



National Programme
on Climate Change
and Human Health



Ministry of Health & Family Welfare
Government of India



Heat-Health Advisory and Public Health Preparedness

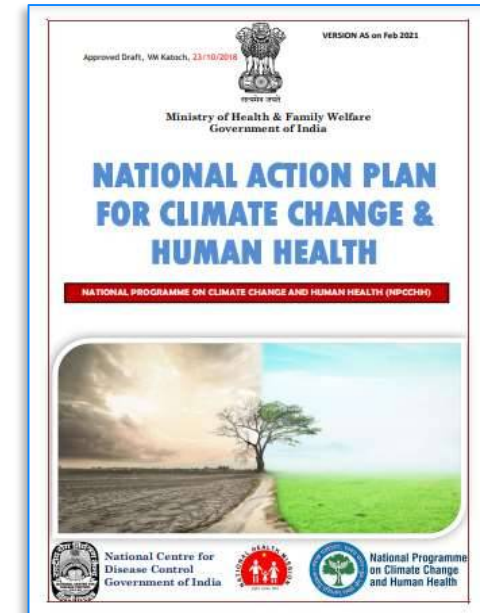
National Mission on Climate Change and Human Health

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Additional Director and Head
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National Centre for Disease Control, India

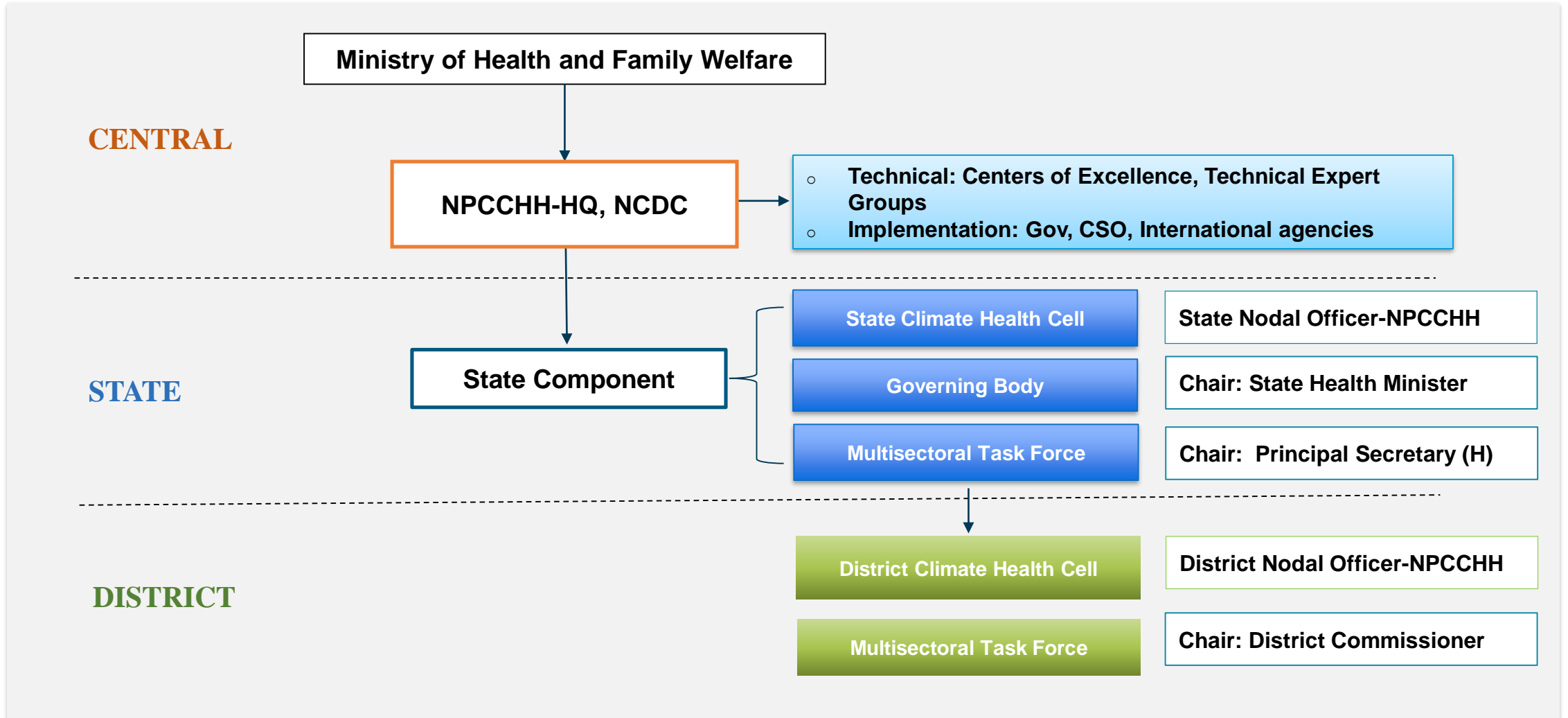
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National Mission on Climate Change and Human Health

- **Prime Minister's Council on Climate Change → Mission on Health** (proposed in 2015)
- National Action Plan on Climate Change and Human (HNAP)
- **National Programme on Climate Change and Human Health (2019)**
- **Goal:**
To reduce morbidity, mortality, injuries and health vulnerability to climate variability and extreme weather events

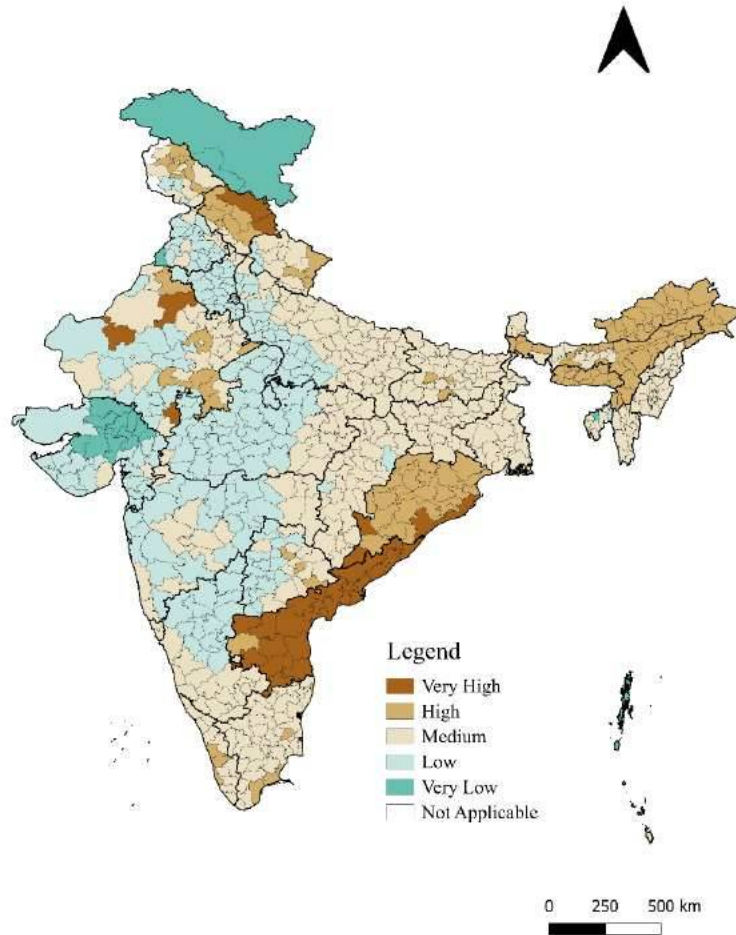


Organizational Framework

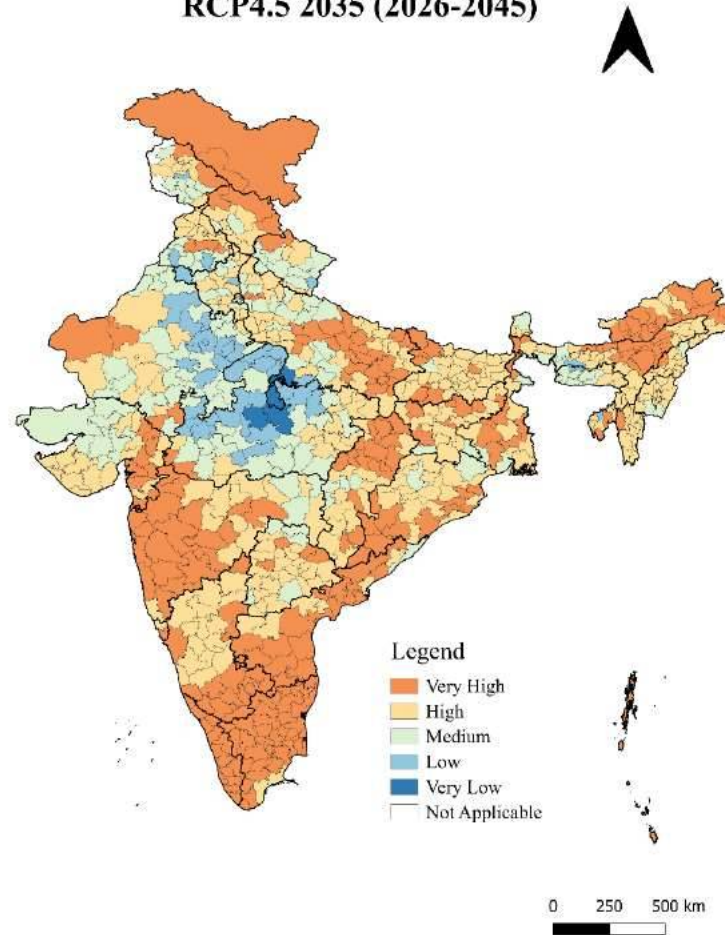


Heatwave Hazard in Health Sector

Historical Heatwave Hazard in Health Sector



Future Heatwave Hazard in Health Sector
RCP4.5 2035 (2026-2045)

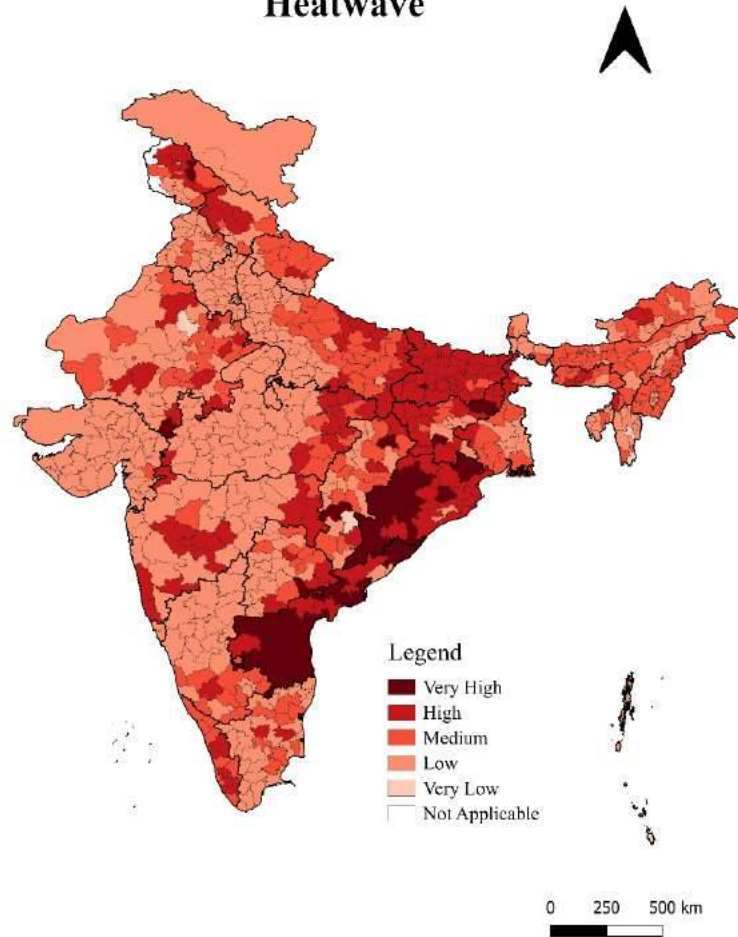


- Historical hazard assessment suggests that 171 Districts in India have very high to high heat wave hazard level.

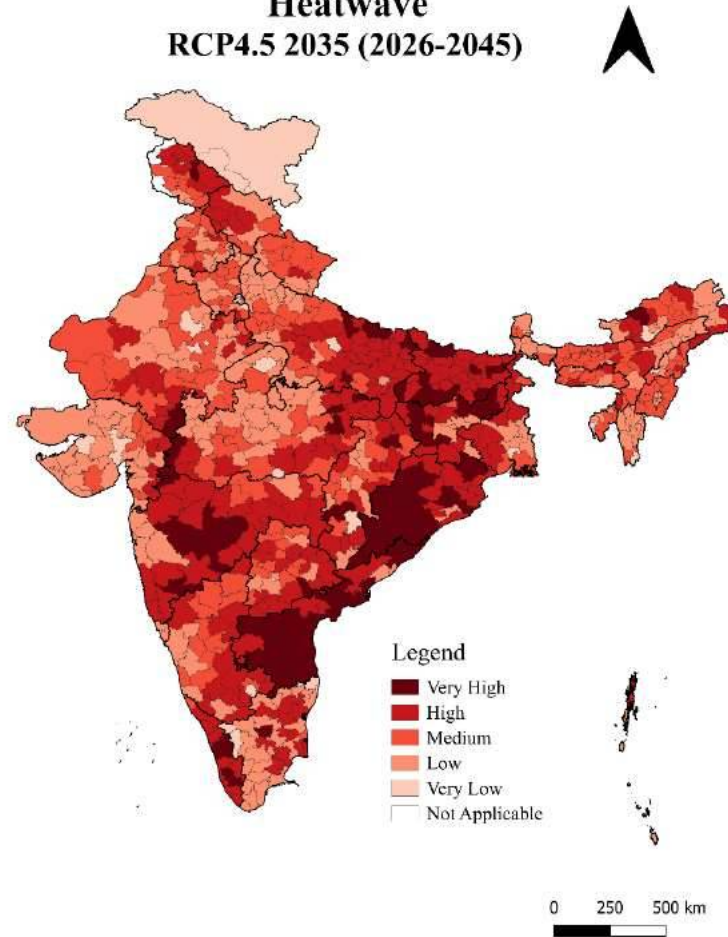
- Future hazard assessment suggests that this will increase to 593 Districts

Risk in the Health Sector for Heatwave

Historical Risk in the Health Sector for Heatwave

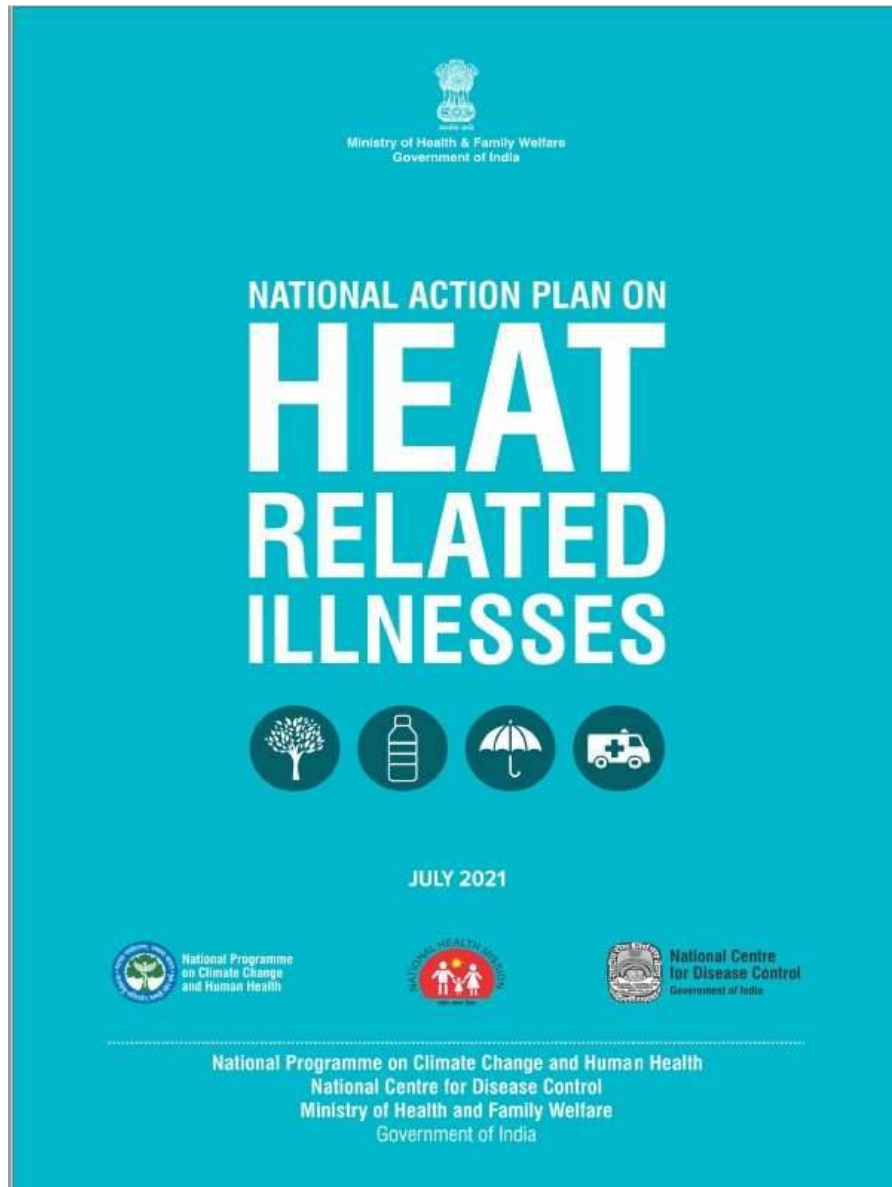


Climate Risk in the Health Sector for Heatwave
RCP4.5 2035 (2026-2045)



- Historical risk assessment for health sector suggests that 197 Districts in India have very high to high heat risk score.
- Future risk assessment suggests that this will increase to 324 Districts

National & State Action Plans on Heat Related Illness

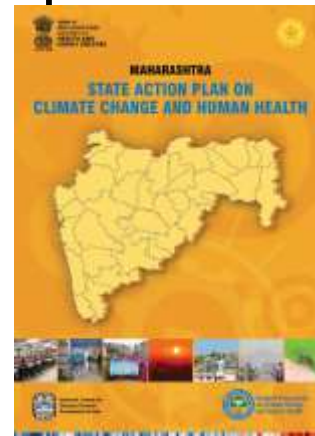


National Action Plan on Heat-Related Illnesses outlines

- Basics of heatwave
- Heat-related illnesses
- Clinical management protocols
- Health facility preparedness
- Protocol for Surveillance of Heat-related illness & deaths

States Specific Heat-Health Action Plans for 36 States & UTs

- Submitted to NDMA for integration into State Heat Action Plans



Seasonal Preparedness Advisory: March



पुण्य सलिला श्रीवास्तव, भा.प्र.से.
सचिव
PUNYA SALILA SRIVASTAVA, IAS
Secretary



भारत सरकार
स्वास्थ्य एवं परिवार कल्याण विभाग
स्वास्थ्य एवं परिवार कल्याण मंत्रालय
Government of India
Department of Health and Family Welfare
Ministry of Health and Family Welfare
DO no: 90/NCDC/CEOH&CCH/2020-21
9.3.2026



Dear Colleague,

As you aware, many States/UTs in India face frequent, intense heatwaves, elevated temperatures, and urban heat island effects which may lead to heat stress, heat exhaustion, and heat stroke. Vulnerable groups like the elderly, pregnant women, children, those with underlying health conditions, and outdoor workers are more likely to face health impact of extreme heat. Ministry of Health and Family Welfare issues annual advisories to States, aligned with IMD forecasts, to prepare the health sector for heat-related illnesses. Given IMD's year 2026 seasonal outlook, States/UTs must proactively enhance delivery of early warning to health functionaries, undertake health sector preparedness, strengthen health workforce capacity, take up IEC activities, and maintain a sensitive surveillance system.

I would like to request that all heat-prone States/UTs ensure comprehensive preparedness of ambulance services and the operationalization of dedicated Heat Stroke Management Units at health facilities. This may include maintaining adequate stocks of Oral Rehydration Salts (ORS), essential medicines, intravenous fluids, ice packs, and appropriate cooling equipment to enable timely and effective management of heat-related illnesses. States/UTs may also undertake capacity building of healthcare personnel and community health workers for early identification, prompt management, and proper reporting of heat-related conditions.

In addition, fire safety audits and the adoption of heat-resilience measures, such as cool roofs and provision of adequate shading within healthcare facilities, may be prioritized to safeguard patients and healthcare workers during extreme heat events. Further, States/UTs are requested to strengthen surveillance mechanisms through mandatory daily reporting of heatstroke cases and deaths, including nil reporting, on the Integrated Health Information Platform (IHIP) Portal to ensure real-time monitoring and timely public health response.

#StopObesity

टीबी हारेगा देश जीतेगा / TB Harega Desh Jeetega

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4755889/2026/189

Public Health Advisory: Extreme Heat/Heatwave

Do's

For general population

Stay hydrated:

- Drink sufficient water whenever possible, even if you are not thirsty. Thirst is not a good indicator of dehydration.
- Carry drinking water when traveling
- Use Oral Rehydration Solution (ORS), and consume homemade drinks like lemon water, buttermilk/lassi, fruit juices with some added salt.
- Eat seasonal fruits and vegetables with high water content like water melon, musk melon, orange, grapes, pineapple, cucumber, lettuce or other locally available fruits and vegetables.

Stay covered:

- Wear thin loose, cotton garments preferably light coloured
- Cover your head: use umbrella, hat, cap, towel and other traditional head gears during exposure to direct sunlight
- Wear shoes or chappals while going out in sun

Stay alert:

- Listen to Radio, watch TV, read Newspaper for local weather news. Get the latest update of weather on India Meteorological Department (IMD) website at <https://www.imd.gov.in/>

Stay indoors/in shade as much as possible:

- In well ventilated and cool places
- Block direct sunlight and heat waves: Keep windows and curtains closed during the day, especially on the sunny side of your house. Open them up at night to let cooler air in.
- If going outdoor, limit your outdoor activity to cooler times of the day i.e., morning and evening
- Reschedule or plan outdoor activities during cooler parts of the day.

For vulnerable population

Although anyone at any time can suffer from the heat stress & heat-related illness, some people are at greater risk than others and should be given additional attention.

These include:

- Infants and young children
- Pregnant women
- Physically ill, especially with heart disease or high blood pressure
- Travelers from colder climate to a hot climate should allow one week's time for their bodies to acclimatized to heat, avoid overexertion, and should drink plenty of water. Acclimatization is achieved by gradual increase (over 10-15days) in exposure/physical activity in hot environment
- People working outdoors
- People who have a mental illness.

Other precautions

- Elderly or sick people living alone should be supervised and their health monitored on a daily basis.
- Keep your home cool, use curtains, shutters or sunshade and open windows at night.
- Try to remain on lower floors during the day.
- Use fan, spray bottles, damp cloths, ice towels to cool down body.
- Immersing feet in 20°C water above ankle provides rapid cooling by reducing dehydration and thermal discomfort.

Public Health Advisory

- Before summer, annually
- Dos and Don'ts for general and vulnerable population

Advisory to State Health Departments

- Awareness (IEC & Campaigns)
- Trainings
- Surveillance & Early warnings
- Facilities & Ambulances
- Infrastructure measures

IMD's Seasonal outlook

Public Awareness: Advisories and Outreach

Heatwave Ready Safety Measures for Mass Gatherings & Sporting Events

- Monitor heatwaves & humidity forecasts from the local meteorological services.
- Plan outdoor activities to avoid the hottest hours (10 PM - 3 PM).
- Get up one drinking water outlet per 500 people, meeting water safety and hygiene standards.
- Establish cooling/ventilation areas to keep participants cool.
- Use airily/visibly or verbal needs to inform about dangers of heat exposure.
- Avoid events on days with active heat wave warnings & high humidity.
- Ensure everyone has easy access to safe drinking water. A person needs 4 litres of drinking water a day.
- Create shade to minimize direct sun exposure.
- Have a plan for rapid emergency cooling & medical transfer of patients suffering from severe heat-related illnesses.
- In local languages, inform about signs of heat-related illnesses and how to seek medical care.

Prepare and Protect
Call 108/102 immediately if you find someone with a high body temperature and is unconscious, or confused.

#HeatWavePreparedness

Children love playing in the Sun heat should not spoil their fun

Symptoms of heat related illness

- Headache
- Weakness
- Exhaustion
- Thirst
- Stomach pain
- Hot and red skin
- Fast breathing
- Weakness and dizziness
- Difficulty in walking or standing
- High temperature

Be careful when child is

- Managing in heat
- Wearing headgear
- Playing outdoors in heat

First aid measures

- Bring child to shade or air-conditioned area
- Remove extra layers of clothing
- Use cool water to wash the child's face and neck
- Use cool water to wash the child's body
- Use cool water to wash the child's hair
- Use cool water to wash the child's feet
- Use cool water to wash the child's hands
- Use cool water to wash the child's clothes
- Use cool water to wash the child's shoes
- Use cool water to wash the child's socks
- Use cool water to wash the child's underwear
- Use cool water to wash the child's pajamas
- Use cool water to wash the child's nightgown
- Use cool water to wash the child's towel
- Use cool water to wash the child's blanket
- Use cool water to wash the child's bedsheet
- Use cool water to wash the child's pillowcase
- Use cool water to wash the child's mattress cover
- Use cool water to wash the child's car seat cover
- Use cool water to wash the child's stroller cover
- Use cool water to wash the child's backpack cover
- Use cool water to wash the child's bag cover
- Use cool water to wash the child's shoes cover
- Use cool water to wash the child's socks cover
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- Use cool water to wash the child's car seat cover
- Use cool water to wash the child's stroller cover
- Use cool water to wash the child's backpack cover
- Use cool water to wash the child's bag cover

Prevention

- Use sunscreen
- Wear hat
- Wear sunglasses
- Wear light-colored clothing
- Wear loose-fitting clothing
- Wear breathable fabric
- Wear moisture-wicking fabric
- Wear quick-drying fabric
- Wear UV-protective fabric
- Wear fabric with UPF 30 or higher
- Wear fabric with UPF 50 or higher
- Wear fabric with UPF 100 or higher
- Wear fabric with UPF 150 or higher
- Wear fabric with UPF 200 or higher
- Wear fabric with UPF 300 or higher
- Wear fabric with UPF 400 or higher
- Wear fabric with UPF 500 or higher
- Wear fabric with UPF 600 or higher
- Wear fabric with UPF 700 or higher
- Wear fabric with UPF 800 or higher
- Wear fabric with UPF 900 or higher
- Wear fabric with UPF 1000 or higher

Heat-Ready Schools Empowering Schools to Beat the Heat!

- Ensure easy access to clean and cold drinking water.
- Regularly clean and maintain water coolers to keep the water safe.
- Ensure enough water storage for routine water needs for students and teachers.
- Keep classrooms well-ventilated through natural or artificial fans, coolers etc. means.
- Avoid outdoor activities during peak sun hours (10:00 to 3:00) and especially during active heatwave warnings in the area.
- Educate children on the importance of staying hydrated and cool. Consider ball activities to reward children to drink water.
- Identify shaded/covered locations within the school premises and encourage children to take frequent breaks.
- Educate children about the signs and symptoms of heat-related illnesses and first aid measures for themselves and others.
- Educate children to identify signs of dehydration by observing their urine colour.

Let's Keep Students Safe and Cool all Summer Long!

गर्मी से करें बचाव याद रखें ये सुझाव

बचाव करें

- पानी पाने का समय लें।
- पानी में नमक, चीनी या कandi न डालें।
- आप सोने के समय पानी पी लें।
- आप सोने के समय पानी पी लें।

बचाव का करें

- पानी पीने से पहले हाथ धो लें।
- पानी पीने से पहले हाथ धो लें।
- पानी पीने से पहले हाथ धो लें।
- पानी पीने से पहले हाथ धो लें।

Am I Drinking Enough Water? Use this urine colour chart to assess how hydrated you are.

- 1 is 1: Hydrated**
Pale, colourless and plentiful urine is often an indication that you are well hydrated. Keep drinking at the same rate.
- 2 to 4: Mildly dehydrated**
Slightly darker yellow urine indicates that you need to drink more water. Drink a glass of water now.
- 5 to 6: Dehydrated**
Medium dark yellow urine is often an indication that you are dehydrated. Drink 2 glasses of water now.
- 7 to 8: Very dehydrated**
Dark, strong-smelling urine is a great pointer that the signs of dehydration. Drink a large bottle of water immediately.

KEEP IN MIND
Get lots of fluids. Use fruits, coconut, sports drinks and electrolyte drinks. Avoid alcohol and caffeine as they can dehydrate you. Drink enough water.

IMPROVE HABIT
The colour on this chart should only be used as a guide and does not replace the advice of a health professional. Speak to your doctor if you are worried about the colour of your urine or have any other health problems.

Public Awareness: Advisories and Outreach



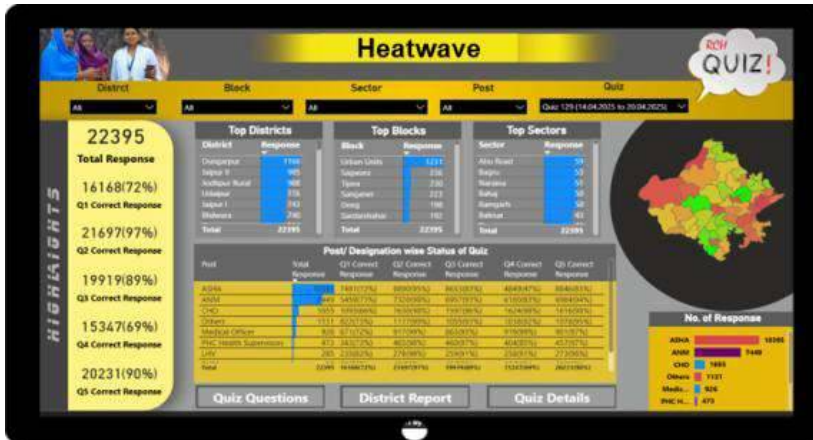
Community engagement efforts, Dakshin Kannada, Karnataka, 2026



Trained wrapped in HRI IEC, Kerala



Awareness session among outdoor workers, Telangana



Heat-Health Quiz among health care workers & professionals, Rajasthan 2025




Sensitization for traffic police, municipal workers and teachers, Kangpokpi, Manipur




Digital display in railway station, Bhopal, MP

Recognizing Impacts on Pregnancy Outcomes



डॉ. राकेश गुप्ता, आ.प्र.से.
अवर सचिव
Dr. Rakesh Gupta, IAS
ADDITIONAL SECRETARY



भारत सरकार
स्वास्थ्य एवं परिवार कल्याण मंत्रालय
कतव्य भवन-1, नई दिल्ली-110001
GOVERNMENT OF INDIA
MINISTRY OF HEALTH & FAMILY WELFARE
KARTAVYA BHAWAN-1, NEW DELHI-110001

F. 90/NCDC/NPCCHH/2025-26/Heat Pregnancy IEC
Date: 27th March, 2026

Sub: State health programmes including National Programme on Climate Change and Human Health and Reproductive and Child Health.

Dear Colleagues,

As you are aware that National Programme on Climate Change and Human Health (NPCCHH) in consultation with officers of Reproductive and Child Health and Technical Expert has developed guidance document and brochure on heat's impacts on pregnancy and new born health.

The health impacts of **heat on pregnant women and newborns** have been documented which reveals significant risks associated with elevated temperatures. Occupational exposure and related physical activities further increase these risks. Notably, heat exposure impacts pregnancy primarily by elevating the risk of adverse outcomes, driven by circulatory disruptions and inflammatory pathways rather than thermoregulatory disturbance.

This emerging evidence demands systemic action to address the growing impact of extreme heat on these vulnerable populations in the warming world. As a step towards strengthening health system response in this context two types of guidance material focused on pregnant women and newborns (enclosed) has been developed:

- 1. Technical guidance for healthcare professionals and community healthcare workers** includes information on the risk of heat exposure during pregnancy, clinical assessment pointers with a list of medicines that impact/re are impacted by thermal response, patient education, and facility preparedness. A recent conceptual framework on Extreme Heat and Maternal, Newborn and Child Health by World Health Organization (WHO) is also incorporated.
- 2. Awareness material for pregnant women/new mothers and their families** includes information on the risk of heat exposure during pregnancy, generic and specific preventive measures, early identification of symptoms in the mother and newborns and sustainable cooling solutions. This is available in both a Document and Brochure version.

Nest_2

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Tel. No.: 011-24013609, 24013610. E-mail: asrg-mohfw@gov.in

Simple, sustainable cooling measures

Dress light



Wear light-colored, loose-fitting clothing.

Plenty of fluids



Drink plenty of fluids, especially water.

Moist



Use a humidifier to keep the air moist.

Use a fan



Use a fan to circulate the air.

Identify early signs of heat stress (mother)	Identify early signs of heat stress in babies and newborns (newborn)
<ul style="list-style-type: none"> Headache Excessive sweating Exhaustion Thirst Dark urine Loss of appetite Confusion Blurred vision Fast heart rate Fast breathing Hot, dry skin Hot, flushed skin Hot, dry mouth Hot, dry nose Hot, dry throat Hot, dry lips Hot, dry tongue Hot, dry skin on the face Hot, dry skin on the neck Hot, dry skin on the chest Hot, dry skin on the back Hot, dry skin on the arms Hot, dry skin on the legs Hot, dry skin on the feet 	<ul style="list-style-type: none"> Excessive sweating Exhaustion Thirst Dark urine Loss of appetite Confusion Blurred vision Fast heart rate Fast breathing Hot, dry skin Hot, flushed skin Hot, dry mouth Hot, dry nose Hot, dry throat Hot, dry lips Hot, dry tongue Hot, dry skin on the face Hot, dry skin on the neck Hot, dry skin on the chest Hot, dry skin on the back Hot, dry skin on the arms Hot, dry skin on the legs Hot, dry skin on the feet

Ensuring Safe Pregnancy during High Temperatures with Changing Climate



Hot weather and pregnancy: Why it affects mothers and babies? As temperatures rise, it's important to take steps to ensure a safe pregnancy. Heat stress can lead to complications for both mother and baby. Stay hydrated, wear light clothing, and seek shade. Consult your healthcare provider for personalized advice.

For Mothers

How hot weather can affect mothers.



Heat stress can lead to complications for both mother and baby. Stay hydrated, wear light clothing, and seek shade. Consult your healthcare provider for personalized advice.

Simple, sustainable cooling measures



Stay hydrated, wear light clothing, and seek shade. Consult your healthcare provider for personalized advice.

For Babies

How hot weather can affect babies.



Heat stress can lead to complications for both mother and baby. Stay hydrated, wear light clothing, and seek shade. Consult your healthcare provider for personalized advice.

Capacity Building: Guidelines, Tools, Trainings

Annual, pre-summer refresher trainings

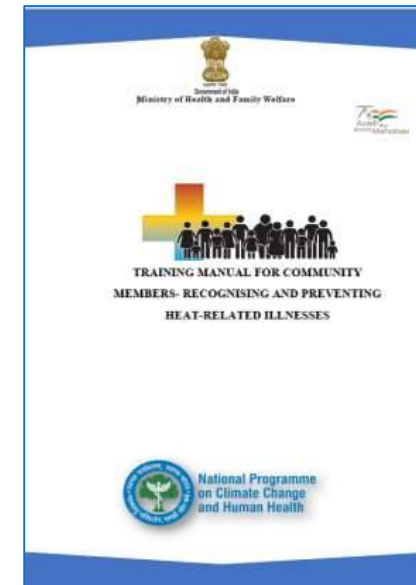
- Program Officers and Medical Cadre refresher training & reviews
- Cascade trainings for other cadres
- Special trainings for Clinicians – Physician / Pediatrician
- Training Modules for all cadres
- Self learning video modules



Heat-health conclave, NCDC-NIDM 2025



Training of health workers, Karnataka



Knowledge sharing trip, CHC Vatva, A'bad



Nation-wide refresher webinar

Guidelines

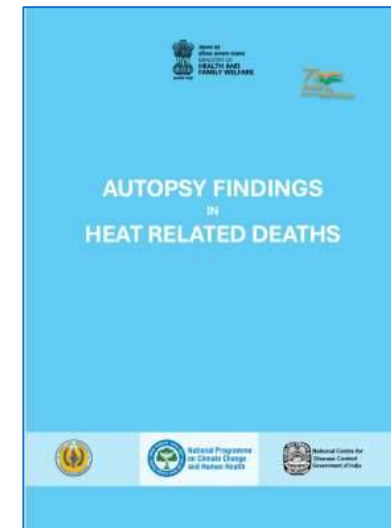
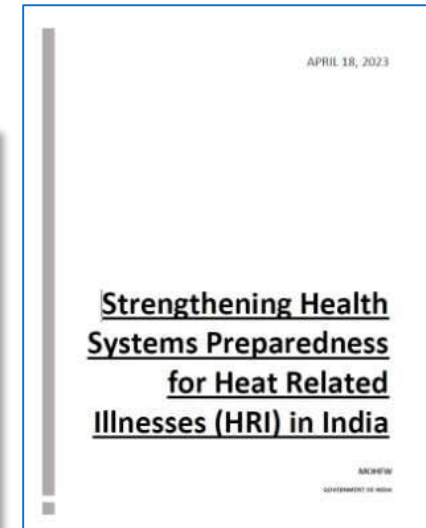
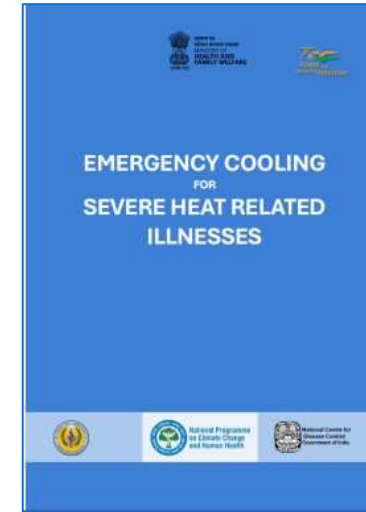
Strengthening Health Systems Preparedness for Heat Related Illnesses in India

Emergency Cooling for Severe Heat-Related Illnesses

Autopsy Findings in Heat Related Deaths

Mass Gathering Guidelines

Heat and Pregnancy Guidelines



Heatstroke Management Units and Ambulance Preparedness

- **Aim:** early diagnosis and rapid treatment of severe heat related illnesses

Secondary level & above

- Dedicated beds in cool area
- CHC, SDH & DH
- Rapid active cooling: equipments, methods
- Ensuring general cooling

Primary level

- Rapid primary cooling, referral
- ORS corners

Ambulance

- Rapid on-site cooling

Principle: Cool first transport second



Heatstroke Management Unit, RML Hospital, Delhi



Oral Rehydration Therapy Corners in health facility, Gujarat



Heat Illness Ward, Ahmedabad



Ambulance preparedness, Jharkhand

Evolution of Data Collection Process

Surveillance

2023

Digitization and integration

- **All States/UT** (Health facility)
- **Near-real time**
- Meteorological data & Daily heat bulletin
- Integrated Health Information Platform, MoHFW

2024

Timeframe extension

- **Year-around**
- **Clinical confirmation** of death

2025

Indicators added

- **Case-based data** collection
- Added indicators on **exposure and vulnerable** groups

Supporting mechanisms

- **Field epidemiology**
Assessment heat-related mortality clustering:
 - Mass gathering
- **Technical review (Central)**

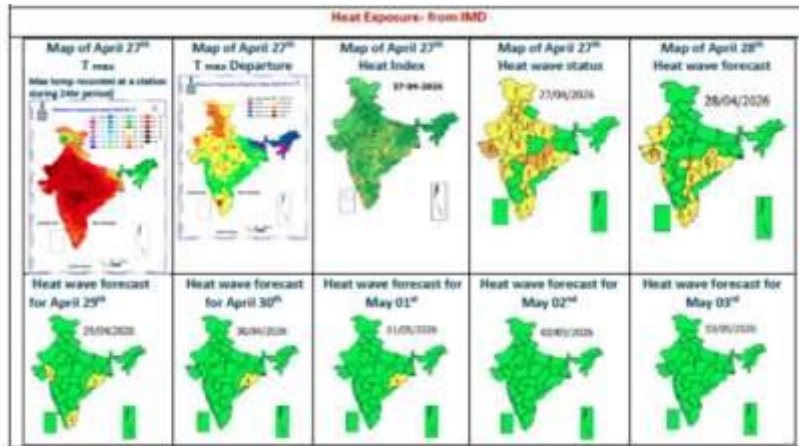
- **Guidelines** on Autopsy Findings
- **Technical review (Central)**
 - Indicators
 - Analysis and modeling
- **Health facility preparedness**

Indicators

Indirect Heat-Health Impact	Direct Heat-Health Impact
Aggregate-based	
<p>Emergency attendance (A+B+C)</p> <ul style="list-style-type: none"> A. Medical emergency B. Pediatric emergency C. Casualty <p>Total Deaths in the facility (A+B+C)</p> <ul style="list-style-type: none"> A. Cardiovascular Deaths B. Suspected Heatstroke Death C. Other deaths including unknown/brought dead 	<div style="border: 2px solid orange; padding: 5px;"> <ol style="list-style-type: none"> 1. Suspected Heatstroke Case 2. Suspected Heatstroke Death 3. Confirmed Heatstroke Death </div>
<p>Meteorological indicators (API)</p> <ul style="list-style-type: none"> • Temperatures (max, min) • Relative Humidity 	

Case-based
<p>Demographic</p> <ul style="list-style-type: none"> • Age, gender, address, social economic status <p>Exposure before onset</p> <ul style="list-style-type: none"> • Occupation • Type of activity <p>Clinical features</p> <ul style="list-style-type: none"> • Date of onset • Admission type • Pre-existing condition (DM/HT/Other) • Improved after cooling • Outcome: admitted/recovered/referred/died <p>Death details</p> <ul style="list-style-type: none"> • Confirmation: clinical/post-mortem/verbal • Time, place, location

Early Warning with Advisories



Code: Yellow 1. Hot and Humid weather very likely at isolated places over Coastal Andhra Pradesh, Odisha and Tamil Nadu Puducherry & Karaikal.

NPCCHH, NCDC

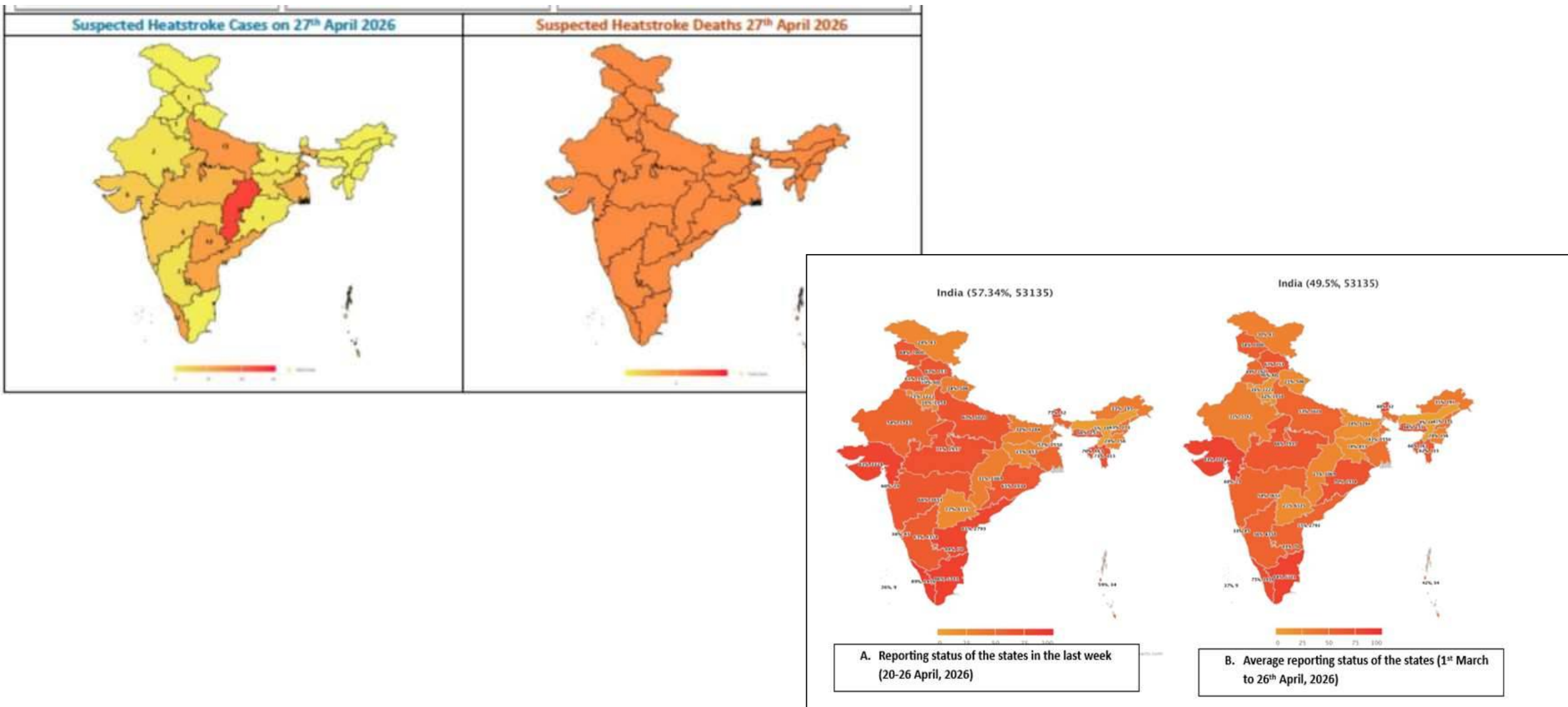
NPCCHH CENTRAL ZONES
Aniket, Avnesh, Brijesh, Dipuraj, Kamlesh, Jayshree, Kalu, Maji, Praveen, Praveen

Max Temperature Departure Dated 26/04/2026

1. Review District Heat Health Action Plan and facility readiness status.
2. Check stock position of ORS, IV fluids, ice packs and essential supplies.
3. Conduct briefing of Medical Officers and frontline workers on HRI protocols.
4. Initiate local IEC activities.
5. Ensure IHIP reporting readiness including Nil reporting compliance.

Type a message

Feedback to States



District Heat-Health Activities, 2025

State

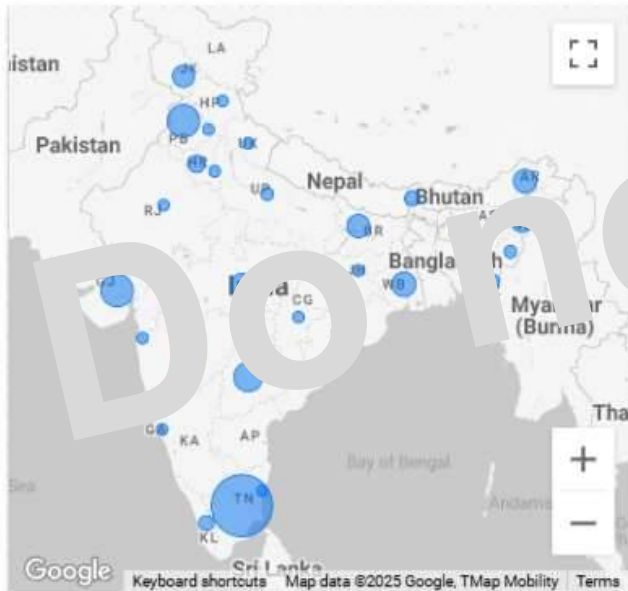
District

Heat prone

Submissions



State: 28
District: 172

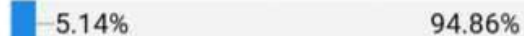


Submissions 1 • ● 44

Health Facilities

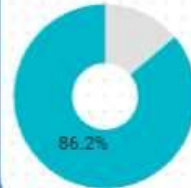
Total	Primary	Secondary	Tertiary
52,425	49,455	2,848	127

Solarized

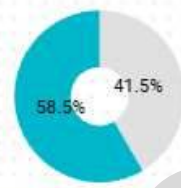


Key Actions

DAPCCHH Drafted



Taskforce Meeting



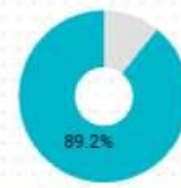
Health facility advisory



Health advisory



Print media IEC



Capacity Building

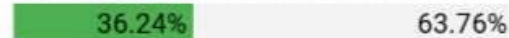
Medical officers



Nurse & allied health professionals



Community health workers



Community health officer



Ambulance paramedics



Anganwadi workers



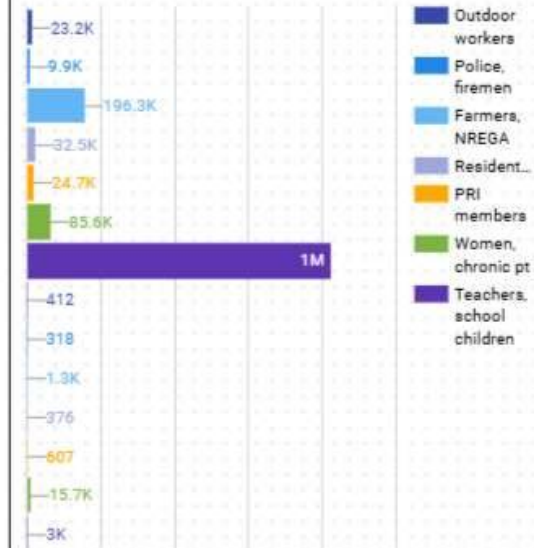
Heatstroke Management

Units (5-beds + rapid cooling)

DH & SDH
1194



Community Awareness



Health Facility Preparedness Assessment 2025

State ▾

Month ▾

Facility Level ▾

Heat prone ▾

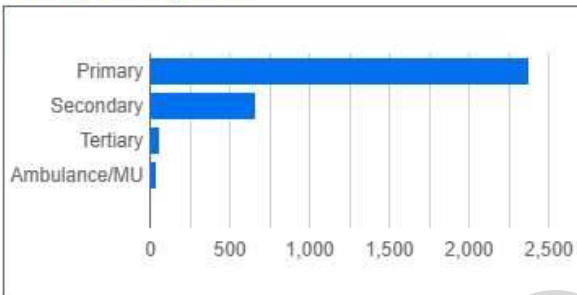
Facility assessed
3169

Districts
204

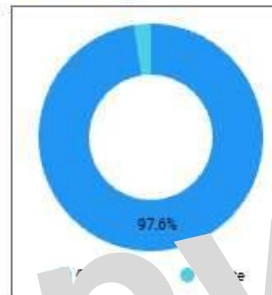
States
30



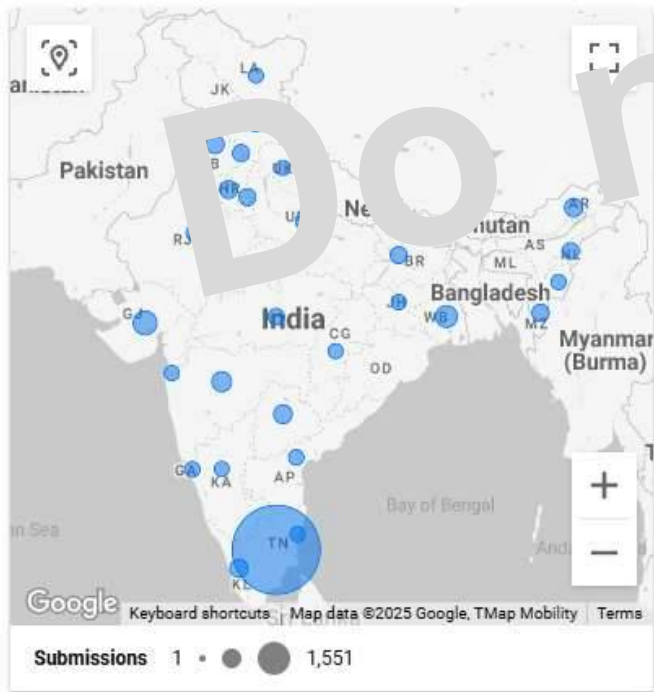
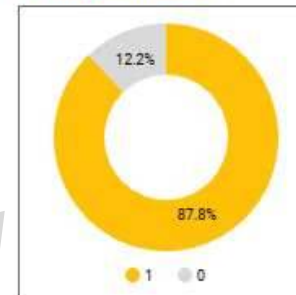
Health Facility Level



Ownership

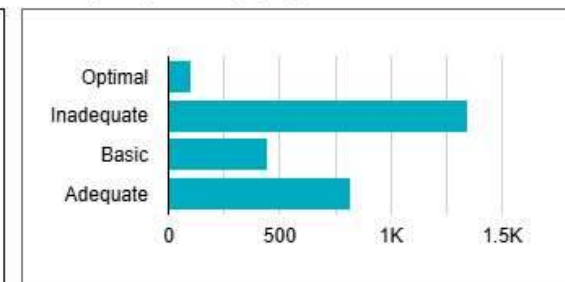
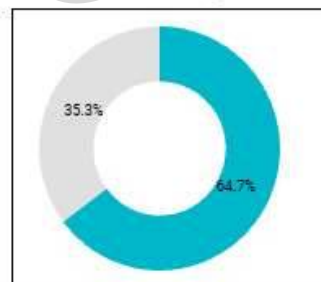
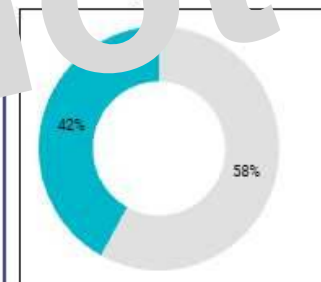


Heat prone area



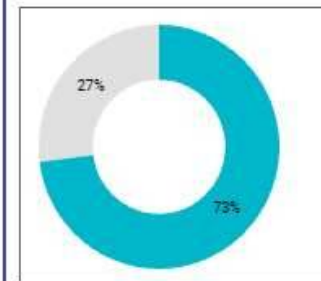
Health facility preparedness

Compliance with body temperature guidelines
Body temperature meter
Body temperature taken as guidelines
Emergency cooling preparedness

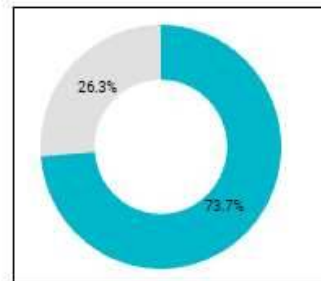


Health professionals trained (>30%)

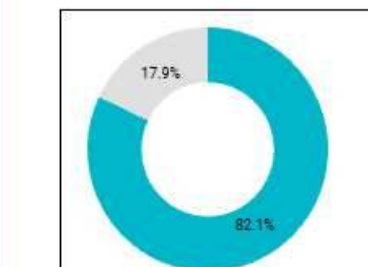
Clinical management



Surveillance reporting



General awareness activities



Multisectoral Coordination



State Multisectoral Taskforce meeting on Heat, Manipur, 2022



District Multisectoral Taskforce meeting on Heat, YSR District, Andhra Pradesh, 2024



District Multisectoral Taskforce meeting on Heat, Ambedkar Nagar, Uttar Pradesh, 2024



Heat preparedness review meeting, NDMA, 2025

Low Carbon and Climate Resilient Measures

- Heat resilient paint – cool roof
- Ventilation
- Solar panels for self sufficiency in energy
- Rainwater harvesting for self sufficiency in water



Rainwater Harvesting in UPHC-4, Bhubaneswar, Odisha

Thank You

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