THE TELANGANA STATE

HEATWAVE ACTION PLAN
Heatwave Action Plan -2018
Revenue (Disaster Management) Department
Government of Telangana
Telangana State
Summer is a time when many of us plan our vacations to visit places of interest and native places, due to school vacations. However, in the recent past, summer temperatures are high and can negatively impact the health and wellbeing of the community and vulnerable population groups such as children, senior citizens, lactating mothers and pregnant women, older people, those working in the open and those with a disability or a pre-existing medical condition.

The summers in Telangana in 2015, 2016 and 2017 have seen unprecedented heat wave across and temperatures recording around 47 degrees centigrade in some locations. According to State records about 108 deaths occurred in 2017, due to heatwave.

The extreme weather conditions is attributed to Climate change and it is expected to increase the frequency and intensity of such heatwaves now and in future, if proper preparedness and mitigation measures are not undertaken.

The Revenue (DM) in consultation with National Disaster Management Authority, Indian Meteorological Department, Telangana State Development Planning Society and UNICEF has revised the ‘Heatwave Action Plan’ (the guide) prepared in 2016, to enable various departments of the State, Media and Public at large to utilize the plan to reduce fatalities and ill health among people and livestock. The Heatwave Action Plan can be used to develop heatwave plans at District level and support the local communities during heatwaves.

The Heatwave Action Plan has two parts – 1. Emphasizing on the need for heatwave action plan and 2. The process of implementation and role of various departments in the State. The document is based on the experiences of the people, best practices of other states has been adopted. The document provides the officers with templates, strategies and background information, with an emphasis on identifying and protecting vulnerable population groups.

The Government of Telangana emphasizes that the actions mentioned in the Heatwave Action Plan be implemented and requests all Stakeholders to use the plan document for reference and also seek guidance from various academic and scientific institutions and civil society organisations to ensure there is no fatalities due to Heatwave in the State.

Dr. R.V.Chandrvadan IAS
Prl. Commissioner for Disaster Management &
Ex – Officio Prl. Secretary to Government
Telangana State.
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PART- 1

NECESSITY OF
HEATWAVE ACTION PLAN
1. **BACKGROUND**

The State of Telangana prepared ‘The Telangana State Heat Wave Action Plan’-2016 as per High Court orders and the guidelines issued by the National Disaster Management Authority (NDMA), Government of India and the same was submitted to NDMA. Based on regular inputs from NDMA and Scientific Institutions the Heat Wave Action Plan is revised and updated in 2017 and 2018.

Chief Secretary held consultative meeting with the member of Heatwave committee on 3rd March 2018 and which was immediately followed up with detailed DO letter to all District Collectors & Head of Departments to implement the “The Telangana State Heat Wave Action Plan”. In addition to this the Telangana State Development Planning Society (TSDPS), Indian Meteorological Department, Indian Meteorological Society UNICEF organised a day long workshop for District Officials from all the 31 districts on extreme weather conditions on 24th March 2018. It is communicated to District Administrations to conduct orientation and plan for the implementation of the Heatwave Action Plan. It is requested of all departments and District Administrators to submit weekly reports on actions taken to mitigate heatwave conditions and also during exigencies. The actions taken by departments and district administration is apprised on regular basis to the office of Chief Secretary.

In 2017, with support from Indian Meteorological Department, Telangana State Development Planning Society, Dr. MCR HRD Institute and UNICEF conducted workshops/conferences with State and District Officials on Heatwave Action Plans.

**DISTRICT COLLECTORS**

District Collectors held regular Press conferences on the risks and dangers of heat related illness, activated “cooling centres” at important locations – Religions places, Community and Public buildings, Malls and bus stands. Supported NGO’s, Community Groups and Individuals to open “Chalivendrams” at public congregation places for providing drinking water and butter milk during Heat Wave conditions.

**I & PR DEPARTMENT**

I & PR Department Prepared and positioned IEC Material for adequate publicity through posters (50,000 No’s), pamphlets (2,50,000 No’s), flexi boards & banners (1500 #), Radio jingles across the State. Created public awareness on heat-related illnesses, provided preventive tips and on Do’s & Don’ts of Heat wave through electronic and print media.

**MEDICAL AND HEALTH DEPARTMENT**

Medical and Health Department alerted public of ill-health that will occur during to heatwave. The department deployed additional staff to take care of affected persons due to Sunstroke, activated 108 / 104 Emergency services and also kept adequate stocks of medical supplies such as ORS and IV fluids in all hospitals / PHC’s / UHC’s by positioning 5,00,000 ORS packets and 1,000 IV fluids in each district.

**LABOUR AND EMPLOYMENT DEPARTMENT**

Labour and Employment Department activated employers to shift the outdoor
workers schedules away from peak afternoon hours (1PM to 4 PM).

**PR & RD DEPARTMENT**

PR & RD Department restricted the working hours from 7 to 11 AM during Heat Wave Conditions for the labours working under Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA).

**ANIMAL HUSBANDRY DEPARTMENT**

Animal Husbandry Department activated field staff to create awareness among the Livestock farmers on the Animal Management during Heat waves and printed posters and exhibited in the public places of the villages. Cattle troughs were also provided with transportation of Drinking water.

**TRANSPORT DEPARTMENT AND TSRTC**

Transport Department and TSRTC established health teams at major bus stands / terminals and other public places for safe transportation by changing the timings of buses during peak hours (12 to 4 PM).

**EDUCATION DEPARTMENT**

Education Department issued directions to schools to alter school timings to ensure children are not affected. Summer leave was declared.

**IT DEPARTMENT**

IT Department built ‘The Telangana State Disaster Management Control Portal’ and upload data such as maximum, minimum and average temperatures, humidity and wind speed recorded by 885 AWS sensors deployed across the state by TSDSP. ‘The Telangana State Disaster Management Control Portal’ provides functionality of mapping the nearest hospitals, schools and public offices in the identified area to disseminate information.

As per plan and directions, training programmes were conducted to officials from Medical and Public Health, Community Health Staff, Health Care Professionals, Administrators, and also VROs, VRAs, paramedical & field staff and link workers (ASHAs, ANMs etc.) for effective implementation of “Heat Wave Action Plan”.

The Hon’ble Chief Minister reviewed the situation on Heatwave conditions in 2016 and 2017 and instructed the District Collectors and HOD’s on implementation of Heatwave Action Plan.

The State Government constituted a ‘Three-member Committee’ at Mandal level with Tahsildar, Sub Inspector of Police and Assistant Civil Surgeon to enquire in to and certify the deaths due to Sun strokes / Heat Waves, in order to ensure the deceased families, receive the relief at the earliest under “Apathbandhu Scheme” amounting to 50,000/-. 
Heat wave is considered only after the maximum temperature of a station reaches at least 40°C for plains and at least 30°C for hilly regions.

When actual maximum temperature of a station is more than or equal to 40°C.

**HEAT WAVE**
Departure from normal temperature is 5°C - 6°C

**SEVERE HEAT WAVE**
Departure from normal temperature is 7°C or more

When actual maximum temperature is 45°C or more, irrespective of normal maximum temperature, heat wave is declared.

When actual maximum temperature is 47°C or more, irrespective of normal maximum temperature, Severe Heat Wave is declared.

**Warm Night** is declared if actual maximum temperature of a station is more than or equal to 40°C and minimum temperature departure is more than or equal to 5°C.

**Very Warm Night** is declared if actual maximum temperature of a station is more than or equal to 40°C and minimum temperature departure is more than or equal to 7°C.

2. **HEATWAVES**

Spells of abnormally high temperatures that occur in different parts of the country during April to June are referred to as heat waves. The term heat wave is a description of prevailing temperature conditions relative to daily normal value. The IMD (India Meteorological Department) has laid down the following criteria for describing a heat wave or a severe heat Wave or a Warm Night.

Coordinated action is needed among government agencies at the State level to reduce the devastating health effects of heat stress on local residents. A practical plan of targeted interventions can increase information-sharing, communication, preparedness, and response coordination to improve the most vulnerable populations' resilience to rising temperatures and consequently minimize heat wave fatalities.

Temperature and humidity index, which could be used for reference to understand the Heatwave and colour coding

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Source: Calculated in °F by NOAA’s National Weather Service

Table 1: Temperature/ Humidity Index
3. HISTORICAL DATA ON HEATWAVES IN TELANGANA

Following shows the Monthly climatology maps of number of Heat Wave days for the 5 months of (a) March, (b) April, (c) May, (d) June and (e) July over India. The climatology was computed by averaging the number of HW days for the period (1961-2010)

Map shows the duration of the longest Heat Wave spell over each of the stations used in the study during the analysis period of 1961-2010. The duration of (a) HW spells ≥10 days and (b) SHW spells ≥5 days are shown using red colour.
The Extreme weather recorded in Telangana according to IMD

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Heat wave days over the years and death

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Most of the victims were from Below Poverty Line (BPL) families

Most victims were engaged in outdoor occupations

Age-related vulnerability among working members is indicated from the fact that maximum deaths occurred in the age group 40-60

No significant difference in risk factors affecting men and women was indicated

In Telangana, during 1986-1993, the heat waves were mainly of moderate in nature with maximum duration of 7-13 days (April 1987). The highest maximum temperature of 47ºC was recorded at Nalgonda, and Ramagundam on 11 May 1988.

In 1984 Heat Waves prevailed for 16 days from 14 May to 29 May in Ramagundam

From 1994 onwards, the frequency of severe heat waves and the duration of heat wave spells have increased significantly. In 1997 (18 May to 5 June) and 1998 (23 May to 10 June) the duration of moderate to severe heat wave spells had extended up to 19 days.

Since Heat wave conditions prevail in several parts of the state during the summer, deaths occur due to sunstroke every year.
4. HEATWAVE ACTION PLAN

After a severe heat wave affected the State of Telangana in May 2015, causing several deaths, the Government of Telangana has taken the initiative to develop a comprehensive heat wave Management action plan for extreme heat events.

In Telangana State, the period from April to June is summer months. During this period, temperatures rise considerably, to a point of 47º C in the month of May in Districts - Khammam, Nizamabad, Bhadrachalam, Nalgonda, Karimnagar and Warangal. To protect and prepare people of Telangana from extreme heat events, the State Government formed a Committee to prepare a comprehensive Heat Wave Action Plan based on guidelines issued by NDMA and plans prepared by other states such as Gujarat, Odisha, etc., to avoid sunstroke fatalities and illness in the future.

5. COMMITTEE:

The following are the members of the Committee:

1. The Prl. Secretary, Health, Medical & Family welfare Dept. - Member
2. The Prl. Secretary, School Education Dept. - Member
3. The Prl. Secretary, PR & Rural Development Dept. - Member
4. The Prl. Secretary, Municipal Admin. & Urban Development Dept. - Member
5. The Prl. Secretary, Animal Husbandry & Fisheries Dept. - Member
6. The Prl. Secretary, IT, Electronics & Communications Dept. - Member
7. The Director, Public Health & Family Welfare Dept. - Member
8. The Director, Institute of Preventive Medicine Dept. - Member
9. The Commissioner, Information & Public Relations Dept. - Member
10. The Director, Indian Meteorological Dept. (IMD) - Member
11. The Director General of Fire Services Dept., - Member

The Committee meets regularly for sharing preparedness measures, implementation process and actions taken. The Committee referred the Heat Wave Action Plans of Ahmedabad and Odisha and after discussions with various departments, IMD and TSDPS revised the Telangana Heat Wave Action Plan -2018.
PART – I

PURPOSE OF HEATWAVE ACTION PLAN

Heat Wave Action Plan is a Plan intended for multiple purposes:

To protect the population from heat related harm to health. It aims to prepare for, alert people to, and prevent, the major avoidable effects on health during periods of severe heat, while the days are sunny in summer, it should not be forgotten that the temperature can get too high, that it can become uncomfortably hot, and for some, it can become dangerously hot putting their life at risk. The plan evolved is to address all sections of the society, with special focus on the following vulnerable population.

VULNERABLE GROUPS OF THE POPULATION

- Young children
- Pregnant Women & Nursing mothers
- Older people mainly above the age of 60
- Below Poverty Line (BPL) families with no or poor housing conditions
- Infirn, isolated, and destitute
- People with pre-existing medical conditions (e.g., cardiovascular and respiratory illness, diabetes), people on certain medications
- People with limited mobility, impairment of thermoregulatory capacity and reduced ability to perceive changes in temperature
- People engaged in outdoor occupations

The Telangana Heat Wave Action Plan (HAP) aims to provide guidelines on the steps to be taken by the state & district administration for minimising the impact of Heat Waves. The Plan’s primary objective is to ensure no fatalities among the population most at risk for Heat wave and reduce related illness due to the effects of the heatwaves.

Extreme heat wave management planning includes:

- Identifying vulnerable populations and the health risks specific to each group;
- Developing effective strategies, agency coordination, and response planning to shape a Heatwave Action Plan that addresses heat-health risks;
- Implementing the Heat Action Plan and activating heat alerts;

Successful implementation of the Heatwave Action Plan in Telangana requires co-ordination between Government Departments, IMD, TSDPS, health care professionals including emergency medical personnel, health centre staff, and hospital staff; civil society organisations and Academic institutions.
THE TELANGANA
HEATWAVE ACTION

Part - I  NECESSITY OF
HEATWAVE ACTION PLAN

Part - II  IMPLEMENTATION OF
HEAT WAVE ACTION PLAN
PART - II
IMPLEMENTATION

The plan is to be implemented in three phases:

**Phase - I**
Pre-Heat Season
Jan-Mar

**Phase - II**
During-Heat Season
Mar-July

**Phase - III**
Post-Heat Season
July-Sep

The Commissioner for Disaster Management & Ex-Officio Principal Secretary to Government (CDM & EOPS) as Nodal Officer to head the Heat Wave Action Plan at State Level, District Collector is the Nodal Officer at District Level and Commissioner Greater Hyderabad Municipal Corporation (GHMC) is the Nodal Officer for GHMC area Municipal Corporation and Commissioner, Municipal Corporations/Municipalities in their respective Municipalities.

The Nodal Officer is responsible for coordinating and communicating ahead of, and during, extreme heat events. The Nodal Officer should adopt the steps given in three Phases.
PART – II

IMPLEMENTATION OF HEATWAVE ACTION PLAN
## PHASE 1: PRE-HEAT SEASON
*(FROM JANUARY THROUGH MARCH)*

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- **Convene Meeting with Departments/Organisations/ NGOs involved in rehab /Agencies to review mechanism to respond to extreme heat events.**

- **Interact regularly with concerned Departments for review and feedback.**

- **Identify high-risk areas of the State/District vulnerable to heat waves and focus on such areas and initiate focused activities on prevention of heat related illness.**

- **Organize training for health workers, link workers, teachers, school children, and the local community with the Health Department in preventive measures and treatment protocol.**

- **Distribute pamphlets and posters in local language with tips to prevent heat stress to hospitals, schools, and professional associations.**
INDIA METEOROLOGICAL DEPARTMENT (IMD)

1. Issue Prior Warnings with details of temperature and districts.
2. Conduct awareness workshops for media and Departments.

INFORMATION & PUBLIC RELATIONS (I & PR) DEPARTMENT

1. Identifying high-risk areas through survey by Dist. Officers of I & PR Dept as to be made focus of attention
2. Developing and designing information materials in local languages on heat stress prevention and tips for health protection during extreme heat events:
   - Posters
   - Pamphlets
   - Booklets
   - CM Open letters to the public to be read in the Gram Sabhas
3. Developing spots to be shown in cinema theatres, TV scrolls, Radio Jingles etc
4. Developing themes for widespread communications through social and print media. Use of folk artists to spread message in rural and tribal artists.

MEDICAL & HEALTH DEPARTMENT AND MEDICAL PROFESSIONALS

1. Initiate targeted training programs, capacity building efforts and communication on heat illness for medical staff at local PHCs/hospitals and Urban Health Centres (UHCs), nursing staff and also VROs, VRAs, paramedics, field staff and link workers, (ASHA Workers ANMS etc.). Identify the susceptibility of particular wards for special attention.
2. Ensure hospitals update their admissions and emergency case records to track heat-related cases. Train hospitals to improve expedience of recording the cause of death certificates. The training could also include recording Information Education & Communication (IEC) efforts.
3. Adopt heat-focused examination procedures at local hospitals and urban health centers.
4. Promote use of reusable soft plastic ice packs for the state wide UHCs, 108 emergency centres, ambulances and hospitals.
5. Explore creation of ice pack dispensaries to increase access to vulnerable communities.
6. One day workshops in 18 hospitals with the medical students may be organized before commencement of summer – Director Medical Education (DME).
7. Separate beds for the Sunstroke victims may be provided – Director Medical Education (DME) and Telangana State Vaidya Vidhana Parishat (TSVVP).
8. Help desk with Toll free 104 may be established for further information on Heatwave – S.O-104.

108/104 EMERGENCY SERVICE:
1. Create displays on ambulances during local events to build public awareness
2. Identify at-risk areas of vulnerable populations, in part by utilizing the list of high-risk areas.

LABOUR & EMPLOYMENT DEPARTMENT

1. Organize awareness camps for employers, factory manager’s outdoor labourers and workers regarding health impacts of extreme heat and recommendations to protect themselves during high temperatures.
2. Utilize maps of construction sites and outdoor work spots to identify more high-risk outdoor workers. Potentially overlay with irradiation map from IMD or heat island map. Conduct publicity campaigns during high-risk days to these specific areas.
3. All construction/work site contactors to provide drinking water, ORS and shelter to worker’s labourers.
4. Factory Management also to provide cool drinking water, ORS and shelter to worker’s labourers.

ANIMAL HUSBANDRY DEPARTMENT

1. Review and discuss implementation of Heatwave Action Plan for safeguarding cattle and poultry district heads and also Farmers Training Centres.
2. Prepare material like Posters & pamphlets separately for tips to take care of cattle and poultry during heatwaves
3. Review availability of necessary medicines for treatment of cattle / poultry affected by heatwave
4. Prepare plan for drinking water for cattle with RWS Dept.

TRANSPORT DEPARTMENT

1. Review plan with cab operator / auto / transport associations and also Highway patrol
2. Explain importance of proper shade, availability of drinking water and other facilities for passengers
3. Distribute pamphlets / posters on heat related illness prevention; Do’s and don’ts for display & further distribution to passengers at Bus stations, bus shelters, cab and auto stands etc
4. Ensure availability of proper shade, drinking water for passengers
5. Ensure availability with of ORS, Ice pack, and Cool drinking water.

TELANGANA STATE ROAD TRANSPORT CORPORATION

1. Review plan with Depot Managers/ Zonal Managers
2. Organize heat wave risk awareness programmes for Bus crew, staff at bus stands
3. Explain importance of proper shade, availability of drinking water and other facilities for passengers in bus stations
4. Distribute pamphlets/posters on heat related illness prevention; Do’s and Don’ts for display & further distribution to passengers at Bus Stations, Bus Shelters
5. Ensure availability of proper shade, drinking water for passengers at bus stands
6. Ensure availability of ORS, Ice pack, and Cool drinking water, in long distance buses

EDUCATION DEPARTMENTS

1. Review plan with Education Department officials (School/Colleges, etc) organise awareness camps classes on heat wave related illness/sunstrokes for teachers and also students
2. Explain importance of proper shade, availability of drinking water and other facilities for Students
3. Distribute pamphlets/posters on heat related illness prevention; Do’s and Don’t for display & further distribution to students in Schools & Colleges.
4. Ensure availability of ceiling fans in class room’s proper shade, drinking water for students.
5. Ensure availability with of ORS, Ice pack, and Cool drinking water.

INFORMATION TECHNOLOGY (IT) DEPARTMENT

1. Arrange with Planning Department to collect real time information through sensors in Automatic Weather Stations (AWS) for monitoring the temperatures and also for disseminating the same.
2. Prepare Dash board with a login to monitor heat wave scenario and its impact constantly.
3. Prepare map on web interface with colour coding system

COLOUR SIGNALS FOR HEAT ALERT

The Heat alerts based on thresholds determined by the IMD using the following colour signal system shall be issued.

- Display the information provided by TSDSP/IMD in the web portal and for displaying the same in display boards across the City and District HQs.
▪ Request all telecom service providers to send Heat wave messages to subscribers at no cost.

DEPARTMENT OF FOREST AND ENVIRONMENT

1. Directive for making water available for animals in reserved/protected forests and make necessary provisions, where necessary.

2. Issue directives to the Zoo Authorities for special arrangements for the animals in zoo to protect them from the effect of Heat Wave.

3. Provision of drinking water like ponds/water bodies for wild life

4. Directive for provision of water to human habitations facing water scarcity inside reserved forests

5. Promote rain water harvesting


7. Identify spots for possible fire accidents in the forest and ensure to defuse any possible fire related accidents. Clearance of dry wastes to be priority.

NGOs, COMMUNITY GROUPS AND INDIVIDUALS

1. Initiate educational preventative trainings aimed at children and distribute heat protection materials at local schools. A workshop for teachers to equip them with knowledge of heat protection tips and materials that they can teach in classrooms. Students can be assigned activities and projects on health dangers of extreme heat.

2. Conduct Training workshops and outreach sessions with community groups and mobilizers such as ASHA workers, Anganwadis, Self Help Groups and municipal councils to help inform and also actively involve vulnerable communities. Other sectors such as higher education, NGOs and community leaders may also be involved to increase reach to communities.

3. Encourage individuals’ discussion of the early signs of heat exhaustion with their local doctor or Urban Health Centre.

4. Inform fellow community members about measures and tips to keep cool and protect oneself from heat.

5. Distribute pamphlets & paste, posters in vulnerable areas.
PHASE 2: DURING THE HEAT SEASON
FROM APRIL THROUGH JUNE

CDM & EOPS
District Collector
Commissioner, GHMC
Commissioner
- Nodal Officer for State
- Nodal Officer) for District
- Nodal Officer for GHMC
- Nodal Officers for Municipal Corporation/Municipalities

- Issue a heat alert state District wide when extreme heat events are forecast. The key agency leaders, IMD, SDMA in accordance with the Communication Plan above may be notified.
- When necessary Monitor and increase the heat alert level to match the severity of the forecast and threshold established. Special meetings with key agency leaders may be convened.
- Activate “cooling centers,” such as temples, public buildings, malls, during a heat alert and/or State Government - run temporary night shelters for those without access to water and/or electricity.
- Provide access to shaded areas for outdoor workers, slum communities, and other vulnerable populations on a large scale. For example, confirm that night shelters stay open all day for migratory populations during a heat alert.
- Hold regular (daily, if necessary) conference to discuss reports and fresh breaking developments during a heat alert and ensure that communication channels are functional and operating.
- Monitor temperature data and forecasts.
- All non-essential uses of water (other than drinking, keeping cool) may be suspended.
Increase efforts to distribute fresh drinking water to the public by opening ‘Chalivendrams’ at people congregation points. For example, expand potable water access during a heat alert at religious spaces including temples and mosques, Bus stations, pouch handouts to the poor and high-risk areas (identified by the mapping of high-risk areas).

Inform power supply Companies to prioritize maintaining power to critical facilities (such as hospitals and UHCs).

Notify when the heat alert is over.

**INDIAN METEOROLOGICAL DEPARTMENT (IMD) and TELANGANA STATE DEVELOPMENT SOCIETY (TSDPS)**

1. Provide weekly forecasts
2. Communicate Heatwave alerts/warnings promptly.
3. Communicate Max temperatures district-wise periodically.
4. Update heatwave details regularly.

**INFORMATION & PUBLIC RELATIONS (I & PR) DEPARTMENT**

1. Creating awareness among public through advertisements in regional languages
2. Displaying hoardings at important places
3. Creating awareness through TV and Radio spots and jingles
4. Conducting regular press conferences at the State level and District level through concerned Ministers, Secretaries and Collectors on the risks and dangers of heat related illness.
5. Circulating heat wave warnings i.e. text alerts or WhatsApp messages in collaboration with private sector telecom companies in addition to traditional media.
6. Sending warnings in bulk to the public via centralized email databases during heat waves.
7. Developing SMS alert system from time to time on treatment systems to send messages to private doctors and
medical professionals at Government hospitals including PHCs and UHCs.
8. Utilizing local radio FM broadcast through special programmes and during popular programmes to alert the public.
10. Collect all news items/reports on Heatwaves daily and report to Government.

**MEDICAL & HEALTH DEPARTMENT AND MEDICAL PROFESSIONALS:**

1. Display heat-related illness prevention tips and how to stay cool around hospitals PHCs and UHCs
2. Keep adequate stocks and ensure availability of medical supplies like ORS in all hospitals/ PHCS/ UHCs, hospitals
3. Generate reports of the public health impact for Nodal Officer, every week/month during a heat alert
4. Deploy additional staff at hospitals and PHCs/UHCs to attend to the influx of patients during a heat alert, if feasible
5. Increase link worker and community health worker outreach in at-risk neighbourhoods during a heat alert, if feasible
6. Have Regional Health Officers visit UHCs to confirm proper preparation has been made for heat related illness case audits during heat season may be conducted
7. Update heatwave related illness information to Revenue (Disaster Management) Department to monitor the impact of heat wave.

**108/104 EMERGENCY SERVICE:**

1. Ensure adequate supply of ice packs and IV fluids
2. Disseminate SMS text messages to warn local residents during a heat alert
3. Ensure ambulance vehicles are available for emergency purposes

**LABOUR & EMPLOYMENT DEPARTMENT**

1. Encourage employers to shift outdoor workers’ schedules away from peak afternoon hours (1pm – 5pm) during a heat alert
2. Provide emergency ice packs and heat-illness prevention materials to construction workers as pilot project

**ANIMAL HUSBANDRY DEPARTMENT**

1. Conduct training for Dept., field workers as well as for cattle and poultry farmers on heat wave management plan in Animal Husbandry sector, can use giant coolers in Cattle sheds and poultry farms
2. Display posters / distribute pamphlets in villages, and important government offices
3. Ensure availability of adequate field staff during heat wave and ensure that they visit villages for follow up action
TRANSPORT DEPARTMENT /METRO RAIL/ TRAIN

1. Display posters & distribute pamphlets on prevention of heat related illness
2. Ensure availability of shade, drinking water, ORS etc
3. Permit use of school premises as shelter during day time
4. Establish Health teams at major bus stands / Terminals and other public places

TELANGANA STRATE ROAD TRANSPORT CORPORATION

1. Display posters & distribute pamphlets on prevention of heat related illness
2. Ensure availability of shade, drinking water, ORS for passengers & crew at Bus stands, Depots
3. Establish Health stations at major bus stands / Terminals and other public places
4. Ensure that buses do not run during peak hours (12-4 pm) when Heatwave is declared.
5. Provide emergency ice packs and heat-illness prevention materials to TSRTC staff (Drivers, Conductors) etc
6. Operate more AC buses during peak hours (12 noon -4.00 p.m.) when Heat wave is declared. Keep the AC buses in operational conditions.

EDUCATION DEPARTMENTS

1. Display posters & distribute pamphlets on prevention of heat related illness in Schools and Colleges
2. Identify shelter space, of shade, drinking water, ORS facilities with signs
3. Ensure that Schools do not function during peak hours (12-4 pm) when Heat wave is declared
4. No open-air classes to be conducted
5. Ensure school buses are parked in sheds, sprinkle water on the roof of the buses, before commuting.
6. Distribute heat protection materials at local schools and orient school teachers to equip them with knowledge of heat protection tips and activities which they can disseminate in classrooms.
7. Scheduling of examinations before starting of Heat period normally.
8. Hostels operated by Social Welfare, Minority, and by Private Institutions to ensure proper measures are adopted to provide sufficient water and arrangements to keep the environment in the hostels cool. Ensure sufficient power supply is available, health facility is available, fans/cooler’s installed.

INFORMATION TECHNOLOGY (IT) DEPARTMENT

1. Prepare Dynamic Heat wave Plan with links of Departments for real-time / implementation.
2. Send real-time information to all Departments through Dash board/interface.
3. Activities to be displayed on Dash board/Interface/Online Monitoring Tool
4. Activate Heat Wave management APP

**MA & UD DEPARTMENT / CORPORATIONS / MUNICIPALITIES**

1. Display temperature data in the electronic display boards in its jurisdiction (Junctions and public places)
2. Parks to be open for rest – no charges to collect. Keep open the parks for a longer duration during evenings.
3. Malls/shops to keep cold water at their locations
4. Department of Water Supply to provide drinking water to “Chalivendrams”
5. Activate “cooling centers,” such as public buildings, malls, temples, schools and State Government or Local body, run temporary night shelters for those without house or access to water and/or electricity at home.
6. Expand access to shaded areas for outdoor workers, slum communities, and other vulnerable sections of population.
7. All non-essential uses of water (other than drinking, keeping cool) may be suspended, if necessary.
8. Distribution of fresh drinking water to the public by opening water centres (Chalivendrams) at people congregation points like market places, construction and infrastructure work locations, Bus stations etc.
9. Water may be distributed through pouches to the poor in the identified high-risk areas.
10. Actively involve NGOs, Lions Club, Rotary Club and Corporate houses in providing shelter and drinking water facilities in places like public buildings, malls, temples, schools and State Government or Local body, run temporary night shelters for those without house or access to water and/or electricity at home.
11. Expand access to shaded areas for outdoor workers, slum communities, and other vulnerable sections of population.

**DEPARTMENT OF WOMEN DEVELOPMENT AND CHILD WELFARE**

1. Use opportunities, such as nutrition day, SHG meetings for creating awareness and educate young girls and mothers regarding the dangers of Heat Waves, its related health impacts and the precautionary measures to be taken.
2. Display IEC materials at Anganwadis and encourage integrated child development scheme (ICDS) workers to disseminate Heat Wave related information with special focus on infants, children below five years, pregnant and lactating mothers, and
geriatric population to protect them from dehydration.

3. Provision of drinking water and first aid at all the Anganwadi Centers, old age homes, orphanages.

4. Ensure that visits to homes by AWWs are done early mornings, so as not to be exposed to high temperatures.

5. Provision of funds for Heat Wave management

NGOs, COMMUNITY GROUPS AND INDIVIDUAL

1. Keep cool and hydrated during the heat season by drinking water, staying out of the sun, and wearing light clothing

2. Office and field visit timings to be re-worked

3. Check on vulnerable neighbours, particularly during a heat alert

4. Limit heavy work in direct sun or indoors if poorly ventilated, especially during a heat alert.
Phase - III
Post - Heat Season
July-Sep

**PHASE 3: POST-HEAT SEASON**
JULY THROUGH SEPTEMBER

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- Organize an annual meeting with key agency leaders and relevant stakeholders to review Heat Wave Action Plan.
- Evaluate the reach and impact of the Plan and update/revise it based on review and evaluation.
- Evaluate the Plan process based on performance and revise accordingly.
- Evaluate the reach and impact of the Plan and revise accordingly.
- Display the revised Plan to the Disaster Management/District website ahead of the next heat season for stakeholders.
- Discuss establishing cooling center facilities in high-risk areas around city.
- Make important recommendations arising out of review and evaluation to Government
INDIA METEOROLOGICAL DEPARTMENT (IMD)

1. Provide season report containing duration of Heatwave, maximum temperatures location-wise.
2. Obtain feedback on cases, plan, and measures taken.
3. Revise plan accordingly.

INFORMATION & PUBLIC RELATIONS (I & PR) DEPARTMENT

1. Collect feedback on publicity, reach and implementation of plan from media and other sources.
2. Collect all news items/reports on Heatwave plan published/telecast.
3. Collect all new items/reports on Heatwaves.

MEDICAL & HEALTH DEPARTMENT AND MEDICAL PROFESSIONALS

1. Perform an epidemiological case review of heat-related mortalities during the summer.
2. Conduct and gather epidemiological outcomes from the data on heat risk factors, illness and death, based on average daily temperatures.
4. Measure mortality and morbidity rates based on data before and after the Plan’s interventions.

108/104 EMERGENCY SERVICE

2. Obtain feedback on cases, plan, and measures taken.
3. Revise plan accordingly.

LABOUR & EMPLOYMENT DEPARTMENT

2. Obtain feedback on cases, plan, and measures taken.
3. Revise plan accordingly.

TRANSPORT DEPARTMENT

1. Review implementation and effectiveness of Plan.
2. Obtain and give feedback for further improvement of Plan.

TSRTC

1. Review implementation and effectiveness of Plan.
2. Obtain and give feedback for further improvement of Plan.

EDUCATION DEPARTMENTS

1. Review implementation and effectiveness of Plan.
2. Obtain and give feedback for further improvement of Plan.
**ANIMAL HUSBANDRY DEPARTMENT**

2. Obtain feedback on cases, plan, and measures taken.
3. Revise plan accordingly.
4. Report to Government

**FIRE DEPARTMENT**

To check the readiness of vehicles and firefighting equipment to face any emergency situations

**INFORMATION TECHNOLOGY (IT) DEPARTMENT**

1. Collect data of temperatures mandal wise.
2. Collect data on number of downloads of APP & map accordingly

**NGOs, COMMUNITY GROUPS/SHGs/ WARD LEVEL COMMITTEES / INDIVIDUALS**

1. Reach the unreached and educate the community on a continuous basis.
2. Conduct training programmes, workshops and outreach sessions with community / Self-help groups and mobilizers such as DWACRA groups, Mahila Arogya Samiti, ASHA workers, Anganwadis, and Ward Committees in Municipalities to help inform and get vulnerable communities more actively involved

3. Identification of NGOs, Voluntary Organizations in reaching out to the Public, especially Vulnerable groups
4. Encourage discussions for finding early signs of heat exhaustion with local doctor or Health Centre
5. Inform fellow community members about how to keep cool and protect oneself from heat

All Departments are requested to (create awareness) circulate this plan to their District/Division/ Mandals/Village offices for the benefit of field staff.
ANNEXURES

Annexure -1 Details of Sunstroke Deaths reported – 2018
Annexure -2 Details of Sunstroke ill health reported – 2018
Annexure -3 DOs and DON'Ts
## Annexure I

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<tr>
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Sd/-

Dr. R.V.CHANDRAVADAN
Prl. Commissioner for Disaster Management &
Ex – Officio Prl. Secretary to Government
## Annexure II

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Sd/-  
Dr. R.V.CHANDRAVADAN  
Prl. Commissioner for Disaster Management &  
Ex – Officio Prl. Secretary to Government
చేయవలసినవి (Do’s)

* సిద్ధంగా సాగడము చాలావింతం పోడి ఇవ్వండి.
* అంశాలు ప్రత్యేకంగా మాత్రమే మిగిలి పంపించండి.
* బ్యాక్స్ ఇందదికం వారి ప్రత్యేకంగా పంపించండి.
* తప్పనిసరిగా గొడుగు వాడండి.
* వేడిగా ఉనన రోజులలో మాత్రమే సాగడము పంపించండి.
* తెలుప్రంగు గల ప్లుచటి కాటన్ వస్తు దాలను ధరించండి.
* నెత్తికి టోపి, లేదా రుమాలు పెటటు కోవండి.
* ఉప్పు కలిపిన మజ్జిగ లేదా గలూ కొజు కలిపిన నీరు తాత గవచుును, లేదా ఓరల్ పాలించండి.
* వడదెబ్బకు గురి అయినవారిని శీతల పాతంతానికి వెంటనే చేరండి.
* వడదెబ్బకు గురి అయినవారిని తడిగుడడతో శరీరం అంతా రుద్ుు తూ ఉండండి. ఐస్ నీటిలో బ్టును ముంచి శరీరం అంతా తుడవవలెనుశరీర ఉపణో గరత 101° F - మైదానం లో చిప్పు మాత్రమే నిపుణంగా ఎంతా మాత్రమే శరీరం అంతా తుడండి.
* మంచి నీరు ఎకుువ స్రారుూ తాత గాలి.
* ఇంటి నుంచి బ్యటకు వెళ్ళండి ఒక గాూ సుమంచి నీరు తాత గాలి.
* ఎండలో బ్యటి నుంచి వచిున వెంటనే ఒక మాదిరిన చలూని నిమమరసముగాని, కొబ్బరి నీరు లేదా చలూని నీరు తాత గాలి.
* తీవతమ ఎండలో బ్యటికి వెళ్ళండి పడన తలత్తరుగుట మొద్లెనా అనారోగా సమసా ఏరపడితే ద్గగరలో వుననవెైద్ుాణణో సంప్తదించి పాత ధమిక చికితస పంది బ్యటికి ప్డకుండా కాపాడుకోవచుును.
మాత్రారోగ్యం (Don’ts)

* నారంగ పండరించండి. విత్త పండరించండి.
* హైయ్యాండ్ రాగం ఎంకిందే కింది స్టేన్ లేదు.
* భయం రాగం సమయంలో ప్యాన్, ఎక్స్ట్రా పంపు ప్యాన్.
* రవాణా రేగా ప్యాన్ సంచికా నారంగ రాగం ఉత్తమం.
* ప్రాంతాల పేతన సాజి నీటిలో ప్యాన్ నిషిద్ధం.
* వచ్చిన విషయం ఉండి ఒకటి నీటి ఇక్కడ ప్యాన్.
* రుండా సమయంలో నలుపురం ద్రవాలు, మందాన్ని ఉండాలి ఉత్తమం.
* ఉత్తమానే టోపి రాగంలో ప్యాన్ ఉత్తమం.
* మధ్యాహ్నం మధ్యాంశం 10.00 గంటల నుండి స్రాయంతం 4.00 గంటలం (మధ్యాహ్నంలో).
* మధ్యాహ్నం మధ్యాంశం సారి సారి సారి జరుగు నిషిద్ధము.
* మందానే మంది సారి సారి మంది సారి రాగంలో ప్యాన్ నిషిద్ధం.
* విశేషారోగాంధియా కాలి ప్యాన్ నిషిద్ధం కాలి రాగంలో ఎంపు విద్యారాధి కాలి రాగంలో ఎంపు.
* విదిద్ధార్థి.
**DO's**

* Try to stay in cold places
* Use umbrella during hot days
* Wear thin, loose cotton garments, preferably of white colour
* Wear a hat of cotton or a turban
* Avoid outdoor physical activity from 12-3 P.M. If unavoidable, attend to only light physical activity under the hot sun
* Take ample water along with salted butter milk or glucose water
* Take measures to reduce the room temperature like watering, using window shades, fanning, and cross ventilation
* Shift the person with heat stroke symptoms to cool dwelling
* The person suffering with heat stroke should have minimum clothing
* The person suffering with heat stroke has to be sponged with cold water, indirect application of ice-packs
* The person suffering with heat stroke should be kept in between ice-blocks
* If the person affected with heat stroke is not showing any improvement, he should be shifted to a hospital immediately preferably with cooling facility

**Don’ts**

* Expose to direct sunlight or hot breeze
* Move under hot sun without umbrella
* Use of black and synthetic, thick clothes during summer season
* Move under the hot sun without a hat or turban.
* Attend to strenuous physical activity under the hot sun
* Allow direct hot air into the living room
* Delay in shifting the person suffering with heat stroke to a cool place
* The person suffering with heat stroke to have thick clothing
* The person suffering with heat stroke to be sponged with hot water and to be exposed to hot air.
# Symptoms and First Aid for Various Heat Disorders

<table>
<thead>
<tr>
<th>Heat Disorder</th>
<th>Symptoms</th>
<th>First Aid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sunburn</td>
<td>Skin redness and pain, possible swelling, blisters, fever, headaches.</td>
<td>Take a shower, using soap, to remove oils that may block pores preventing the body from cooling naturally. If blisters occur, apply dry, sterile dressings and get medical attention.</td>
</tr>
<tr>
<td>Heat Cramps</td>
<td>Painful spasms usually in leg and abdominal muscles or extremities. Heavy sweating.</td>
<td>Move to cool or shaded place. Apply firm pressure on cramping muscles or gentle massage to relieve spasm. Give sips of water. If nausea occurs, discontinue.</td>
</tr>
<tr>
<td>Heat Exhaustion</td>
<td>Heavy sweating, weakness skin cold, pale, headache and clammy. Weak pulse. Normal temperature possible. Fainting, vomiting.</td>
<td>Get victim to lie down in a cool place. Loosen clothing. Apply cool, wet cloth. Fan or move victim to air-conditioned place. Give sips of water slowly and If nausea occurs, discontinue. If vomiting occurs, seek immediate medical attention. Or call 108 and 102 for Ambulance</td>
</tr>
<tr>
<td>Heat Stroke (Sun Stroke)</td>
<td>High body temperature (106°F). Hot, dry skin. Rapid, strong pulse. Possible unconsciousness. Victim will likely not sweat</td>
<td>Heat stroke is a severe medical emergence. Call 108 and 102 for Ambulance for emergency medical services or take the victim to a hospital immediately. Delay can be fatal. Move victim to a cooler environment. Try a cool bath or sponging to reduce body temperature. Use extreme caution. Remove clothing. Use fans and/or air conditioners. <strong>DO NOT GIVE FLUIDS.</strong></td>
</tr>
</tbody>
</table>
(include Telugu content)
HEATWAVE ACTION PLAN 2018
REVENUE (DISASTER MANAGEMENT)
DEPARTMENT

DOs
- TRY TO STAY IN COLD PLACES
- USE UMBRELLA DURING HOT DAYS
- WEAR THIN LOOSE COTTON GARMENTS, PREFERABLY OF WHITE COLOUR
- WEAR A HAT OF COTTON OR A TURBAN
- AVOID OUTDOOR PHYSICAL ACTIVITY FROM 12-3 P.M. IF UNAVOIDABLE, ATTEND TO ONLY LIGHT PHYSICAL ACTIVITY UNDER THE HOT SUN
- TAKE AMPLE WATER ALONG WITH SALTED BUTTER MILK OR GLUCOSE WATER
- TAKE MEASURES TO REDUCE THE ROOM TEMPERATURE LIKE WATTERING, USING WINDOW SHADES, FANNING, AND CROSS VENTILATION
- SHIFT THE PERSON WITH HEAT STROKE SYMPTOMS TO COOL DWELLING
- THE PERSON SUFFERING WITH HEAT STROKE HAS TO BE SPONGED WITH COLD WATER, INDIRECT APPLICATION OF ICE-PACKS
- THE PERSON SUFFERING WITH HEAT STROKE SHOULD BE KEPT IN BETWEEN ICE-BLOCS
- IF THE PERSON AFFECTED WITH HEAT STROKE IS NOT SHOWING ANY IMPROVEMENT, HE SHOULD BE SHIFITED TO A HOSPITAL IMMEDIATELY PREFERABLY WITH COOLING FACILITY

DON'Ts
- EXPOSE TO DIRECT SUNLIGHT OR HOT BREEZE
- MOVE UNDER HOT SUN WITHOUT UMBRELLA
- USE OF BLACK AND SYNTHETIC THICK CLOTHES DURING SUMMER SEASON
- MOVE UNDER THE HOT SUN WITHOUT A HAT OR TURBAN
- ATTEND TO STRENUOUS PHYSICAL ACTIVITY UNDER THE HOT SUN
- ALLOW DIRECT HOT AIR INTO THE LIVING ROOM
- THE PERSON SUFFERING WITH HEAT STROKE TO WEAR THICK CLOTHING
- THE PERSON SUFFERING WITH HEAT STROKE TO BE SPONGED WITH HOT WATER AND TO BE EXPOSED TO HOT AIR
- DELAY IN SHIFTING THE PERSON SUFFERING WITH HEAT STROKE TO A COOL PLACE