

**MOST IMMEDIATE / PERSONAL ATTENTION****Rc. No. N.C.I (4) / 1749 / 2019**Commissionerate of Revenue  
Administration and  
Disaster Management,  
Chepauk, Chennai 600 005.**Dated 09.05.2019.****Circular**

**Sub:** Disaster Management - South West Monsoon 2019 - Convening of District Coordination Committee Meeting, -Disaster Preparedness, immediate relief and restoration measures, etc. to be carried out  
- Instructions issued.

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South West Monsoon period is one among the three distinct periods of rainfall for Tamil Nadu. This monsoon period which usually commences in June is accompanied with strong south West winds and concludes in September and brings about 35% of annual normal rainfall. Since the State is heavily dependent on monsoonal rains, it is essential that the vulnerabilities that cause loss and damages due to the monsoon are well reduced to derive the maximum benefit from the monsoon. It is also to be noted that some of the Districts receive significant quantum of rains and some of the locations are vulnerable during South West Monsoon also. It is also an opportunity for all the Districts to initiate water conservation measures to tap the rain water for augmenting the ground water resources.

From the experience gained in the past, the District authorities are familiar with the action to be initiated, measures to be adopted in the event of rains / floods, cyclone, etc and any other eventuality that may occur during the said Monsoon period.

## **1. Pre-Disaster Preparedness for Southwest Monsoon 2019**

Based on the key measures adopted for disaster preparedness to face North East Monsoons, the following instructions are issued to District Collectors on preparedness measures to be followed during South West Monsoon season in the districts:

### **1.1 Identification of vulnerable areas and vulnerability analysis**

The vulnerable areas already identified in the districts based on legacy data to be updated. The areas affected during Vardah, Ockhi floods due to spate of Cauvery River and Gaja cyclone should be included without fail. The vulnerable areas may be classified as:

#### **1) Areas of Very High Vulnerability.**

- (a) Inundation of water and water level was **more than 5 feet.**  
(or)
- (b) Rescue operations carried out with the help of Central forces / SDRF. (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 water and **water level was 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 Water & Water level was 2-3 feet.

**4) Areas of Low Vulnerability.**

- (a) Stagnation of water was below 2 feet.

**1.2. Updating Maps of Vulnerable Areas**

The vulnerability maps to be prepared in the prescribed format in vogue – at the rate of 3 vulnerable areas in each map at Firka (Rural areas) / Ward (Urban areas) level incorporating vulnerability analysis, details of escape routes and relief centres. The mitigation measures initiated during last 3 years should be incorporated besides updating all the details. **(A model map and sample vulnerability analysis is given in Annexure I – A & B)**

**1.3. Formation of Inter Departmental Zonal Teams**

- (a) The Inter departmental Zonal Teams led by Revenue Authority to be constituted. The team members are to be drawn from Police, Fire services, Rural Development, Agriculture Departments etc. Each team is to closely monitor 5 to 7 vulnerable areas.

- (b) Village level Interdepartmental Teams may be formed in all the Villages, especially in vulnerable areas. The team may be headed by the VAO and shall comprise of Panchayat Clerk, Anganwadi Staff, Noon meal organizers, forest guards etc.,

#### **1.4. Community participation**

- (i). Ensure Community participation at grass root level through enrolment of able bodied volunteers, with skills of swimming and climbing, as first responders including Women First Responders (atleast 20 per vulnerable area) and form first responder teams in all the vulnerable areas. The first responders have to be trained by Fire services / SDRF and approved NGOs and Disaster Response Guards.
- (ii). Form first responders to exclusively attend to the needs of livestock (First Responders for protecting livestock).
- (iii). As a new measure identify a separate team of First Responders and train them for cutting and removing wind fallen trees. The volunteers from NSS, NCC and Youth Groups, can be identified as First Responders for Tree Cutting and Removal. 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 - Tree cutting should be deployed both in arterial and non-arterial 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 desirous of wage employment.
- (v). To form Mobile teams of first responders for evacuation of people, for protecting live stock and for tree cutting and Snake catchers at Block / Taluk / Sub-Divisional and District levels for deployment based on need.
- (vi). 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.

**(See Annexure III - A (4))**

### **1.5. 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).

## **1.6. District Disaster Management Authority / District Co-ordination Committee Meeting**

All the District Collectors are instructed to convene the District Disaster Management Authority and District Co-ordination Committee Meeting with the officials of the line departments concerned, Non-Governmental Organisations (NGO's), Community Based Organisations (CBOs), Voluntary Organisations and Elected Representatives of Local Bodies to review the state of preparedness and also to initiate necessary action for the effective response from all concerned for the ensuing South West Monsoon 2019.

The Revenue Divisional Officers and Tahsildars should also be instructed to conduct Coordination Meeting at sub-divisional and taluk level respectively in an effective manner.

The District Collectors are required to collect the daily **Action Taken Report** (ATR) given in **Annexure III - A** from concerned line departments. The daily action taken may essentially include,

- a) Mock Drills Scheduled and completed with focus on very high vulnerable habitation,
- b) Village / Ward Committee Meeting details,
- c) Status of encroachments removed w.r.t the total numbers identified, which cannot be removed due to legal issues / stay from courts, which can be removed.

- d) Progress of desilting in vulnerable areas and other areas in addition to tank silt removed under G.O Ms.No.50, Industries Department, dated 27.04.2017, **(See Annexure III - A (1))**
- e) No. of Relief centres inspected, and
- f) PDS Movement & Buffer Stock with reference to vulnerable areas.

## **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, Communication Service providers 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. Under G.O (Ms) No. 177, School Education Department, dated: 27.08.2018, State Level School Safety Advisory Committee has been formed for implementation of School Safety Policy Guidelines given by NDMA. Some of the major roles and responsibilities of DDMA as per the School Safety Policy are

- 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. Urban & Rural Local Bodies.**

- 1) OHTs have to be filled up based on IMD forecast to tide over possible power outages.
- 2) Mobilize conservancy staff for clearance of debris.
- 3) Ensure that list of agencies to hire generators for pumping water is compiled and rates are finalised.
- 4) Take undertaking from kalyana mandapams and other organisations for
  - a) accommodation of people if evacuated on a large scale (Beyond the capacity of existing relief centres).
  - b) Send Generators for pumping water to OHTs if required.

### **1.8.3. 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 ensure power back up. Stock sufficient quantity of diesel.
4. Fire Safety

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

### **1.8.4. Oil Companies**

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

### **1.8.5. Mobile Operators**

The Mobile operators should 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 Personnel, Equipment 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 Tree Cutting and Removal
- 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 vulnerable Areas

- 2) Deployment plan may be prepared in consultations 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 vulnerable areas.
- 4) Prepare for patrolling to prevent possible threat of looting and arson by anti-social elements in areas where evacuation is to be undertaken on a large scale.
- 5) To identify teams in non-costal 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 and
- 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) Identify buildings that are suitable for organizing relief camps in village / Town Panchayats / Municipalities with necessary contact details, in addition to the regular cyclones 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) Ensure Generators ready to be used for relief operations and in relief camps as it is advisable to switch off the power supply during extreme weather events.
- 5) Management of Relief Centers shall be entrusted to Cooperative Department.

- 6) Register of persons accommodated in the Relief Centers along with photos, gender, age, address and Aadhaar no shall be maintained.

### **1.12.2. Water, Sanitation and Hygiene**

- 1) Ensure adequate supply of drinking water of good quality in the Relief Centers.
- 2) Ensure adequate no. of toilets are available. If not make arrangements for temporary toilets. Also ensure periodic emptying of septic tank/pit and safe disposal. Collectors should have list of such vehicles available in Urban Local Bodies (ULB) or with private operators

### **1.12.3. Food & other arrangements at Relief Centres**

- 1) Air dropping of food and essential commodities in inaccessible areas.
- 2) Providing Cooked or dry food at the Shelters as per norms prescribed.
- 3) Providing Sufficient clothing and blankets to the affected people.

### **1.12.4. 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) To arrange medical camps to treat minor ailments, provide health

education and referral of sick cases to higher centres

- 5) Chlorination Teams to be formed for proper chlorination of drinking water at OHT, GLR, Bore wells etc.
- 6) Rapid Response Teams to be formed to ensure chlorinated drinking water and to prevent outbreak of diseases.
- 7) Vector Control Teams consisting of Entomologists and Field Workers to be formed to carry out anti-adult and anti-larval works.
- 8) Food safety teams to be formed and Designated Officers and Food Safety Officers should be in field to check chlorination and food hygiene.

#### **1.12.5. Special Care for Women, Senior Citizens and Differently abled in the Relief Centres**

- 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, women and widows.
- 3) Sanitary napkins for women / girls should be provided with disposable paper bags.
- 4) For pregnant woman, necessary basic arrangements should be made by the local administration for safe delivery.
- 5) Static and Mobile Health teams to attend to the inmates.
- 6) For lactating mothers special care may be taken to provide milk powder etc.,

- 7) Wheel chairs may be kept ready at relief centres to help aged, differently abled persons. **(For details of arrangements in Relief Centres see Annexure – II)**

#### **1.12.6. Shelters for Animals & Care**

- 1) Identify existing cattle pounds and grazing 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) Preparation First Responders for Animal Protection to evacuate the animals to designated shelters.

#### **1.13. Communication through Multiple Channels**

- 1) Disseminate information and bulletins through TN-SMART.
- 2) Utilize the Press / Audio Visual media and Social media to sensitize the community, especially in vulnerable areas.
- 3) Arrange Vehicle mounted with loud speakers for use during emergencies and use Disaster Warning Announcement System (DWAS) in relevant areas.
- 4) 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.

- 5) 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**

- 1) 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.
- 2) To ensure the proper maintenance of 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 guarding their interest but also to offer better service to the public during emergency.

- 2) Advise all Transport Corporations that not to ply transport vehicles 3 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 6 AM.

### **1.16. Capacity Building**

- 1) Arrange to conduct 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. Each institution has to prepare their own Disaster management plan to ensure safety and wellbeing of patients.

- 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. Mitigation measures**

### **1.18.1. Water Way / Bodies**

- 1) Minor irrigation tanks, supply channels & distribution channels should be desilted before the onset of Southwest monsoon to harvest rain water as well as minimize risks due to floods.
- 2) The Municipalities and Corporation 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.

### **1.18.2 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. **(See Annexure III - A (2) & Annexure III - A (3))**

### **1.18.3 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 into recharge wells.
- 3) Launch a mission for tapping rain water from roof tops - both in residential and institutions buildings.

### **1.18.4 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.

### **1.19 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.

#### **Road Works**

- 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 can help you in correcting without time delay.
- 3) Convert bed level cause ways & low level bridges to elevated bridges wherever necessary.

## **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 Director, Cooperative 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.

### **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, assists in response, relief & reconstruction operations. All senior

officers should be actively involved in operations.

- 2) Those drafted for liaison works should be familiar with the area.

## **2.6. Reporting system**

The daily situation report given in **Annexure III - B** shall be sent through website <https://tnsdma.tn.gov.in> / TNSMART and major events should be reported to the Additional Chief Secretary/Commissioner of Revenue Administration then & there and details of rainfall before 8.00 A.M. when heavy rainfall is received.

## **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 & 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 South West 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 South West Monsoon 2019.

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 IV)**

The Commissioner, Greater Chennai Corporation and the District Collectors are well aware of the instructions issued now and in the earlier circular relating to North East Monsoon 2018. It should be followed scrupulously and the district administration should be in a position to respond effectively at the time of emergencies.

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 31.05.2019 and receipt of this circular should be acknowledged by return post.

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

**To**

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

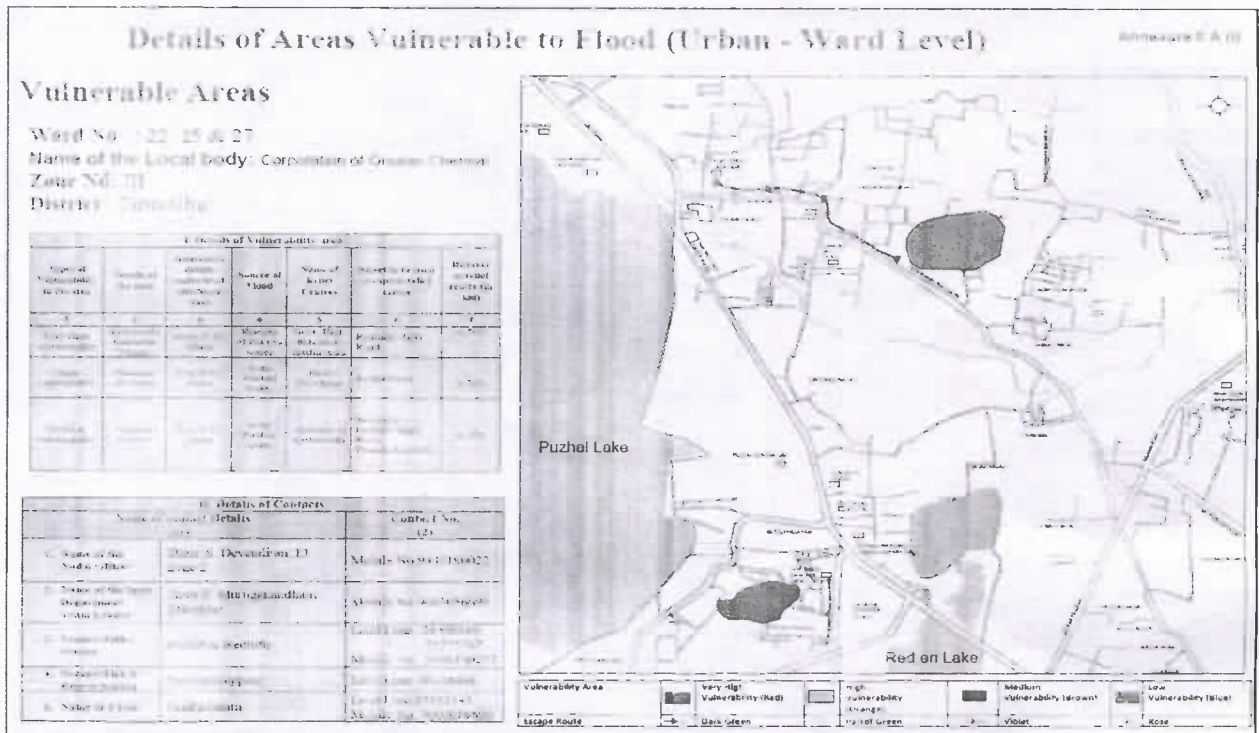
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1. The Chief Secretary to Government, Secretariat, Chennai -9
2. The Additional Chief Secretary to Government,  
Revenue & Disaster Management Department,  
Secretariat, Chennai -9
3. The Commissioner, Corporation of Madurai / Trichy / Coimbatore /  
Vellore / Erode / Thoothukudi / Salem / Tiruppur / Tirunelveli /  
Thanjavur / Dindigul.
4. The Secretary,  
National Disaster Management Authority,  
Government of India, New Delhi

*27/5/19*  
for Additional Chief Secretary /  
Commissioner of Revenue Administration

*2*  
*27.5.2019*

**Annexure - I A (i)**



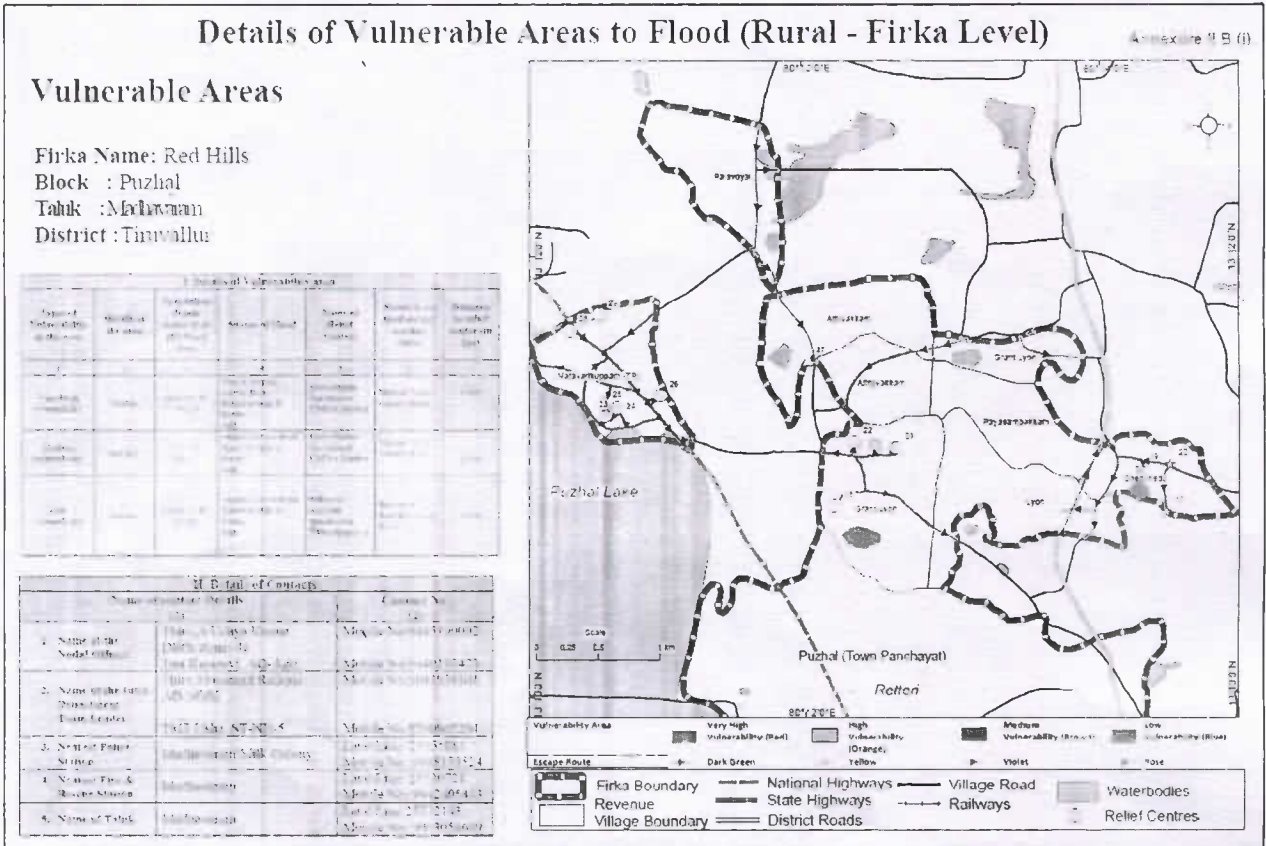
Note: Vulnerability Area Maps - Urban Local Bodies - Ward wise, and not more than 3 locations in each map alone to be prepared. If more than 3 locations are there in the Ward. Additional maps to be prepared according to the numbers. (P.T.O)

**Annexure - I A (ii)**

Annexure I A (ii)

Details of Vulnerability	III. Analysis of Vulnerability (URBAN)			IV. Details of First Responders		
	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. Marim Raj	1 Puzhal	98491 15273
3. Rainfall received in that area (Heavy rain, poor data which triggered the event with dates)	320mm			Mr. Thirupathi	2 Puzhal	98491 15273
4. Relief Centres operated to tide over the situation	a) Reddy's Govt. Girls School b) Noon Meal Room Samayar Madam c) Community Hall Grandline d) P.U.E.S. Mahila Puzhal e) P.U.E.S. Grandline f) Community Hall Grandline			Mr. Senthil	3 Vadakarai	98491 15273
5. Number of persons evacuated and housed in Relief Camps	Approximately 2008 families			Mr. Bharathiraja	4 Vadakarai	98491 15273
6. Number of days Relief Camps was in operation	6 Days				5	
7. Works taken up during current year				Mr. Srinivasan	1 Vadaperumbakkam	98491 15273
a) Temporary Measures taken to restore damaged portions in case of breaches	Temporary Restoration at Retti Junction			Mr. Karthik	2 Vadaperumbakkam	98491 15273
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				3	
c) Desilting Activities under taken	i) De-silting work at Sanjay Collector's house on completion stage ii) De-silting work at Puzhal Lock iii) De-silting work at Samayar Madam, Vadakarai Village				4	
8. Permanent measures identified to be undertaken to minimize the risks in areas (Diversion canal construction of retaining walls, conversion of pipe culvert to box culvert etc.,)					5	

**Annexure - I B (i)**



Note: Vulnerability Area in 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 number. (P.T.O)

**Annexure - I B (ii)**

Annexure I B (ii)

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			<b>Location 1</b>		
2. Cause of Flooding (Breach/Overflow/Encroachment etc.)	Overflow of Puzhal surplus course, adjoining area, Balasubramanyam Nagar, Arulamandham Nagar, T.V.K. Nagar - Inundated areas			Mr. Loganathan	1 Mathur	9789956961
3. Rainfall received in that area (Heavy down pour date 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 Manjambakkam	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 Manjambakkam	9709726124
b. Permanent Measures taken to restore the damaged portion in case of breaches	Earthen bund formed along Puzhal Surplus Course			-	3	-
c. De-silting Activities under taken	19 Numbers of SWD of length 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 road, cleaned and along CPCL Layout cleaned by Greater Chennai Corporation			Mr. M Sekar	1 Madhavaram	9551313770
				Mr. Karl Marx	2 Madhavaram	9941145067
				Mr. Neelakanthan	3 Madhavaram	9566185844
				-	4	-
				-	5	-

## Annexure-II

### Preparedness Measures at Relief Camps

The National Disaster Management Authority has released the Guidelines for providing Minimum Standards of Relief to the victims of disasters. The District Collectors are to follow the guidelines for setting up of relief centre which are detailed below:-

#### Relief Camps

- Steps to be taken to identify buildings like schools, anganwadi centres, cyclone shelters, community centres, marriage halls etc., which can be used as Relief Shelters for accommodating the people affected by disaster.
- Availability of adequate water supply, generators with fuel for power back up bed sheet, sufficient number of toilets including mobile toilets should also be ensured.
- 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.
- 3.5 Sq. m of covered area per person with basic lighting facilities shall be catered to the inmates of relief camps. In mountainous areas, minimum covered area shall be relaxed.
- High Mast lights, emergency lamps, search lights and candles are to be arranged.
- Special care should be taken for the safety and privacy of inmates, especially women, widows and children.
- Special arrangements should be made for differently-abled persons, old and medically serious patients.
- All the electrical installations to be checked for safety issues.



## Food

- 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 date of manufacture and the date of expiry on the packaged food items should be verified before distribution.

## 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.

## 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.

## Medical Health

- Mobile Medical Teams should visit relief camps to attend the affected people. Steps should be taken to avoid spread of communicable diseases.

- Necessary basic arrangements should be made for pregnant women for safe delivery.
- 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.
- Transportation of the affected people for further treatment / operation etc., should be arranged.
- Advance contingency plans for management of multiple casualties shall be derived.

#### **Relief for Widows and Orphans**

- Special care to be given for widows and orphans who are separated from their families.
- 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.
- Ex-gratia assistance for loss of life, assistance on account of damage to houses should be given as per the norms already communicated in G.O.Ms.No.380, Revenue Department, dated 27.10.2015.

All the District Collectors shall ensure the implementation of the above guidelines for providing minimum standards of relief to the victims affected by disasters. Also refer to the guidelines issued in G.O. Ms. No.279, Revenue and Disaster Management Department, dated 01.08.2018 for maintenance of Multi-Purpose Evacuation Shelters

Annexure – III AFORMAT FOR DAILY ACTION TAKEN REPORT

DISTRICT:		Date of	
DEPARTMENT:		Reporting:	
Sl.No.	Actions	Total	Completed till today
1.	Mock Drills schedule & completed (Fire & Rescue Department)		
2.	Village Ward Committee Meetings (Revenue & Team)		
3.	No. of Dams / High altitude dams / M.I Tanks / River courses Inspected (PWD)		
4.	No. of Schools inspected		
5.	No. of Hospitals inspected		
6.	No. of Shelter Relief Centres (Revenue) inspected		
7.	PDS Movement & Buffer Stock		

## Annexure III - A (1)

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			Total
		Vulnerable Areas	Non-vulnerable Areas	Other Areas	
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				
	<b>Total</b>				

Annexure - III A (2)				
Desilting & Encroachment Removal in Supply Channels & Tanks				
Sl. No.	Description	Name of the Areas.		
		Vulnerable Areas	Non Vulnerable Areas	Other Areas
1	No. of Tanks 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 A (3)

## Desilting &amp; 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			
a	PWD			
b	Local Body			
c	Total			
2	Length of River Courses / Irrigation Canals 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 Length of River Courses / Irrigation Canals Where Work is in progress			
a	PWD			
b	Local Body			
c	Total			
4	Length 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 A (4)**  
**Preparedness / Mitigation 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	Culverts and Bridges cleaned in Vulnerable / Non Vulnerable areas	
a	Very High	
b	High	
c	Moderate	
d	Low	
e	Other areas	

f	Non Vulnerable	
6	Recharge pits created in Vulnerable / Non Vulnerable areas	
a	Very High	
b	High	
c	Moderate	
d	Low	
e	Other areas	
f	Non Vulnerable	
7	Defunct bore wells converted as recharge pits	
a	Very High	
b	High	
c	Moderate	
d	Low	
e	Other areas	
f	Non Vulnerable	



Annexure-III B

COMMISSIONERATE OF REVENUE ADMINISTRATION AND

DISASTER MANAGEMENT, CHENNAI - 600005

DAILY SITUATION REPORT (SOUTH WEST MONSOON - 2019)

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

Rainfall:

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

----- Taluk has recorded the highest amount of rainfall ----- mm and -----

----- Taluk has recorded the lowest amount of rainfall ----- mm.

Heavy Rainfall-----RAINFALL PERFORMANCE DURING SOUTH WEST MONSOON SEASON 2019 (up to -----)

Taluks which have received Normal Rainfall (+19% to -19% )		Taluks which have received Scanty Rainfall ( -60% to -99% )	

Cases of Human loss:

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

a) Reported Cases

Sl. No	No. of Human loss reported & under verification			
	Male	Female	Child	Total



**Annexure IV****Check List**

Sl. No.	Details	Remarks
<b>Pre Disaster Preparedness for SWM 2019</b>		
1	Preparation of Perspective District Disaster Management Plan. (2019 - 2030)	
2	Taluk level Disaster Management Plan.	
3	Identification of vulnerable areas.	
4	Preparation of digital maps of vulnerable areas.	
5	DDMA Meeting	
6	District Coordination committee meeting with line departments.	
7	Formation of Interdepartmental Zonal Teams including local community at vulnerable locations.	
8	Zonal Teams <ul style="list-style-type: none"> <li>i) Visit Relief Centres</li> <li>ii) Source of Vulnerability</li> <li>iii) Mitigation measures</li> <li>iv) Had interaction with first responders</li> <li>v) Check the Inventory</li> <li>vi) Check measures in place for the differently abled and other vulnerable sections.</li> </ul>	
9	Appointment of <ul style="list-style-type: none"> <li>I. Early Warning Committee</li> <li>II. Search and Rescue Committee</li> <li>III. Evacuation Committee</li> <li>IV. Relief Centre / Shelter Management Committee</li> </ul>	

10	Identification of First Responders including women First Responders for  i) Evacuation  ii) Protecting Livestock  iii) Cutting and Removing Wind fallen trees	
11	Appointment of Nodal officer at the District level, Sub - Divisional level and Taluk level	
12	Training of Nodal Officers.	
13	Meeting with First Responders by Collectors / Participation of Sub-Collectors / RDO's during Training of First Responders.	
14	Co-ordination Meeting with DRGs / NGOs / Red Cross / Service Organisation etc., & assign specific roles	
15	Meeting with Private Institutions / Hospitals / Educational Institutions, Oil Companies and Mobile Services Providers for Sensitising on their preparedness	
16	Implementation of School Safety Guidelines	
17	Preparation of Hand book (Telephone Directory & Inventory).	
18	Preparation of deployment plan for rescue teams based on vulnerability mapping.	
19	Preparation of list of inventories / machineries required for the vulnerable area.	
20	Preparation of traffic plan by police to establish green corridor to highly vulnerable areas.	
21	Arrangement to accommodate TNDRF, NDRF, DRG and Central Agencies.	
22	Identification of cyclone/safe shelters - Relief Centres.	
23	Inspection of Multi-Purpose Evacuation Shelters and Relief Centres to check their readiness.	

24	Review of arrangements for emergency supply of safe drinking water including transportation of drinking water, Fuel, generator sets, pump sets, boats, power saws ,etc.,	
25	Drawing up evacuation plan for the low lying areas including identification of places, means of transportation, evacuation routes.	
26	Plan for putting up temporary shelter in case of additional requirement.	
27	Review of availability of essential medicine needed during flood period	
28	Special arrangements for women, Senior Citizens and Differently abled in relief centres	
29	Data base on the availability of Medical Officers & Paramedical staff with a view to earmark medical teams for providing medical cover in case of emergency.	
30	Planning to ensure the availability of required resources for maintaining hygiene and sanitation in a flood situation in the flood prone areas.	
31	Planning of control measures to prevent the outbreak of any epidemic in case of flood situation	
32	Arrangement for Animal Shelters and procurement of medicine, fodder by Veterinary and Animal Husbandry Department.	
33	Compile list of ambulances with Government Agencies & Private Sector	
34	Formation of Chlorination Teams and Rapid Response Teams to ensure chlorinated drinking water and to prevent outbreak of diseases.	
35	Vector Control Teams consisting of Entomologists and Field Workers to be formed to carry out anti-adult and anti-larval works.	
36	Food safety teams to be formed and Designated Officers and Food Safety Officers should be in field to check chlorination and food hygiene.	

37	Check arrangements in place for supply of food, Warm clothes, etc., and air dropping of food and essential commodities.	
38	Whether advance storage points/ location for Milk, food items (Civil Supplies), boats (fire service, fisheries) identified for vulnerable locations in consultation with Civil Supplies/ Fisheries / Fire Service	
39	Strengthening of DEOC & Proper working of Communication equipment.	
40	Inspection of Tanks / water bodies, supply channels / canals/ river courses by PWD officials.	
41	Inspection of the water bodies / supply channels under the control of local bodies by Engineers of local bodies.	
42	Whether blockages under all culverts / bridges are cleared. (Upstream 1000 mtrs, downstream 1000 mtrs).	
<b>Inspection of Lifeline &amp; Critical infrastructures by Line Departments</b>		
43	Dams/Water Storages, Schools, Hospitals, Power Plants Roads & Bridges, Monuments ,Tourism infrastructures	
<b>Capacity Building</b>		
44	Mock drills in vulnerable areas.	
45	Training of First Responders (Volunteers)	
46	Check maintenance of infrastructure / equipment as per circular	
<b>Mitigation Measures</b>		
47	Whether cleaning / desilting of natural water reservoirs and drainage channels have been done in the flood prone areas?	
48	Whether encroachments /obstructions on ponds/tanks have been removed?	
49	Whether embankments along rivers and nallahs, ring bunds and other bunds have been inspected and strengthened?	
50	Whether necessary maintenance of sluice gates, barrages, embankments, etc. are being done by PWD?	

51	Whether defunct bore wells have been converted into recharge pits?	
52	Whether storm water drains in urbans have been inspected and desilted for safe outflow of surplus runoff of flood water?	
53	Whether percolation ponds / check dams / Recharge pits with shafts or ring wells / sub surface dykes are constructed in vulnerable areas	
54	Whether 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 have been identified?	
55	Whether Piped culverts have been converted into box type?	
56	Whether bed level cause ways & low level bridges have been converted into elevated bridges wherever necessary? If yes, indicate no.	
57	Whether action has been taken to plant tall trees and create shelter belts in the 13 coastal districts in consultation with Forest Department.	
58	Whether action has been taken to plant tall trees along with river courses in all Districts in consultation with the Public Works Department (PWD) & Forest Department.	
59	Whether Adangals have been updated properly? (Azmoish entries)	
60	Whether reconciliation with Agriculture Department crop wise are done periodically and report sent to Government / Department?	
61	Enrolment of farmers in Fasal Bheema Yojana Scheme.	

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

*27/5/19*  
for Additional Chief Secretary /  
Commissioner of Revenue Administration

2/2

*27*  
27.5.2019