52.	P Nandakumar	Panchayat
53.	Gireesh P S	Tourism
54.	Pradeep Chandran	Tourism
55.	Sunitha K	Tourism
56.	Shajahan M	Tourism
57.	Sajeena V M	Tourism
58.	Ambily Arjunan	Tourism
59.	Haseena Banu K K	Tourism
60.	Meenu M A	Tourism
61.	Nivil K P	Tourism
62.	Nithin R S	Tourism
63.	Vani C. A.	Tourism

Department Wise Distribution of Respondents

Sl. No.	Name of Department	No. of Responses
1.	**Panchayat**	**12**
2.	**Groundwater**	**10**
3.	**Tourism**	**11**
4.	**Civil Supplies**	**10**
5.	**Fisheries**	**8**
6.	**Education**	**12**
Total		**63**

9.4 Project Inception Report

VIRTUAL CADRE TRAINING PROGRAMME FOR THE OFFICIALS FROM SIX DEPARTMENTS ON DRR, GOVERNMENT OF KERALA

A Project Inception Report

Photo: AIDMI.

November 2020

unicef | for every child

Title: Virtual Cadre Training Programme for the officials from six departments on DRR, Government of Kerala

A Project Inception Report

Virtual Cadre Training Programme for the officials from six departments on DRR, Government of Kerala

A Project Inception Report

Contents

Abbreviations

AIDMI	All India Disaster Mitigation Institute
DDMA	District Disaster Management Authority
DDMP	District Disaster Management Plan
DM	Disaster Management
DRR	Disaster Risk Reduction
HDI	Human Development Index
KSDMA	Kerala State Disaster Management Authority
KSDMP	Kerala State Disaster Management Plan
SEC	State Executive Committee
TNA	Training Needs Assessment
UNICEF	United Nations Children's Fund

1. Introduction

A. General Profile of Kerala

Kerala is seen as a success story in terms of its social and economic development. With infant mortalilty rate less than 10 and longevity above 70, Kerala often top the country in most human development indices. With universal education and high-quality public health systems, the youth in the state usually obtain higher education and skill training which give them employment opportunities around the world, particularly in the middle east. The diaspora was fully active to support the state during the time of crisis with money, materials and expertise.

Kerala is a comparatively narrow strip of land sandwiched between the Arabian sea and the Western Ghats. It has a 580-kilometer coastline with a mazimum width of 120 kilometers. Consequently, it is highly vulnerable to natural disasters and the changing climate dynamics given its location along the sea coast and with a steep gradient along the slopes of the Western Ghats. Being one of the most densely populated Indian states (860 persons/km2), Kerala is more vulnerable to damages and losses on account of disasters.

According to quick estimates for 2018-19, the per capita income of Kerala is 1,48,078. The corresponding national average (for 2018-19) is 93,655. In other words, the average income per person in Kerala was approximately 1.6 times the Indian average in 2018-19. Among the big Indian States, Kerala is one of the leading ones for per capita incomes, Haryana, Gujarat, Karnataka, Maharashtra, and Tamil Nadu.

The following table provides a brief geographic and demographic profile of Kerala[1]:

Feature	Description
Area	38,863 km^2
Location	Graticule 8°18'N & 12°48'N and 74°52'E & 77°22'E
Rivers	44
Forest	11,266 km^2
Coastline	590 km
Population	3,33,87,677 (Census, 2011)
Male Population	1,60,21,290
Female Population	1,73,66,387
Population density	860 people/km^2
Population growth rate	4.9%
Districts	14
Taluks	75
Corporations	6
Municipalities	87
Villages	1664* (including group villages)
Lok Sabha Constituencies	20
Rajya Sabha Constituencies	9
Assembly Constituencies	140
Climate	Humid equatorial tropic climate; the dominant climatic phenomena being the monsoons called the South-West (June to September) and the North-East (October to December) monsoons, the former is more significant than the latter with an annual rainfall of 3104 mm mainly contributed by the South West Monsoon

B. Hazard Profile of Kerala

The disastrous consequences of numerous hazards frequently ravage Kerala, and hence it is a multi-hazard prone State. Natural hazards are part of the earth's natural evolutionary system, which turned into 'hazards' when the human system started interacting. The human system itself was subjected to significant transformations over its history. These transformations and their links to the natural system have served as templates of the dynamics of naturally triggered hazards and, therefore, of disasters (Alcantara-Ayala, 2002). This 'template of disasters' is particularly apparent in Kerala, where, within a short period of the last 80 years, there has occurred a rapid socio-economic transformation from an agrarian society to a highly urbanized consumerist society. [2]

Parallel to this societal transformation, the population pressure along the coastline forced the community's marginalized sections to migrate from the coastal belt to the Western

[1] Kerala State Planning Board
[2] Kerala State Disaster Management Plan 2016

Ghats' relatively inhospitable terrain (George and Chattopadhyay, 2001). A study conducted on migration suggested that in the past 80 years, the coastal plains recorded a population growth of 306%, whereas the highlands, foothills, and uplands together experienced growth of 1342% (Nair et al., 1997). This population with a density of ~819 people/km2 (Census of India, 2001) is more or less widely distributed across all state geomorphic units, exposing them to multiple hazards.

Sl. No	Category	Type
1	Natural Hazards	Flood (Riverine, Urban and Flash Floods)
2		Landslides (includes debris flows, rock fall, rock avalanche, rock slide, landslips and mud slips)
3		Drought
4		Coastal hazards (High waves, Storm surges, *Kallakadal*, Tsunami, Salt Water Intrusion, Coastal erosion)
5		Wind (Cyclone, Gustnados, Gusty winds)
6		Lightning
7		Earthquakes
8		Human epidemics
9		Plant disease epidemics and pest attack on crops
10		Avian epidemics
11		Animal epidemics
12		Pest attack of human habitations
13		Forest Fire
14		Meteorite/asteroid impacts
15		Soil Piping
16		Heat wave/sunburn/sunstroke
17		Natural background radiation
1	Anthropogenic Hazards	Stampedes
2		Fire cracker accidents
3		Petro-chemical transportation accidents
3		Industrial accidents
4		Dam break
5		Dam spillway operation related floods & accidents
6		Oil spill
7		Road accidents involving civilian transport vehicles
8		Human induced forest fire
9		Human-animal conflicts
10		Fire accidents in buildings and market places
11		Boat capsizing
12		Accidental drowning
13		Building collapse
14		Hooch accident
15		Air accidents
16		Rail accidents
17		Terrorism, riots and Naxalite attacks
18		Nuclear and radiological accidents
19		Space debris impacts
20		Biological accidents
21		Occupational and recreational area related hazards
22		Accidents in Armed Forces premises
23	Disasters outside State's administrative boundaries, affecting Keralites	

Kerala is prone to a high incidence of lightning, especially during April, May, October, and November. Apart from floods, the mountain regions of the state experienced several landslides during the monsoon season. It is known that a total of 65 fatal landslides occurred between 1961 and 2009, causing the death of 257 individuals (Kuriakose, 2010). Between 1871 and 2000, the state experienced 12 moderate drought years. Kerala's 570 km long coastline is prone to erosion, monsoon storm surges, and sea-level rise. Land subsidence due to tunnel erosion or soil piping, which is a slow hazard, is recently noticed to affect the state's hilly areas. It is a hazard with the potential of causing landslides, infrastructural damages, and crop loss covering vast areas in the state's high land regions.

The high density of population of 860 people/km2 (2011 Census), narrow roads, high density of road network, density of coastal population, and the generally 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.[3]

KSDMP identifies thirty-nine (39) phenomena with the potential to cause disasters requiring L2 attention that the state is susceptible to, and they are grouped under two categories based on the major triggering factors, they being Naturally Triggered Hazards (Natural Hazards) and Anthropogenically Triggered Hazards (Anthropogenic Hazards). Not all of these hazards turn into disasters that are 'beyond the coping capacity of the community of the affected area.'

[3] Kerala State Disaster Management Plan 2016

2. About the Project

Following the disaster, the Government of Kerala felt that the was a need to go beyond traditional approaches to recovery and reconstruction to not only recover fully from the current disaster but also to prepare better for future disasters. The Rebuild Kerala Initiative, led by the Chief Minister, Shri Pinarayi Vijayan, was thus born out of the vision that floods should be taken as "a challenge and an opportunity to rebuild the State to ensure better standards of living to all sections of the society. The RKI (Rebuild Kerala Initiative) presents a unique approach to rebuilding the State. The Rebuild Kerala Development Programme is attempts as a bold vision for a Nava Keralam that is more resilient, green inclusive and vibrant[4]. Number of initiatives has been taken at multiple levels by the partners and stakeholders with citizens of Kerala by the authorities of state authorities. AT KSDMA, the process of mainstreaming disaster management requires initiated. It is targeting to have 'champions of disaster management' in each department for which the most appropriate is to create virtual cadre in the respective departments and incrementally train the same individuals to prepare the plans and support the respective departments. This was taken up as a project and added to the SDMP 2016 as a five-year perspective. The presented project is part of this initiative that joint efforts with and for targeted departments and led by the KSDMA.

A. Brief Overview

The State Disaster Management plan 2016 of Kerala envisages setting up a virtual cadre for all departments in which officials from different departments will be trained to act as respondents to disaster management related issues. Hence, the idea of creating human resources groups within the departments becomes a necessity. Govt. of Kerala vide GO Rt no. 56/2017/DMD dated 25th November 2017 and vide GO Rt No. 111/2018/DMD dated 28th February 2018 issued under the section 16 of DM act 2005, had formalized the virtual cadre for officials from 26 departments. The virtual cadre will support the departments in carrying out the following activities,

1. Support to District Disaster Management Authority (DDMA) in preparation of District Disaster Management Plan (DDMP)
2. During an emergency, support DDMA and work with the departments
3. During an emergency, inform the directions and decisions taken by the SEC and coordinate with district-level line departments
4. Develop and update departmental disaster management plans
5. Prepare training calendar for the district and ensure necessary arrangements for training
6. Provide necessary support and advice to departmental heads and make sure that the activities under the departmental plan are not increasing disaster risk and
7. Implement projects of the DDMA of the concerned departments.

As part of this ongoing engagement, officials from eight departments were trained in 2019-2020 by Kerala State Disaster Management Authority. For 2020-2021 this engagement focuses on the virtual cadre training for officials on disaster risk reduction (DRR) from 6 Kerala government departments. These departments include:

- Fisheries

[4] Rebuild Kerala Development Programme, https://impactkerala.com/sites/default/files/DRAFT_RKDP_12_March_2019.pdf.

- Groundwater
- Panchayat
- Education
- Civil Supplies
- Tourism

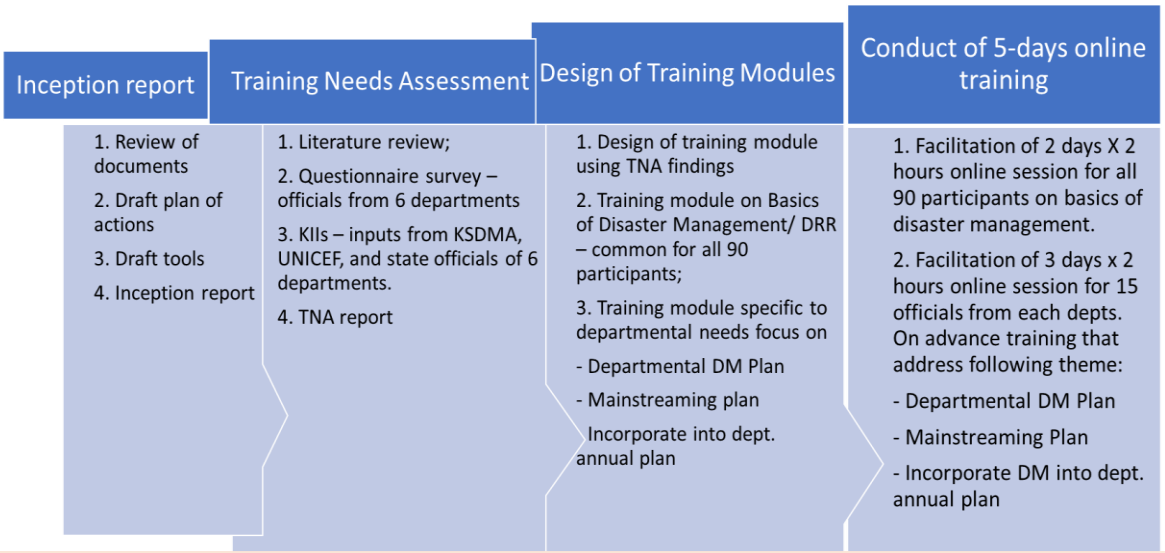
The TNA and the training pieces will be conducted with 15 officials from each of the six departments above, i.e., 90 officials in total.

B. Objectives of the Project

The project's main objective is to develop and enhance the capacity of the virtual cadre members of the department at districts and state to act as champions/ agents of 'Disaster Management.' The objectives of the proposed training are:

- Imparting knowledge on DM/DRR to the members of the virtual cadre
- Mainstream DRR into departmental Planning
- Capacity building for the formulation of Department DM plan
- Integration of department DM activities with state/district level mechanism of DM

C. Deliverables



Monitoring and Review Process

1. A brief online meetings will be organised under KSDMA leadership between KSDMA, UNICEF and AIDMI team prior and after each above four actions that share the progress and plan; input sharing; and feedback aspects from officials of 6- depts.
2. Upon submission of the departmental plan and annual plan from departments, a review exercise will be conducted.

D. Key Actions to Achieve Deliverables

The following are key actions and deliverables. Basically, before finalizing these actions and deliverables, a consultation (online meeting) will occur with involved partner agencies, particularly KSDMA and UNICEF, to capture the inputs and perspectives for effective implementation with concerned stakeholders.

Inception Report: The inception report will present the details of actions with related draft tools and methods to follow in the proposed project activities. The timeline, tools, outlines will be shared as a draft to get the inputs from involved agencies. A report will share the draft tools – questionnaire, KIIs, and a draft list of essential documents covered under literature review – will be shared.

Training Needs Assessment (TNA): It is the first and very important step of the proposal as the training module's design and conduct will be based on the TNA findings. The TNA will capture the training needs of the partners and stakeholders. The literature review (particularly earlier documents, so far progress, departmental documents), questionnaire survey with departmental officials covering all districts, and KIIs with representatives from involved agencies are highly important to shape the needs related to disaster management training related risk reduction. The findings will be shared with KSDMA. Based on consultation (using the online platform) with KSDMA and UNICEF on TNA findings, a final plan of module preparation and conduct of training will be made.

Design of Module – Basic and Advance: Based on TNA findings, the module will be developed. The module material will have two categories – basics of disaster management and advance training of disaster management. The basics of DM will be common for all that covers the legal framework, role of agencies, state plan on disaster management, policy framework, good practices from other states and countries, SFDRR, conceptual understanding, integration with adaptation and mitigation of climate change, etc., The advance training module will have aspects specific to departments – fisheries, social justice, civil supplies, groundwater, panchayat, and education. The focus is to build capacity to develop departmental DM plans, link emergency response, and risk reduction to department functions, and incorporate DM into an annual departmental plan.

Conduct of Training – The training will be delivered using the online CISCO Webex platform. Due to ongoing daily functions and also different locations of participants across Kerala state, CISCO Webex online platform will be selected to deliver the pieces of training. The pieces of training will be facilitated through 2 hours of sessions with related assignments and exercises. All the departments will be given disaster management training, followed by specific DRR training related to their respective departments. The perspectives and needs captured through the TNA exercise will be highly used in designing the content of the training and facilitating the actual training.

Handholding Support for Department DM Plans: Once training pieces have been completed, virtual cadre members shall be given handholding support to develop the departmental DM plans in collaboration with KSDMA. A review of at least two departmental draft plans or a period of three months will be the criteria for ending this process.

E. Target audience

AIDMI will design and conduct the TNA (Training Needs Assessment), design module (basic and advance), and facilitate the training focusing on the following six departments.

1. Fisheries
2. Groundwater
3. Education

4. Tourism
5. Panchayat
6. Civil supplies

Departments

The good practices from other states and other countries will be shared in the training. Similarly, Kerala's local successful response and recovery examples will be important to reflect in training.

Education: One of the main success stories of Kerala's development is education. Kerala has reduced the regional and gender gaps in education, literacy, and enrollment at all levels of education. The state has made considerable strides in providing access to schools and higher education and technical education to rural students at a reasonable distance. It is important to protect the education sector in Kerala from the onslaught of disasters. The government of Kerala – KSDMA, with the education department and UN agencies, initiated several key measures that promote and strengthen safety measures in educational institutions. The above-mentioned capacity building inputs will consider the progress made so far and prepare the education department to incorporate disaster management into department functions effectively.

Civil Supplies: The department's sectoral risk comprises the overall potential risks to food storage and supplies by certain hazards in the Kerala state. The impact of a disaster can be categorized as direct, indirect, or tertiary. The response experience in recent disasters, including floods in 2018 and 2019 and the current pandemic (COVID-19), will be incorporated into the actions mentioned above – TNA, module development, and training.

Tourism: Tourism is a very important sector for Kerala as it is an internationally recognized tourist destination and one of the most popular tourist destinations in India. The tourism industry promotes ecologically sustained tourism. The state is actively promoting tourism in domestic and international markets. Kerala's public spending focuses on infrastructure development, marketing, human resource development, publicity, and hospitality. The tourism sector in the state is also highly vulnerable to disasters and extreme events. The floods of 2018 and the current COVID-19 pandemic have severely impacted the sector. The training needs assessment (TNA), and the subsequent training on DRR would focus on contextualizing mitigation and adaptation actions for the state's tourism sector to make it more resilient.

Fisheries: This department is vital as it directly deals with the local people across the state and directly impacts the people's income. The sector has to deal with climatic hazards effectively. Aquaculture and marine fisheries are considered the food basket for a considerable size of Kerala state families. Kerala is a pioneering state of seafood exports in the country. The state initiated several activities to deal with related risks. The good practices from other countries will be very useful for training participants. It is crucial to incorporate disaster management into departmental functions for effective response and recovery and risk reduction in the fisheries department. The TNA will capture the existing process related to risk reduction from the departmental officials. This process will be valuable to address relevant capacity building gaps during module development and delivery of training.

Panchayat: Panchayat is the most important of all the local bodies. Kerala initiated excellent examples of capacity building of the department and local bodies. The state has demonstrated good examples of its decentralized and devolved financial and administrative powers through a tiered structure from the district downwards right up to the village level. The departmental capacity building inputs will be valuable for building an understanding of officials to tackling disasters through different aspects of disaster management from early warning system to long term recovery and mitigation aspects with the more robust engagement of stakeholders.

Groundwater: The department provides solutions to irrigation needs as well as domestic and industrial needs. The district context of groundwater and disaster risk is highly important as it is different for different parts of the state. The department is implementing several schemes that require good linkages with disaster management components in the department's functions – mini water supply schemes, conservation, and management of groundwater resources.

3. Project Timeline

Sl.No.	Deliverable	Oct-20	Nov-20				Dec-20				Jan-21				Feb-21			
		Week 4	Week 1	Week 2	Week 3	Week 4	Week 1	Week 2	Week 3	Week 4	Week 1	Week 2	Week 3	Week 4	Week 1	Week 2	Week 3	Week 4
1	Inception Report																	
2	Preparing Draft TNA Questionnaire																	
3	Inception Meeting with KSDMA																	
4	Questionnaire with Key Departments																	
5	Preparing Training Needs Assessment Report																	
6	Design of Training Module for 6 departments																	
7	Conduct of 6 virtual Trainings																	
8	Handholding Support for Preparation of Departmental DMs																	

4. Partners and Stakeholders

The above-mentioned proposed plan will be implemented through joint efforts between the following key agencies.

The **KSDMA** (Kerala State Disaster Management Authority) is a leading agency to provide inputs from design to the proposed plan's implementation phase. The experience of KSDMA will guide the proposed activities to align with current requirements. AIDMI will have an online consultation with KSDMA during Planning and before finalizing the above deliverables to strengthen the capacity-building and related processes.

The 6 Departments mentioned above (Fisheries, Tourism, Panchayat, Education, Civil Supplies, and Education) are the proposed plan's main target institutions. The district officials are targeted in each action – TNA, design, and delivery of training. The perspectives of officials (needs, gaps, experience) are very valuable in training design. AIDMI sees this as an opportunity to shape the needs and delivery of capacity building inputs accordingly.

UNICEF's state office is highly experienced, which will be useful in the implementation of the project. AIDMI will have close coordination with the respective officials of KSDMA and UNICEF for the proposed plan. The earlier eight departmental exercise experience is crucial to be utilized to improve the quality of expected results.

AIDMI constantly emphasizes capacity building and local planning aspects at the district to sub-national level in India's different states. AIDMI's recent experience in the Kerala state will be utilized in the above-proposed plan such as ascertainment study with more than 5000 flood-affected families; field practice review of accountability to the affected population; project review with a focus on mental health and psychosocial support; and lessons learned to study on ECHO supported agencies in 2018 flood response. AIDMI has responded to training and capacity building needs across 18 states of India through the design and conduct of more than 500 pieces of training with a wide range of stakeholders. Similarly, the long experience of preparing and reviewing disaster management plans – district, city, departmental, ward, and state – will be valuable to utilized in the above mentioned proposed actions.

5. Annexures and Tools

A. Questionnaire for TNA

Name:

Department:

Position:

Age:

1. Do you know what disaster risk reduction is?
   ☐Yes ☐No

2. Have you ever participated in any training on disaster risk reduction?
   ☐Yes ☐No

3. Are you aware of the major hazards that impact Kerala? If yes, then please list them out.
   ☐Yes ☐No

4. Can you please list out some of the hazards and disasters that impact Kerala?

   _____

5. Are your departments functioning affected by these disasters?
   ☐Yes ☐No

6. List of Hazards in the past five years that have affected your department/sector:

   _____

7. Are you aware of the SDRF/NDRF relief norms for disasters that apply to your department?
   ☐Yes ☐No

8. Are you aware of any funds within your department that may be used for disaster mitigation and capacity building on the same?
   ☐Yes ☐No

9. If yes, then please list them out.

_____

10. Do you know about the Kerala State Disaster Management Plan?

☐Yes ☐No

11. Is there any role that your department can play in promoting disaster risk reduction?

_____

12. Have you received any directive on the integration of disaster risk into your annual departmental plans?

☐Yes ☐No

13. Do you think that your current level of knowledge and skills are sufficient in dealing with disaster risk at the departmental level?

☐Yes ☐No

14. Has there been a COVID-19 specific action plan at your departmental level?

☐Yes ☐No

15. Who are the key stakeholders that support your department in the delivery of key departmental services? (Start with the most important)

_____
_____
_____
_____
_____

16. Please list out the key partner organizations that help your department for capacity building? E.g., Staff College, etc. (Start with the most important).

_____
_____
_____
_____
_____

17. Do you think that you need additional training to integrate your department's actions with disaster risk reduction?

☐Yes ☐No

18. What kind of training would your department require to help in the integration of disaster risk reduction actions?

_____
_____
_____
_____
_____

B. Key Informant Interview Guide

Name:
Department:
Position:
Age:

1. Do you think that the impact of disasters has been increasing in Kerala over the years?

2. How have repeated disasters impacted the various sectors of Kerala? Please give a relevant example to explain your position.

3. What do you think are the underlying causes of the increasing number of disasters and hazards affecting Kerala?

4. How can disaster risk reduction activities be integrated with the various departments of the government?

5. What kind of training or capacity building initiatives should be undertaken to improve the departmental resilience to disasters and extreme events in Kerala?

6. The floods of 2018 are a recent example of a big disaster impacting Kerala. Can you list some lessons and good practices on disaster risk reduction that you observed at the departmental level in the aftermath of the 2018 Floods?

7. How has the COVID-19 pandemic affected the functioning of various departments in the state of Kerala?

8. What kind of training and capacity building initiatives would help improve the resilience of various government departments to disasters in Kerala? Please elaborate with specific examples.

9. What kind of barriers do you observe in human resources to deal with disaster risks at the departmental levels? Please elaborate.

C. Outline of Training Module

I. General Training for all departments

A. Introduction to hazard vulnerability of India and Kerala along with the list of major disasters affecting the state

B. Introduction to Key Terminologies in Disaster Risk Reduction

C. Introduction to international, national, and state-level frameworks on DRR

D. Mechanism and governance related to DRR at the state level in Kerala

E. Role of specific departments in DRR activities- Kerala specific

F. Introduction to IRS/IDRN

G. Best practices in DRR across the world and in India

II. Department/Sector Specific Training

A. The vulnerability of the specific department to disasters

B. Aim and vision of the department

C. The organizational structure of the department

D. The capacity of the department to deal with various disasters

E. Measures to be undertaken by the specific department for effective mitigation, prevention, and preparedness

F. Provision of funds for mitigation, preparedness, and capacity building

G. Preparing a response plan for different types of disasters

H. Relief, rehabilitation, and reconstruction measures

I. Measures for Knowledge Management

D. List of Documents for Literature Review

1. National Disaster Management Plan of India, 2016
   Available at https://ndma.gov.in/en/policy-and-plan/national-plan.html

2. Kerala State Disaster Management Plan, 2016
   Available at https://sdma.kerala.gov.in/disaster-management-plans/

3. Economic Review 2019, State Planning Board, Thiruvananthapuram, Kerala, India
   Available at http://spb.kerala.gov.in/ER2019/index.php

4. Template, Departmental Disaster Management Plan, KSDMA
   Available at https://sdma.kerala.gov.in/

5. Annual Plan Proposals 2019-20, State Planning Board, Thiruvananthapuram
   Available at http://www.spb.kerala.gov.in/images/pdf/ap/AP201920.pdf

6. National Disaster Management Guidelines, National Institute of Disaster Management
   Available at: https://nidm.gov.in/pdf/guidelines/new/sdmp.pdf

7. Training Needs Assessment in Disaster Risk Reduction and Climate Change Adaptation
   Available at https://hpsdma.nic.in/WriteReadData/LINKS/TNA%20Filee1fa68a2-00e9-4de7-9352-abb91840bce6.pdf

8. Capacity Development of Virtual Cadre Officials of Eight Departments of Government of Kerala, KSDMA and UNDP (Shared by KSDMA)

9. Training Report, Capacity Development of Kerala Virtual Cadre Officers in Departmental Disaster Management Planning (Shared by KSDMA)

10. Departmental Disaster Management Plans, Odisha State Disaster Management Authority
    Available at https://www.osdma.org/plan-and-policy/departmental-disaster-management-plan/#gsc.tab=0

11. Departmental Disaster Management Plans, Himachal Pradesh State Disaster Management Authority (HPSDMA)
    Available at
    https://hpsdma.nic.in/Index1.aspx?lid=111&lsid=119&pid=14&lev=2&langid=1