

MOST IMMEDIATE/PERSONAL ATTENTION

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Commissionerate of Revenue
Administration and
Disaster Management,
Chepauk, Chennai 600 005.

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Circular

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Additional Chief Secretary/Commissioner of Revenue
Administration & State Relief Commissioner

Sub: Natural Calamities - North East Monsoon 2019 -
Preparedness for Pre-Disaster, During Disaster, and
Post Disaster Phases - Immediate Response Relief
and Restoration measures to be carried out -
Instructions issued - Regarding.

Tamil Nadu is prone to multiple hazards, and is frequented by hazards of serious nature during Northeast monsoon. The coastal community faces severe cyclonic storms and floods due to extreme weather events periodically during the North East Monsoon. Communities in other non-coastal districts are also prone to floods occasionally and the hilly regions of the State face threats from landslides, as well as floods.

2. North East Monsoon season is active from the month of October to December, and results in about 48% of the normal rainfall received every year. This season is associated with low pressure formation and cyclonic storms resulting in very heavy rainfall (124.5 to 244.4 mm) to extremely heavy rainfall (>244.5 mm). During this period, it is not uncommon to witness cyclonic storms coupled with high speed wind with a potential to cause heavy damages to property (both private and public)

disruption / loss of lives. However these adverse effects can be minimised / prevented through proper planning and mitigation measures at various levels including at the district level.

3. Disaster Risk Reduction (DRR) is a major challenge necessitating meticulous planning, and extensive preparedness encompassing pre-disaster, during disaster and post-disaster phases. The Collectors shall take immediate action as mentioned in the following paragraphs so as to manage effectively any eventuality that may arise during Northeast Monsoon period 2019.

The instructions in this Circular are issued with the objectives to

- a) Increase the efficacy with which the District Collector can respond to any Disaster situation arising out of Northeast monsoon in order to minimise the risk of loss of lives, and to provide effective and immediate response during a disaster.
- b) Focus on preparedness by implementing, in a time-bound manner eco-friendly structural and socially acceptable & environmentally friendly non-structural measures of flood / cyclone management.
- c) Ensure early communication of flood / cyclone / tsunami threats to the community.
- d) Ensure proper maintenance of waterways infrastructure and removal of blockages that impact water flow.
- e) Ensure multi-stake holder involvement in all phases of a disaster and strengthen the preparedness / resilience of the community, different Government agencies, public & private sector institutions including inter alia Health, Education and Agriculture sectors.

1. Pre-Disaster Preparedness for North East Monsoon 2019

1.1 Identification of vulnerable areas and vulnerability analysis

The areas vulnerable to flooding and other disasters in the district already identified based on legacy data and highest inundation levels during the recent past may be updated. **The newly identified vulnerable areas are to be classified as given below:**

1) Areas of Very High Vulnerability.

- (a) Inundation of the area with water level exceeding **5 feet.**
(or)
- (b) Rescue operations carried out with the help of Central forces / SDRF / Fire services (or)
- (c) Areas which are cut-off and became inaccessible. (or)
- (d) Loss of lives or large scale evacuation carried out.

2) Areas of High Vulnerability.

- (a) Inundation of the area with **water level between 3-5 feet.** (or)
- (b) Rescue operations carried out only by local police or Fires services.

3) Areas of Moderate Medium Vulnerability.

- (a) Inundation of the area with water level between 2-3 feet.

4) Areas of Low Vulnerability.

- (a) Stagnation of water in an area with water level below 2 feet.

1.1.1 Cyclones

Vulnerability of an area depends not only upon closeness to sea but also on the kind of structures (i.e. huts, tiled houses and sheet roofed structures are more vulnerable), anticipated landfall point, wind velocity etc. A separate circular is being issued for contents specific to a cyclone.

1.2. Updating Maps of Vulnerable Areas

Digital maps of all the vulnerable areas already prepared at the rate of **maximum 3 vulnerable areas in a single map** at Firka (Rural areas) / Ward (Urban areas) level incorporating vulnerability analysis, details of escape routes and Relief Centres should be updated. If a Firka or a Ward has more than 3 vulnerable areas, additional maps may be prepared at the rate of maximum 3 vulnerable areas per map. The maps may be uploaded in the district website and TNSDMA website.

District wise, Sub-Division wise and Taluk wise vulnerability maps should be compiled and given to the State level and district level Monitoring Officers. Taking into account the legacy data including events in 2018 collectors are authorised to add new locations or upgrade vulnerability under appropriate category. However, for deletions or downgrading, proposals with details of mitigation measures implemented along with justification shall be sent to CRA for approval.

A model map and sample vulnerability analysis is given in **Annexure I - A & B.**

1.3. District Disaster Management Authority / District Co-ordination Committee Meeting

The District Disaster Management Authority and District Co-ordination Committee meeting may be convened before 10.09.2019. One session can be a joint one with the officials of the line departments concerned as well as with Non-Governmental Organisations (NGOs) / Community Based Organisations (CBOs), to review the state of preparedness and also to initiate necessary actions for effective response

by all concerned agencies during the ensuing North East Monsoon 2019. During this session, phone numbers of key district officials may be provided to the members of civil society.

Another meeting session can be an exclusive session with the District level officials and other relevant Government Departments and Agencies. This may be followed by Press meet to brief about the preparedness being done for the ensuing North East Monsoon 2019.

The District Collectors shall ensure that all the line Departments closely monitor and undertake respective standard preparedness measures before onset of monsoon.

1.4. Constitution of Inter Departmental Zonal Teams at district and field level for unified effort

Constitute Inter departmental zonal teams led preferably by Deputy Collector level Officers. The team members are to be drawn from Police, Fire services, Corporations, Municipalities, Town Panchayats, Rural Development, PWD Buildings, Water Resources Department, Highways, Agriculture Departments etc. Each team is to closely monitor a maximum of 5 to 7 vulnerable areas depending upon contiguity. **They are responsible for all activities of Preparedness, Rescue, Relief and immediate Restoration in those areas.** They should actively involve the First Responders in respective areas to ensure timely evacuation and minimize the loss of lives. They should be sensitized to prioritize most vulnerable like differently abled, senior citizens, women and children.

The possibility of forming **exclusive teams for areas of Very high vulnerability and high vulnerability may be explored.** Backup teams should also be constituted to provide relief to the main teams.

All Inter Departmental Zonal Teams should carry with them the booklet of vulnerability maps and should familiarise themselves with the issues concerned and interact closely with First Responders. They should

also interact with the local community to ensure that the vulnerability classification is proper and check whether temporary and permanent mitigation measures have been undertaken or not. If only temporary restoration was done in breached structures, the sites may be inspected for strengthening the measures.

1.5 Community Participation

- i.** The Community participation has to be ensured at grass roots level through enrolment of able bodied volunteers. The volunteers from local community can be identified from NSS, NCC, and Youth Groups with skills of swimming and climbing, as First Responders including Women First Responders (at least 20 per vulnerable area) and form First Responder teams in areas of vulnerability (for search, rescue and evacuation). The first responders have to be trained by Fire & Rescue Services Department, SDRF, Disaster Response Guards and approved NGOs.
- ii.** To identify first responders to exclusively attend to the needs of livestock (First Responders for protecting livestock)
- iii.** To identify a separate team of First Responders and train them for tree planting during normal times and for cutting and removing wind fallen trees during disasters. The volunteers from NSS, NCC and Youth Groups, can be identified as First Responders for tree planting & cutting and removal of wind fallen trees during disasters. In addition staff, trained in tree cutting, belonging to TNEB, Highways, Public Works Department, RD and Urban local bodies etc., may be identified and enrolled. They may be constituted as mobile teams to be placed under the command of Interdepartmental Zonal Teams and at Block level. The above teams and First Responders should be deployed both in arterial and rural roads.
- iv.** The services of first responders upto the response phase, can be utilized free of cost. However, for activities like debris clearance

etc., wages can be paid to First Responders who are desirous of wage employment.

- v.** The following committees shall be formed at Community level for each of **very high and high vulnerable areas** and coastal habitations.
 - 1) Early warning
 - 2) Search, Rescue & Evacuation
 - 3) First Aid
 - 4) Shelter and Relief (Food, Water and Sanitation)
 - 5) Transport Arrangements
- vi.** Form Mobile teams of first responders and Snake catchers at Taluk / Sub-Divisional and District levels for deployment based on need.
- vii.** District Collectors should also have mobile teams under his/her control. Each mobile team should comprise of atleast 15 - 20 persons for being deployed in affected areas based on need.
- viii.** Identify vibrant NGOs, Capable Volunteers from Local Community who are willing to participate in Search, Rescue and Evacuation operations.
- ix.** Data of the NGOs & First Responders is to be prepared well in advance and hosted on the District Website.
- x.** First responders should be identified in all the vulnerable areas.
- xi.** In case, if any first responders has moved out of the area, new first responders have to be identified.
- xii.** Increase the existing number of first responders in all types / categories.

1.6 Disaster Response Guards

To enhance rescue and relief efforts during disasters, Disaster Response Guards were constituted in 2018 by enrolling volunteers from NGOs such as Sri Satya Sai Seva Sangh and Indian Red Cross Society in all the districts and hilly areas. More no. of volunteers and NGOs should

be identified for strengthening the Disaster Response Guards (guidelines issued should be followed while identifying new NGOs).

1.7. Control Room

1.7.1. State Emergency Operations Centre

A State Emergency Operations Centre at the State level has been established in the Commissionerate of Revenue Administration and Disaster Management, Chepauk, Chennai. Advance information on disasters is received in this centre and disseminated to the Collectors and line Departments for taking immediate follow up action.

1.7.2. District Emergency Operations Centre

On the lines of State Emergency Operations Centre, District Emergency Operations Centres were put in place at the District Headquarters to function as communication centres. The Collectors should ensure that the Control room / Emergency Operation Centre is functional round the clock with Toll Free No.1077 and equipped with necessary infrastructure facilities viz., STD Telephone, Fax, computer with internet access etc. Additional Staff should be posted round the clock in the Control Room / Emergency Operation Centre based on the advisories of India Meteorological Department and other designated agencies.

1.8. Involvement of Multiple Stakeholders

Sensitize private institutions, by holding series of meetings at district level with Hospitals, Educational Institutions, Mobile operators and Oil Companies to ensure institutional preparedness with strategies to ensure round the clock functioning of emergency services.

1.8.1 Educational Institutions & School Safety

The National Disaster Management Authority has formulated the National Disaster Management Guidelines on School Safety in February

2016. The Hon'ble Supreme Court has directed that the School Safety Guidelines issued by NDMA have to be implemented in letter and spirit.

The School Education departments as well as the DDMA's have been advised to follow the guidelines given in the School Safety Policy. Some of the major roles and responsibilities of DDMA as per the School Safety Policy are

- Collaborate with and involve education authorities in DM Planning, policies, processes and in developing minimum standards for school safety before, during and after emergencies. This will be done by co-opting the District Education Officer and / other officials / NGOs / Private agencies as part of the DDMA.
- DDMA's will make sure that school safety is given due attention in the DDMPs, DDMA's will collaborate with and provide training inputs to Department of Education for training of School Safety Focal Point teachers and School Management Committee members to lead school safety efforts in their respective schools.
- Ensure that all school buildings whether government or private, comply with the building codes and directives of the Hon'ble Supreme Court of India in relation to safety of children.
- Facilitate specialised training in schools for teachers and peer educators.
- Include issues of school safety – in the District Disaster Management Plans.
- Conduct periodic mock drills at the district level activity involving schools.

The Educational Institutions shall be advised to take up adequate safety measures in Schools such as Checking up Electrical connections,

Installations, cleaning and closing of open drains, Pits, Pruning of branches of trees, Cleaning of clogged drains in the terraces, Clearing of Stair cases, identifying weak and dilapidated structures and strictly avoiding them. The Institutions shall educate Do's and Don'ts to students on all aspects of Safe Health, Security to life etc.

1.8.2 Hospitals

The Government / Private hospitals shall be advised to update their disaster management plans. The hospitals should

1. Ensure power backup arrangements particularly to ICU / CCU's.
2. Position sufficient Stock of Oxygen Cylinders, Emergency Medicines Lifesaving Equipment in working condition and adequate Quantity of Diesel for Operating Generators.
3. **The Generators of adequate capacity should be positioned at an elevated place** preferably in first floor to avoid inundation and ensure power back up.
4. Fire Safety plans.

A copy of the "Hospital Safety Plan" should be obtained from the Health Department and also from Private Hospitals.

1.8.3 Oil Companies

The Oil Companies shall be advised to stock adequate quantity of fuel. The problems faced by them during previous occasions in movement of Fuel etc. should be addressed with the help of Police, and Highways.

1.8.4 Mobile Operators

The Mobile operators shall be advised to ensure backup arrangements, adequate service personal to restore connectivity and to ensure service without any disruption.

1.9 Preparation of Directory of Infrastructure, Machinery, Other Inventory & Telephones

The Directory should have the following

- 1) Vulnerability maps with details of vulnerable areas, contact numbers (up to village level)
- 2) Inventory of all Emergency Vehicles & Equipment essential during search, Rescue and Evacuation and their location
- 3) List of SDRF personnel in the District
- 4) List of Disaster Response Guards of the District
- 5) Details of
 - (a) First Responders for the vulnerable areas
 - (b) First Responders for protecting livestock
 - (c) First Responders for Cutting and Removal of wind fallen trees.
- 6) List of Transport vehicles including Motor boats / Boat owners / Association Addresses
- 7) Details of Rescue Kits and their availability-location wise along with contact details of officer's in charge / owners.
- 8) Details of High power lighting facilities, Motor pump sets including D.G sets. & contact details of Officers in charge.
- 9) Details of Sandbags and Casuarina poles located at strategic places along with details of Officers in charge.

The above details should be uploaded in the district website.

1.10 Deployment Plan for Prepositioning of Men and Material

- 1) Prepare plans to preposition basic relief materials and first aid in buildings identified as Relief Centres in Areas of Vulnerability.
- 2) Deployment plan may be prepared in consultation with Superintendent of Police, Fire Service, Fisheries and others for

prepositioning of rescue teams, boats, Armed Reserved Police, Patrol Vehicle etc.,

- 3) Traffic plan **to establish green corridor for quick movement of rescue teams** and relief measures, fuel, LPG and other essential materials in the areas of vulnerability.
- 4) Prepare for patrolling to prevent possible threat of looting and arson by anti-social elements in areas where evacuation is to be undertaken.
- 5) To identify teams in non-coastal districts for deployment in affected areas.

1.11 Preparation of necessary arrangements to accommodate TNDRF, NDRF, DRG and Central Agencies

- 1) Arrange proper accommodation for TNDRF, NDRF and Central Agencies.
- 2) Separate arrangements for accommodation for members of Disaster Response Guards in the areas where they are deployed.
- 3) Ensure better coordination between Central and State Agencies as well as unified action by multiple agencies of Government of Tamil Nadu
- 4) Appoint **DRO as Nodal officer.**
- 5) District Collectors should ensure that forces are not kept idle and appropriately deployed. Appoint escort officers to guide the forces during their movement to vulnerable areas and oversee the arrangements made for their stay.

1.12 Arrangements at Relief Centres

1.12.1 General

1. Steps to be taken to identify buildings like schools, anganwadi centres, community centres, marriage halls etc., which can be used as Relief Shelters for accommodating the people affected by disaster in addition to the regular cyclone centres and Multipurpose Evacuation Shelters.
2. Inspect and carry out necessary repairs to keep the cyclone shelters and Multi-Purpose Evacuation Shelters (MPES) ready for organizing relief camps. Identify 3 to 4 Collection points for easy and efficient collection and local distribution of Relief materials. Follow the guidelines issued in G.O. Ms. No.279, Revenue and Disaster Management Department, dated 01.08.2018 for upkeep and maintenance of MPES and send compliance report.
3. Ensure proper security arrangements in Relief Centres.
4. **Involve JR cooperative and his team along with Tahsildar level officers for management of relief centres.**
5. Availability of generators with fuel for power back up should also be ensured.
6. Ensure sufficient clothing and blankets to the affected people, sanitary pads and other essentials for women and availability of drugs and Medical check-ups for inmates.
7. In areas where permanent structures are not available to avoid delay in setting up of temporary camps and exorbitant billing of essential supplies, MoU may be entered with manufacturers / suppliers for supply of factory made fast track pre-fabricated shelters / tents / toilets / mobile toilets and urinals which can be dismantled and taken back by the supplier after the closure of the camp.

8. 3.5 Sq. m of covered area per person with basic lighting facilities shall be catered to the inmates of relief camps. In hill areas, minimum covered area shall be relaxed.
9. High Mast lights, emergency lamps, search lights and candles are to be arranged.
10. Special care should be taken for the safety and privacy of inmates, especially women, widows and children.
11. Special arrangements should be made for differently-abled persons, old and medically serious patients.
12. All the electrical installations to be checked for safety issues.
13. The details such as Name, Sex, Age, address, Aadhaar Number, Family Card Number of the inmates must be obtained and entered in the Register as shown below.

Sl. No	Name of the inmate, Father Name	Age & Sex	Address	Aadhaar No.	Family card No.

1.12.2 Drinking Water

- Minimum supply of 3 litres of drinking water per person per day should be provided to the inmates of the camps. For providing safe drinking water double chlorination of water has to be ensured.

1.12.3 Sanitation

- 1 toilet per 30 persons should be arranged in the relief camp.

- Separate toilet and bath area should be catered for women and children.
- Toilets shall not be more than 50 m away from the relief camps.
- 15 litres of water per person to be arranged for toilets / bathing purpose.
- Dignity Kits for women should be provided with sanitary napkins and disposable paper bags with proper labelling.
- Diapers should be provided to the children.
- Necessary arrangements for clearing the solid waste and for keeping the premises clean should be made.

1.12.4 Food & other arrangements at Relief Centres

- Milk and other dairy products shall be provided to the children and lactating mothers.
- Steps should be taken to ensure hygiene at community and camp kitchens.
- It should be ensured that men and women are supplied food with minimum calorie of 2,400 Kcal per day and for children / infants the minimum calorie should be 1,700 Kcal per day. The provisions to be allotted for food preparation for one day for the people accommodated in relief centres will be revised and issued shortly.
- Rice and Dhall must be procured from TNCSC.
- Milk/ Curd must be procured from Aavin.
- Cooking Oil and Spices must be procured from Cooperative Marketing Societies and TNCSC stores.
- The date of manufacture and the date of expiry on the packaged food items should be verified before distribution.

1.12.5 Public Health

- 1) Ensure adequate stocks of essential medicines, life-saving drugs, etc.,
- 2) Make prior arrangements for scheduled visit of Doctors and display their contact numbers for any emergency
- 3) Compile a list of ambulances of both Government Agencies and the Private Sector.
- 4) Arrangements to be made well in advance to ensure the availability of Doctors / Para Medical Staff from Government / Private Hospitals to attend to the affected people in relief camps.
- 5) To arrange medical camps to treat minor ailments, provide health education and referral of sick cases to higher centres. Steps should be taken to avoid spread of communicable diseases.
- 6) Transportation of the affected people for further treatment / operation etc., should be arranged.
- 7) Advance contingency plans for management of multiple casualties shall be derived.
- 8) Chlorination Teams to be formed for proper chlorination of drinking water at OHT, GLR, Bore wells etc.
- 9) Rapid Response Teams to be formed to ensure chlorinated drinking water and to prevent outbreak of diseases.
- 10) Vector Control Teams consisting of Entomologists and Field Workers to be formed to carry out anti-adult and anti-larval works.
- 11) Food safety teams to be formed and Designated Officers and Food Safety Officers should be in field to check chlorination and food hygiene.

1.12.6 Special Care for Women, Senior Citizens and Differently abled

- 1) Ensure proper arrangements for vulnerable sections like differently abled, Senior Citizens, Women and Children etc.
- 2) Providing Warm and inner clothes and additional clothes to Children, sick, elders and women.
- 3) Sanitary napkins for women / girls shall be provided with disposable paper bags.
- 4) For pregnant woman, necessary basic arrangements shall be made by the local administration for safe delivery.
- 5) Advance arrangements shall be made with Government / Private Hospitals so that required medical assistance will be available at short notice.
- 6) Special care may be taken for lactating mothers.
- 7) Wheel chairs may be kept ready at relief centres to help aged, differently abled persons.

1.12.7 Shelters for Animals & Care

- 1) Identify existing cattle pounds and grazing ground poramboke lands as Animal Shelters.
- 2) Ensure the availability of adequate stocks of veterinary medicines in Veterinary Hospitals and also ensure availability of essential drugs.
- 3) Ensure availability of adequate stock of fodder & water in cattle camps/shelters.
- 4) First Responders for Animal Protection to evacuate the animals to designated shelters.

1.13. Communication through Multiple Channels

- 1) Strengthen the DEOC / District level Control Room for effective management of Calls/E-mails/Faxes to ensure that the immediate communication of messages received in EOC are transmitted to the concerned Departments/Field officers for immediate response.
- 2) Disseminate information and bulletins through TN-SMART.
- 3) Utilize the Press / Audio Visual media and Social media to sensitize the community, especially in vulnerable areas.
- 4) Arrange Vehicle mounted with loud speakers for use during emergencies and use Disaster Warning Announcement System (DWAS) in relevant areas.
- 5) Use multiple channels such as print / electronic / social media / wireless systems to spread awareness among the community on the Do's and Don'ts during disasters, and also about evacuation, Relief centre details and also contact person details.
- 6) Utilise the services of Disaster Response Guards and First Responders for building awareness among the community.

1.14. Communication facilities to reach Fishermen on high seas

The District Collectors are instructed that

- 1) Reach out to the Fishermen community through the jurisdictional Fisheries and Revenue Department staff to advise them not to venture into the sea for fishing activities based on IMD advisories.
- 2) Advise the Fisheries Department, to keep track of the number of fishermen venturing into the High seas and monitor their return. In case of missing persons, Coast Guard should be immediately

informed for assistance for tracking them and to ensure their safe return.

1.14.1 Satellite Phone, NavIC and NAVTEX Equipment to Fishermen

In order to convey the distress messages and India Meteorological Department alerts to the fishermen in high seas, Satellite Phone, NavIC and NAVTEX Equipment were provided. Ensure proper maintenance of the Satellite Phone, NavIC and NAVTEX.

1.14.2. Seamless communication through VHF sets

- 1) Special attention was accorded to provide Wireless communication facilities to ensure sea safety and security of the fishermen on High Seas.

- 2) To provide seamless communication network to all fishing crafts operating in all the coastal areas, under CDRRP project, 17539 equipment (15004 nos. of 5W hand held VHF Marine radios and 2535 nos. of 25W fixed mount VHF Marine radios both with built-in GPS receivers) were procured and distributed to the fishermen.

1.14.3. Disaster Warning Announcement System (DWAS)

- 1) To maintain the Early Warning System (EWS) / Disaster Warning Announcement System (DWAS) in the districts properly, in order to deliver the warning alerts and messages to the targeted coastal community, as and when needed.

- 2) To integrate the system with the coastal community with the assistance of the Community Based Disaster Risk Management Programme.

1.14.4. Tamil Nadu System for Multi-hazard Impact Assessment, Alert and Emergency Response Planning and Tracking (TNSMART)

- 1) Tamil Nadu System for Multi-hazard Impact Assessment, Alert and Emergency Response Planning and Tracking (TNSMART) is a decision support system developed with 11 modules encompassing all the components of disaster management cycle that is preparedness, response, relief, recovery and mitigation measures.
- 2) The salient features of TNSMART are forecasting disaster risk, communication risk via Mobile Application, registering and tracking distress calls and evaluating risk reduction measures.
- 3) TNSMART assess the potential flood risk based on rainfall forecast issued by India Meteorological Department for the identified vulnerable locations in 32 districts of Tamil Nadu, in combination with previous rainfall quantity received during the season and status of water level in the reservoirs and tanks.
- 4) Further, the assessed risk is communicated via mobile application to alert the field level functionaries and the community to prepare for minimizing the impacts of potential flood risk through timely evacuation of people in low lying areas to safe shelters.
- 5) This mobile application has an unique alarm system that can send an alarm, even if the mobiles are in silent mode and the alarm stops only after the alert is viewed by the user to ensure timely dissemination of early warning information to minimize loss of lives during life threatening disasters like Tsunami.
- 6) All officials involved in disaster related activities should install the app and popularise among the public to download and utilise it.

1.15. Arrangements in Transport Sector

- 1) Advice all Transport Corporations to sensitize their drivers / conductors regarding their role during flood situation not only to safe guard their interest but also to offer better service to the public during emergency.
- 2) Advice all Transport Corporations not to ply transport vehicles 6 hours before and after cyclone landfall in general and in case of cyclone landfall during night, vehicles movement should be stopped from 6 PM to 7 AM.

1.16. Capacity Building

- 1) Arrange Mock Drills well before the onset of monsoon, in coordination with NDRF / SDRF, Fire & Rescue Department and other vital line departments and approved NGOs (as per guidelines in force), with participation of community.
- 2) Schedule the flood drills with interdepartmental teams at designated zonal level during September & October months.
- 3) Involve all the 3 categories of First Responders and members of other committees in the Mock Drills.

1.17 Periodic maintenance of existing infrastructure & equipment:

- 1) Ensure proper maintenance of the Rain Gauge stations
- 2) Ensure that all department vehicles are road worthy
- 3) Ensure that the VHF / HF sets are functioning properly.
- 4) Sensitize the Government and private health institutions to ensure that the ICU/CCUs function without interruption by making power back up arrangements.

- 5) Ensure that generator sets are located at elevated locations to prevent submergence during floods.
- 6) Ensure that the equipment of the line departments which are involved in search, rescue and relief operations are in working condition.

1.18 Water Release from Dam / Reservoir:

Heavy rain can result in overflow of dams and lakes. The Public Works Department and the Block office to place their staff on high alert to ensure round-the-clock monitoring of flood levels in water bodies under their control and ensure release of water in accordance with existing flood manuals.

When water is being released from Dams/Reservoirs, Public Works Department authorities should alert the people in the downstream to move to safe locations. Besides sharing information with District Administration, information should be sent to Railways, AirPort Authorities, Highways Department, Transport Department and others.

The following instructions among others shall be followed when surplus water is released from any Dam / Reservoir:

- 1) Give wide publicity on quantum of water being released from time to time.
- 2) Ensure that people do not bathe & swim and do not indulge in fishing or other recreational activities without taking necessary safety measures during the water release period in Cauvery basin, rivers canals and other water bodies.
- 3) Advise people to avoid selfies from risk prone locations.

- 4) Issue advisories regarding safety of children and advice parents to prevent children from getting into the canals, rivers and water bodies.
- 5) Advise farmers to take care of the wellbeing of the animals while transporting them across waterways during water release period.
- 6) Instruct the local bodies also to be involved in taking the message to the people and also to identify the river crossing pathways other than bridges.
- 7) Evacuate the people in low lying areas along the banks of rivers Cauvery, Coleroon and tail end reaches of Bhavani and Amaravathi if required.
- 8) Deploy Inter Departmental Zonal Teams, SDRF Trained Police Personnel and Disaster Response Guards to monitor continuously the entire Cauvery River Basin.
- 9) First Responders including Women First Responders to be made alert and also to engage First Responders to exclusively attend to the needs of livestock (First Responders for protecting livestock).
- 10) Form Mobile teams of first responders for evacuation of people, for protecting livestock and for tree cutting of fallen trees and Snake catchers for deployment based on need.
- 11) Sufficient water supply, food and medical facilities should be assured in the shelter places.
- 12) The pumps and pumping arrangement installations at all the water supply wells, infiltration wells and infiltration galleries in riverbeds of Cauvery for all urban, rural and combined water supply schemes should be kept in safe position by taking precautionary measures. Fill up the OHTs in advance to ensure uninterrupted water supply to the habitations. Generators may be hired in case of power outages.

- 13) 108 ambulances to be kept ready and Mobile Medical teams to be pressed into service.
- 14) Chlorination Teams to be formed for proper chlorination of drinking water at OHT, GLR, Bore wells and delivery point.
- 15) Rapid Response Teams to be formed to ensure chlorinated drinking water and to prevent outbreak of diseases.
- 16) Transmission lines and poles should be kept protected in the above villages along the bank of rivers, Cauvery, Coleroon and tail end reaches of Bhavani and Amaravathi. EB officials may be asked to monitor the situation closely.
- 17) Remove blockages under bridges and culverts.
- 18) Any obstructions inside as well as above and below all the vents of all bridges and cause ways across the above mentioned rivers should be cleared and removed.
- 19) Adequate flood stock materials should be kept ready for closing any breeches along the banks of rivers / canals.
- 20) The assessed risk is communicated to alert the field level functionaries and the community to prepare for minimizing the impacts of potential flood risk through timely evacuation of people in low lying areas to safe shelters. Communication may be sent by TNSMART applications, social media and regular media (Print and Electronic)

Further care shall be taken that no panic is created among the public and all the Collectors of the above districts of Cauvery Basin and to send regular reports in this regard.

1.19. Mitigation measures

1.19.1 All water bodies including Reservoirs and Dams should be inspected by PWD & RD Department officials as per Standard Operating Procedures to ensure safety of the structures and removal of blockages to ensure free flow of water into the water bodies. Special drive for encroachment removal should be launched.

1.19.2. Water Way / Bodies

- 1) Minor irrigation tanks, supply channels & distribution channels should be desilted before the onset of Northeast monsoon to harvest rain water as well as minimize risks due to floods.
- 2) The Municipalities and Corporations to undertake a massive drive for desilting the storm water drains, channels before the onset of monsoon.
- 3) Create recharge pits, recharge wells and convert defunct bore wells as recharge wells especially in areas prone for drinking water shortages and in areas where drinking water sources are located.
- 4) The vulnerable points in the downstream area of Dams and reservoirs, River course and other water ways have to be identified, inspected and necessary arrangements have to be made to ensure uninterrupted surplus flow of rain / flood water.
- 5) Accord highest priority for Disaster Mitigation works under CSR funds like desilting of Tanks, clearing the channels to avoid flooding during rainy season and also to improve the water storage capacity of the tanks for ground water recharge for drought mitigation.

- 6) Restoration and deepening of tanks, River courses which can flood National & State Highways, Rail tracks and other major roads during monsoon.

1.19.3 Encroachment Removal in Water Ways

- 1) Protect the water bodies from encroachments and carry out massive programmes for eviction of encroachments.
- 2) The entire River courses should be widened to original size, desilted and encroachments removed especially in vulnerable areas.
- 3) Major Irrigation canals should be desilted & free from encroachments.

1.19.4 Rainwater Harvesting

- 1) Promote Rain Water Harvesting by excavating recharge pits at suitable locations, with special focus on Villages prone for drinking water problems / floods and also in areas in close proximity to drinking water sources.
- 2) Convert defunct bore wells and open wells into recharge wells.
- 3) Launch a mission for tapping rain water from roof tops - both in residential and institutions buildings.

1.19.5 Shelter Belts

- 1) Action should be taken to plant tall trees and create shelter belts in the 13 coastal districts in consultation with Forest Department.
- 2) Tree plantation should be taken up along with river courses in all Districts in consultation with the Public Works Department (PWD) & Forest Department.

1.20 Road and Rail Infrastructure over water ways

- 1) Identify bridges and culverts with special focus on major roads and Railway tracks & remove the blockages besides clearing 1000 metres on either side viz., in the upstream & downstream.
- 2) Piped culverts are to be converted to box type and wherever vent ways are not covering the full width of river courses additional vent ways should be provided on top priority basis in vulnerable areas. Push Type Technology may help in correcting, without time delay.
- 3) Convert bed level cause ways & low level bridges to elevated bridges wherever necessary taking into account traffic intensity.

2. Response During and After Disasters

2.1. Water Quality Surveillance

- 1) To avoid water borne diseases and outbreak of any epidemics, it is highly important that the properly treated water only, is supplied. The community should also be advised to boil the water before drinking.
- 2) In respect of areas where private tanker services are organised for supply of drinking water, it should be ensured that tankers are properly cleaned and chlorinated before they are put in to use.
- 3) In individual houses and apartments (particularly in urban areas) where Ground level Reservoirs / underground Sumps are used for storage there is every possibility of contamination due to inundation and seepage. Necessary advisory should be issued to the community to clean the storage structures and chlorinate the water to prevent spread of epidemics.

- 4) A special Team for "Water Quality Surveillance" for conducting water quality testing may be formed exclusively for each affected area. They must be provided with the "Testing kit" and "Chlorine Tablets."

2.2. Clearance of affected Areas:

- 1) Removal of debris; Clearing the fallen trees; Restoring power lines; Restoration of basic Infrastructure - requires a massive effort and will need mobilization of extra machinery and manpower. Therefore teams are to be formed well in advance.
- 2) Separate teams should be formed for disposal of dead bodies and disposal of carcasses in accordance with NDMA guidelines / state Government guidelines.
- 3) First Responders Teams for evacuation should be involved to evacuate the people from low lying areas to relief centres.
- 4) First Responders Teams - Tree cutting should be involved for tree cutting and removal of fallen trees, including in non - arterial roads.

2.3. Assessment of damages to life & Property

- 1) After the disaster, it becomes necessary to assess the damage as per the guidelines in force.
- 2) Hut damages up to 50 huts in a village can be assessed by Village Administrative Officers assisted by Panchayat clerks. A Team of officials from different departments is to be constituted by the District Collector for assessment of damaged huts if they are more than 50 in a village.
- 3) Proper Documentation of the damaged houses, Crops and Cattle loss with geo-tagged photos / videos capturing date & time should be done.
- 4) Constitute/Designate Engineers/Teams of Engineers from different departments for assessment of damages of pucca buildings and other infrastructure.

- 5) District Collectors should position drones in the district. When there is large scale damage, these drones should be engaged immediately for visual assessment of the damages, date and geo-tagging should be done.
- 6) In order to oversee the relief and restoration activities, one Deputy Collector should be made in-charge of a block. Under him various teams should function for relief and restoration activities.
- 7) Staff from unaffected areas should be diverted to affected areas based on need.

2.4. Relief Centres and Relief

2.4.1. Relief Centres

Based on IMD forecast, immediate action should be taken to operationalize the Relief centres in areas which are likely to be affected. The Joint Registrar of Co-operative Societies and his team should make necessary arrangements for safety and proper care of the people evacuated and sheltered in the Relief centres.

2.4.2. Relief Disbursement

All the District Collectors are instructed to provide immediate relief in respect of Human Loss, Cattle Loss and Hut damages as per the revised norms of assistance ordered in G.O.Ms.No.380, Revenue Department, dated 27.10.2015.

Relief for Widows and Orphans

- Certificate to the widows stating that she lost her husband should be issued within 15 days of disaster. Similar certificate to the Orphaned children should be issued.
- Relief given to Orphaned children by Government should be deposited in a PSU Bank in a Joint Account where the Collector shall be first account holder of the Bank Account. Interest received

should be given to the child / guardian every month for his / her proper upkeep.

2.4.3. Transparency in Relief Operations

A list containing the details of the beneficiaries with their names and address along with quantity / volume and quality of relief distributed should be prepared and made available to the Gram Sabha local representatives of the public in panchayats and Municipalities. Photo / video documentation should be undertaken. Information should also be hosted on Website.

2.5 Liaison Arrangements

- 1) Senior level Officers i.e Tahsildar and above should not be appointed as liaison Officers for the Officers sent to Districts for monitoring, assist in response, relief & reconstruction operations. All senior officers i.e. Tahsildars and field staff should be actively involved in operations only.
- 2) Those drafted for liaison works (administrative staff) should be familiar with the area.

2.6. Reporting system

The daily situation report shall be sent through website <https://tnsdma.tn.gov.in> / TNSMART covering major events including details of heavy rainfall received to the Additional Chief Secretary/Commissioner of Revenue Administration.

The District Collectors should send a consolidated weekly action taken report in the prescribed format to CRA office every Monday by 10.00 AM starting from 11.09.2019. (The Weekly ATR Format is given in Annexure II and Annexure III).

The Weekly action taken may essentially include,

- a) Status of encroachments removed in vulnerable and non-vulnerable areas.
- b) Progress of desilting in Supply Channels, Tanks, River Courses and Irrigation canals in addition to tank silt removed under G.O Ms.No.50, Industries Department, dated 27.04.2017,
- c) No. of Relief centres, Schools and Hospitals inspected, and
- d) PDS Movement & Buffer Stock positioned in vulnerable areas.

2.7. Identification of teams and materials for deployment in other Districts

- 1) Identify Private Buses and Trucks/Lorries for transport not only of staff for rescue work but also to transport relief materials to the identified shelters in other districts, if necessary, within a short notice.
- 2) Identify list of officers, vehicles, equipment for deployment in other districts in case of need.

3. Monitoring Mechanism

The Monitoring Mechanism for the preparedness measures and to carry out activities in a time bound manner in respective vulnerable areas and at district level has to be very dynamic and responsive. The District Collector shall appoint a Nodal Officer at the District Level Sub-Divisional / Taluk / Block to co-ordinate with the Interdepartmental Zonal Teams.

4. General

Department officers / staff drafted for Disaster related works should be provided with Arm bands with Emblem of Government of Tamil Nadu, Department name & Logo of Tamil Nadu State Disaster Management Authority (TNSDMA) to make better visibility and thereby making the public aware about their services.

All the District Collectors are instructed to gear up the entire district machinery and be in state of readiness for the ensuing North East

Monsoon 2019. The Commissioner, Corporation of Chennai is also required to ensure that necessary action is taken on the above mentioned lines in the GCC area in view of the forthcoming North East Monsoon 2019. Detailed Guidelines for initiating measures during cyclonic storms are being issued separately.

In order to monitor implementation of various measures in the Districts a check list for monitoring the progress of preparedness are enclosed herewith. **(See Annexure V)**

All the District Collectors and the Commissioner, Greater Chennai Corporation are also instructed to give wide publicity in the newspapers about the state of preparedness of the district administration, line departments and local bodies thereby creating awareness in the minds of the public and to send a report in this regard.

The action taken in this regard and status of preparedness as per check list enclosed may be sent to this Commissionerate on or before 30.09.2019 and receipt of this circular should be acknowledged by return post.

Sd./- K. Satyagopal
Additional Chief Secretary /
Commissioner of Revenue Administration.

To

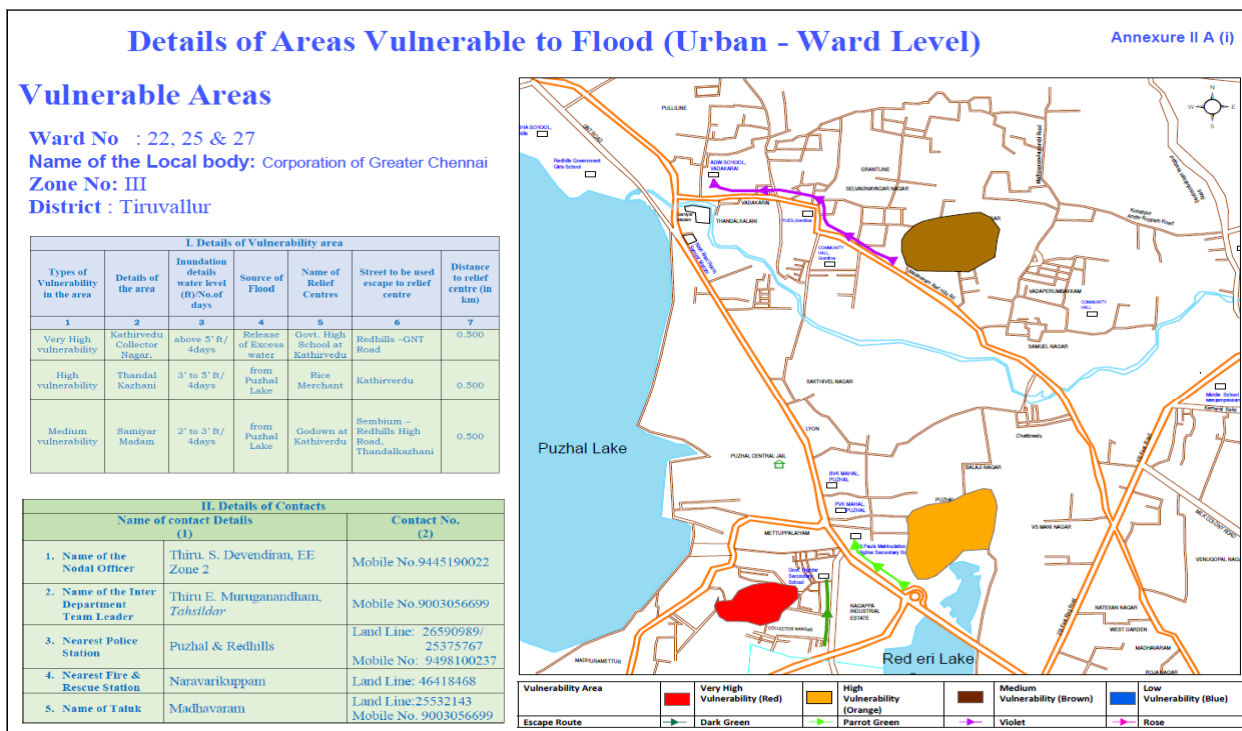
1. The District Collectors of all Districts.
2. The Commissioner of Greater Chennai Corporation.

Copy to

1. The Chief Secretary to Government, Secretariat, Chennai -9.
2. The Additional Chief Secretary to Government,
Revenue and Disaster Management Department,
Secretariat, Chennai -9
3. National Disaster Management Authority, Government of India,
New Delhi.
4. Stock File

for Additional Chief Secretary /
Commissioner of Revenue Administration.

Annexure -I A(i)



Note: Vulnerability Area Maps - Urban Local Bodies - Ward wise and not more than 3 locations in each map alone to be marked. If more than 3 location are there in the Ward, Additional maps to be prepared according to the numbers.

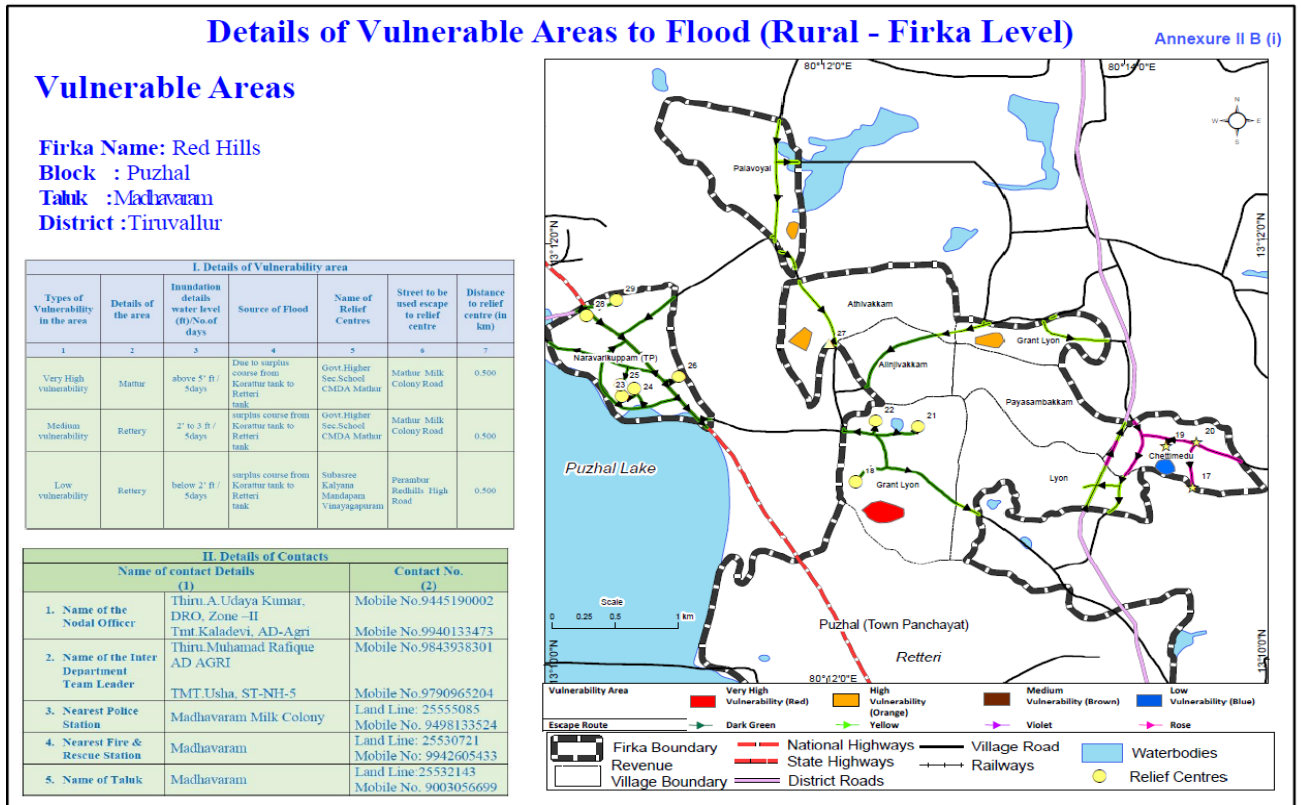
(P.T.O)

Annexure -I A(ii)

Annexure II A (ii)

III. Analysis of Vulnerability (URBAN)				IV. Details of First Responders		
Details of Vulnerability	Place of Flooding			Name	Location	Contact No.
	Location 1	Location 2	Location 3			
	Vadaperumbakkam	Vadakarai	Puzhal			
1. Source of Flooding	Overflowing of Puzhal Surplus course and Heavy Rains			Location 1		
2. Cause of Flooding (Breach/Overflow/ Encroachment etc..)	Overflow of surplus water from Puzhal Lake			Mr. Maran Raj	1 Puzhal	9087852855
3. Rainfall received in that area (Heavy down pour data which triggered the event with date)	320mm			Mr. Thirupathi	2 Puzhal	9003173273
4. Relief Centres operated to tide over the situation	a) Redhills Govt. Girls School b) Noon Meal Room Samiyar Madam c) Community Hall Grantline d) BVK Mahal Puzhal e) PUES Grantline f) Community Hall Grantline			Mr. Senthil	3 Vadakarai	9845520383
5. Number of persons evacuated and housed in Relief Camps	Approximately 2, 058 families			Mr. Bharathiraja	4 Vadakarai	9962172320
6. Number of days Relief Camps was in operation	5 Days			-	5 -	-
7. Works taken up during current year	-			Location 2		
a Temporary Measures taken to restore damaged portions in case of breaches	Temporary Restoration at Retteri Junction			Mr. Sreenivasan	1 Vadaperumbakkam	7358618943
b Permanent Measures taken to restore the damaged portion in case of breaches	De-silting work and strengthening of Puzhal lock are the precautionary measures taken to prevent any eventuality during Northeast Monsoon 2016			Mr. Kamal	2 Vadaperumbakkam	9840626801
c Desilting Activities under taken	i. De-silting work at Surapet Collector Colony on completion stage. ii. De-silting work at Puzhal Lock. iii. De-silting work at Samiyar Madam, Tandalkalani Village.			Mr. Karthik	3 Vadaperumbakkam	9840970101
8. Permanent measures identified to be undertaken to minimize the risks in area. (Diversion canal construction of retaining wall, conversion of pipe culvert to box culvert etc.,)	-			-	4 -	-
	-			-	5 -	-
	-			-	-	-
	-			-	-	-
	-			-	-	-

Annexure -I B(i)



Note: Vulnerability Area Maps - Rural Areas - Firka wise and not more than 3 locations in each map alone to be marked. If more than 3 location are there in the Firka, additional maps to be prepared according to the numbers. (P.T.O)

Annexure -I B(ii)

Annexure II B (i)

III. Analysis of Vulnerability (RURAL)				IV. Details of First Responders		
Details of Vulnerability	Place of Flooding			Name	Location	Contact No.
	Location 1	Location 2	Location 3			
	Mathur	Manjambakkam	Kosapur			
1. Source of Flooding	Overflowing of Puzhal Surplus course and Heavy Rains			Location 1		
2. Cause of Flooding (Breach/Overflow/ Encroachment etc.,)	Overflow of Puzhal surplus course, adjoining area, Balasubramaniyan Nagar, Arulanandham Nagar, T.V.K. Nagar – Inundated areas			Mr. Loganathan	1 Mathur	9789956961
3. Rainfall received in that area (Heavy down pour data which triggered the event with date)	320 mm			Mr. Balaji	2 Mathur	9840488060
4. Relief Centres operated to tide over the situation	Nil			-	3 -	-
5. Number of persons evacuated and housed in Relief Camps	Approximately 500 members			-	4 -	-
6. Number of days Relief Camps was in operation	Nil			-	5 -	-
7. Works taken up during current year	All SWD (Storm Water Drain) de-silted.			Mr. Sampath Kumar	1 Manjabakkam	9551133310
a Temporary Measures taken to restore damaged portions in case of breaches	All SWD de-silted. Earthen bund formed along Puzhal Surplus Course.			Mr. Velayutham	2 Manjabakkam	9709726124
b Permanent Measures taken to restore the damaged portion in case of breaches	Earthen bund formed along Puzhal Surplus Course.			-	3 -	-
c Desilting Activities under taken	19 Numbers of SWD of length 9.15 km de-silted by Greater Chennai Corporation			-	4 -	-
8. Permanent measures identified to be undertaken to minimize the risks in area. (Diversion canal construction of retaining wall, conversion of pipe culvert to box culvert etc.,)	Balancing culverts across 100 feet roads cleaned and along CPCL Layout cleaned by Greater Chennai Corporation			Mr. M. Sekar	1 Madhavaram	9551313770
				Mr. Karl Marx	2 Madhavaram	9941445067
				Mr. Neelakandan	3 Madhavaram	9566183844
				-	4 -	-
				-	5 -	-

Annexure – II

FORMAT FOR WEEKLY ACTION TAKEN REPORT
(to be sent to ACS/CRA by District Collectors)

DISTRICT:		Date of Reporting:	
Sl.No.	Actions	Total	Completed till today
1.	No of Dams / High altitude dams / M.I Tanks / River courses Inspected (PWD)		
2.	No. of Schools inspected		
3.	No. of Hospitals inspected		
4.	Total No. of Water bodies / water ways desilted (PWD / RD) a) Vulnerable Areas b) Non-Vulnerable Areas		
5.	No. of Relief Centres (Revenue) Inspected		
6.	PDS Movement & Buffer Stock		

Annexure III - A

PROGRESS IN REMOVAL OF SILT IN WATER BODIES - As on

As per G.O.Ms.NO.50, Industries Department, Dated: 27.04.2017

Sl. No.	Description	Name of the Areas.					
		Vulnerable Areas				Other Areas	Total
		Very High	High	Medium	Low		
1	No. of Tanks / Water Bodies notified in District Gazette upto 31.12.2018						
2	No. of Tanks / Water Bodies notified in District Gazette from 01.01.2019						
3	Total No. of Tanks / Water Bodies notified in District Gazette						
4	No of Tanks / Water bodies where desiltation works commenced						
a	started upto 31.12.2018						
b	commenced in the year 2019						
c	Grand Total						
5	Total No. of Tanks / Water Bodies where desiltation is yet to be commenced						
6	Quantum of Silt removed						
a	(in Cubic Meter) upto 31.12.2018						
b	(in Cubic Meter) from 01.01.2019						
c	Total quantum of silt removed as on date						
7	No. of Farmers benefitted						
a	upto 31.12.2018						
b	from 01.01.2019						
c	Total						
	Total						

Annexure - III B

Desilting & Encroachment Removal in Supply Channels & Tanks

Sl. No.	Description	Name of the Areas.				
		Vulnerable Areas				Other Areas
		Very High	High	Medium	Low	
1	No. of Supply Channels / identified for Desilting					
a	PWD					
b	Local Body					
c	Total					
2	No. of Tanks / Supply Channels Desilted					
a	PWD					
i	Up to Last week					
ii	Current week					
b	Local Body					
i	Up to Last week					
ii	Current week					
c	Total					
i	Up to Last week					
ii	Current week					
3	Total No. of Tanks / Supply Channels Where Work is in progress					
a	PWD					
b	Local Body					
c	Total					
4	No. of Encroachments Removed					
a	PWD					
i	Up to Last week					
ii	Current week					
iii	Pending					
b	Local Body					
i	Up to Last week					
ii	Current week					
iii	Pending					
c	Total Pending (a [iii] + b [iii])					

Annexure - III C

Desilting & Encroachment Removal in River courses / Irrigation canals

Sl. No.	Description	Name of the Areas		
		Vulnerable Areas	Non Vulnerable Areas	Other Areas
1	Length of River Courses / Irrigation Canals identified for Desilting			
2	Length of River Courses / Irrigation Canals Desilted			
i	Up to Last week			
ii	Current week			
iii	Total			
3	Length of Encroachments Removed			
i	Up to Last week			
ii	Current week			
iii	Pending			

Annexure - III D Preparedness Measures		
Sl. No.	Description	Nos.
1	Inter-Departmental Zonal Teams Formed	
2	Vulnerable Areas Details	
a	Very High	
b	High	
c	Moderate	
d	Low	
e	Other areas	
3	No. of First Responders in Vulnerable areas	
a	Very High	
b	High	
c	Moderate	
d	Low	
e	Other areas	
4	No. of Women First Responders in Vulnerable areas	
a	Very High	
b	High	
c	Moderate	
d	Low	
e	Other areas	
5	No. of First Responders for protecting Livestock in Vulnerable areas	
a	Very High	
b	High	
c	Moderate	
d	Low	
e	Other areas	
6	No. of First Responders for Tree planting and Cutting & removal of wind fallen trees in Vulnerable areas	
a	Very High	
b	High	
c	Moderate	
d	Low	

e	Other areas	
---	-------------	--

Annexure - III E Mitigation Measures

S.No.	Areas	No. of Bridges cleaned	No. of Culverts cleaned	No. of Pipe Culverts converted to Box Culverts	No. of Bridges where additional Vents were provided
1.	Areas of Very High Vulnerability				
2.	Areas of High Vulnerability				
3.	Areas of Moderate Vulnerability				
4.	Areas of Low Vulnerability				
5.	Other Areas				
6.	Total				

Annexure - III F Mitigation Measures

S.No.	Areas	No. of Recharge pits created	No. of Defunct Bore wells converted as recharge Wells		No. of Defunct open wells converted as recharge Wells		No. of Check dams created	No. of Percolation ponds created
			Public places	Farmer's fields	Public places	Farmer's fields		
1.	Areas of Very High Vulnerability							
2.	Areas of High Vulnerability							
3.	Areas of Moderate Vulnerability							
4.	Areas of Low Vulnerability							
5.	Other Areas							
6.	Total							

Annexure-IV

DAILY SITUATION REPORT (NORTH EAST MONSOON-2019)

DISTRICT:

Date of Report: _____ .2019 at 9-30 a.m. (for the day of
_____ .2019)

Rainfall:

Rainfall was occurred in -----Taluk in the District with an average of -----mm.

Sl.No.	Rain gauge Station	Rainfall (in mm)
1		
2		

II. DAMAGES:

Cases of Human loss:

----- Cases of Human loss have been reported from the District during the last 24 hours.

a) Reported Cases

No. of Human loss reported & under verification:

b) Confirmed Cases (after postmortem)

During the day				Up to the day (from)				Relief Sanctioned	Relief Declined	Balance
Men	Women	Child	Total	Men	Women	Child	Total			

c) Total Cases

Sl. No	Status of the cases	Total no. of cases
1	Reported Cases	
2	Confirmed Cases	
Total		

Annexure V

Check List

Sl. No.	Details	Time Line for Completion of the Task
Pre Disaster Preparedness for NEM 2019		
1	Preparation / Updation of District Disaster Management Plan.	13/09/2019
2	Taluk level Disaster Management Plan.	13/09/2019
3	Identification of vulnerable areas.	10/09/2019
4	Preparation of digital maps of vulnerable areas.	10/09/2019
5	DDMA Meeting	12/09/2019
6	District Coordination committee meeting with line departments.	12/09/2019
7	Formation of Interdepartmental Zonal Teams including local community at vulnerable locations.	13/09/2019
8	Zonal Teams (i). Visit Relief Centres (ii). Source of Vulnerability (iii). Mitigation measures (iv). Had interaction with first responders (v). Check the Inventory (vi). Check measures in place for the differently abled and other vulnerable sections.	20/09/2019
9	Appointment of I. Early Warning Committee – First Responders & Interdepartmental II. Search and Rescue Committee III. Evacuation Committee IV. Relief Centre / Shelter Management Committee	13/09/2019
10	Appointment of Nodal officer at the District level, Sub	13/09/2019

Sl. No.	Details	Time Line for Completion of the Task
	- Divisional level and Taluk level	
11	Training of Nodal Officers.	27/09/2019
12	Meeting with First Responders by Collectors / Participation of Sub-Collectors /RDO's during Training of First Responders.	27/09/2019
13	Co-ordination Meeting with NGOs / Red Cross / Service Organisation etc., & assign specific roles	27/09/2019
14	Meeting with Private Institutions / Hospitals / Educational Institutions, Oil Companies and Mobile Services Providers for Sensitising on their preparedness	27/09/2019
15	Preparation of Hand book (Telephone Directory & Inventory).	20/09/2019
16	Preparation of deployment plan for rescue teams based on vulnerability mapping.	27/09/2019
17	Preparation of list of inventories / machineries required for the vulnerable area.	27/09/2019
18	Preparation of traffic plan by police to establish green corridor to highly vulnerable areas.	27/09/2019
19	Arrangement to accommodate TNSDRF & NDRF and Central Agencies.	27/09/2019
20	Identification of cyclone/safe shelters - Relief Centres.	29/09/2019
21	Inspection of Multi Purpose Evacuation Shelters and Relief Centres to check their readiness.	13/09/2019
22	Review of arrangements for emergency supply of safe drinking water including transportation of drinking water, Fuel, generator sets, pump sets, boats, power	27/09/2019

Sl. No.	Details	Time Line for Completion of the Task
	saws ,etc.,	
23	Drawing up evacuation plan for the low lying areas including identification of places, means of transportation, evacuation routes.	27/09/2019
24	Plan for putting up temporary shelter in case of additional requirement.	27/09/2019
25	Review of availability of essential medicine needed during flood period	27/09/2019
26	Database on the availability of Medical Officers & Paramedical staff with a view to earmark medical teams for providing medical cover in case of emergency.	27/09/2019
27	Planning to ensure the availability of required resources for maintaining hygiene and sanitation in a flood situation in the flood prone areas.	27/09/2019
28	Planning of control measures to prevent the outbreak of any epidemic in case of flood situation	27/09/2019
29	Arrangement for Animal Shelters and procurement of medicine, fodder by Veterinary and Animal Husbandry Department.	27/09/2019
30	Compile list of ambulances with Government Agencies & Private Sector	27/09/2019
31	Check arrangements in place for supply of food, Warm clothes, etc., and air dropping of food and essential commodities.	27/09/2019
32	Whether advance storage points/ location for Milk, food items (Civil Supplies), boats (fire service, fisheries) identified for vulnerable locations in	27/09/2019

Sl. No.	Details	Time Line for Completion of the Task
	consultation with Civil Supplies/ Fisheries / Fire Service	
33	Strengthening of DEOC.	27/09/2019
34	Inspection of Tanks / water bodies, supply channels / canals/ river courses by PWD officials.	27/09/2019
35	Inspection of the water bodies / supply channels under the control of local bodies by Engineers of local bodies.	27/09/2019
36	Whether blockages under all culverts / bridges are cleared. (Upstream 1000 mtrs, downstream 1000 mtrs).	27/09/2019
37	Inspection of Lifeline & Critical infrastructures by Line Departments	27/09/2019
	Dams/Water Storages, Schools, Hospitals, Power Plants Roads & Bridges, Monuments ,Tourism infrastructures	
Capacity Building		
38	Mock drills in vulnerable areas.	27/09/2019
39	Identification and Training of First Responders (Volunteers)	27/09/2019
40	Check maintenance of infrastructure / equipment as per circular	27/09/2019
Mitigation Measures		
41	Whether cleaning / desilting of natural water reservoirs and drainage channels have been done in the flood prone areas?	27/09/2019
42	Whether encroachments /obstructions on ponds/tanks have been removed?	27/09/2019

Sl. No.	Details	Time Line for Completion of the Task
43	Whether embankments along rivers and nallahs, ring bunds and other bunds have been inspected and strengthened?	27/09/2019
44	Whether necessary maintenance of sluice gates, barrages, embankments, etc. are being done by PWD?	27/09/2019
45	Whether defunct bore wells have been converted into recharge pits?	27/09/2019
46	Whether storm water drains in urbans have been inspected and desilted for safe outflow of surplus runoff of flood water?	27/09/2019
47	Whether percolation ponds / check dams / Recharge pits with shafts or ring wells / sub surface dykes are constructed in vulnerable areas	31/10/2019
48	Whether Adangals have been updated properly? (Azmoish entries)	27/09/2019
49	Whether reconciliation with Agriculture Department crop wise are done periodically and report sent to Government / Department?	27/09/2019
50	Enrolment of farmers in Fasal Bheema Yojana Scheme.	27/09/2019

Sd./- K. Satyagopal,
Additional Chief Secretary /
Commissioner of Revenue Administration