# HEAT WAVE ACTION PLAN 2024–2025

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**JAMMU & KASHMIR** 



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### FOREWORD

It is with a sense of urgency and purpose that we present this Heatwave Action Plan for Rajouri District. Born out of a collective commitment to safeguarding the well-being of our community, this plan represents a milestone in our journey towards resilience and adaptation in the face of climate change.

Recognizing the importance of proactive disaster management in an evolving climate, this plan outlines our concreted efforts, organizational framework and swift response mechanisms under the guidance of the District Administration.

While policy decision originate from higher Divisions, it is our responsibility to translate them into actionable measures. This plan serves as a blueprint for mitigating the impact of heat waves, drawing from our collective experiences and striving for rapid restoration of normalcy.

We extend our gratitude for the invaluable support and input from stakeholders and we welcome further collaboration to enhance our resilience and ensure community safety amidst extreme heat events. Together let us forge ahead towards a safer and more resilient future.

Om Prakash Bhagat, (JKAS) Deputy Commissioner Rajouri

### PREFACE

As the sun beats down relentlessly, we find ourselves grappling with a pressing challenge: the heatwave. In recent years, the frequency and intensity of extreme heat events have risen, posing significant risks to the health, well-being, and livelihoods of our community. In response to this growing threat, we present the Heatwave Action Plan—a comprehensive strategy crafted to enhance resilience, mitigate risks, and foster adaptation in the face of extreme heat.

This action plan is the culmination of extensive research, collaboration, and stakeholder engagement. We have drawn upon scientific expertise, local knowledge, and global best practices to develop a framework that addresses the multifaceted dimensions of the heatwave phenomenon. From the identification of heat-vulnerable populations to the implementation of early warning systems, each component of this plan is meticulously designed to protect the most vulnerable among us and build a more resilient community.

Central to our approach is a commitment to inclusivity and equity. We recognize that the impacts of the heatwave are not evenly distributed, with marginalized communities often bearing the brunt of its effects. As such, this action plan prioritizes targeted interventions and support for those most in need, ensuring that no one is left behind in our pursuit of resilience.

As we embark on this journey, we do so with a sense of urgency and purpose. The threat posed by the heatwave is not abstract; it is a reality that demands our immediate attention and action. Yet, within this challenge lies an opportunity—to come together as a community, to innovate, and to build a future that is resilient to the impacts of climate change.

I extend my deepest gratitude to all those who have contributed to the development of this Heatwave Action Plan. Your dedication, expertise, and unwavering commitment to the well-being of our community have been instrumental in shaping this document. May it serve as a guiding light in our collective efforts to build a more sustainable, equitable, and resilient future for our community.

> Heat Wave Action Plan, 2024-2025 April 2024 Issued By: DDMA Rajouri

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#### **CHAPTER I**

#### **INTRODUCTION TO HEAT WAVES**

#### **1.1 INTRODUCTION**

Across the globe, hot days are getting hotter and more frequent, while we're experiencing fewer cold days. Heat Wave is also called a "silent disaster" as it develops slowly and kills and injures humans and animals worldwide. Higher daily peak temperatures of longer duration and more intense heat waves are becoming increasingly frequent globally due to climate change. Heat Waves typically occur between March to June, and in some rare cases even extend till July. In July 2023, Earth broke or tied its record for the hottest day on record, four days in a row. As per the annual Global Climate Report 2023, the year 2023 was the warmest year since global records began in 1850 at 1.18°C (2.12°F) above the 20th century average of 13.9°C (57.0°F). This value is 0.15°C (0.27°F) more than the previous record set in 2016. The 10 warmest years in the 174-year record have all occurred during the last decade (2014-2023). Of note, the year 2005, which was the first year to set a new global temperature record in the 21st century, is now the 12th-warmest year on record. The year 2010, which had surpassed 2005 at the time, now ranks as the 11th-warmest year on record. Heat Wave Action Plan is a Plan intended to provide a framework for the implementation, coordination, and evaluation of extreme heat response activities in the State that reduce the negative health impacts of extreme heat. The Plan's primary objective is to alert those populations most at risk of heat-related illness that extreme heat conditions either exist or are imminent, and to take appropriate precautions.

#### **1.2 DEFINITION**

Heat wave is a condition of air temperature which becomes fatal to human body when exposed. Quantitatively, it is defined based on the temperature thresholds over a region in terms of actual temperature or its departure from normal. In certain countries it is defined in term of the heat index based on temperature and humidity or based on extreme percentile of the temperatures. The World Meteorological Organization defines a heat wave as five or more consecutive days during which the daily maximum temperature exceeds the average maximum temperature by five degrees Celsius. If the maximum temperature of any place continues to be more than 45°C consecutively for two days, it is called a heat wave condition. Different countries define heat wave differently in context of their local conditions. In India, as per Indian Meteorological Department (IMD) classification, heat wave is considered if maximum temperature of a station reaches at least 40°C or more for plains, 37°C or more for coastal stations and at least 30°C or more for hilly regions. Following criteria are used to declare a heat wave:

Situation	Normal Temperature	Heat Wave	Moderate Heat Wave	Severe Heat Wave
	If normal	Any increase from	+ (5 or 6) ° C :	+7° C or more:
	temperature	the normal	Moderate Heat	Severe Heat
	is <b>&lt; 40° C.</b>	temperature is called	Wave/Heat Wave	Wave Day
		a Heat Wave.	Days (HWD)	(SHWD)
II	If normal	Any increase from	+ (3 or 4) ° C:	+5° C or more:
	temperature	the normal	Moderate Heat	Severe Heat
	is <b>≥ 40° C</b> .	temperature is	Wave (or	Wave Day
		called Heat Wave.	HWD)	(SHWD)
	If the maximum temperature of any place continues to be $45^{\circ}$ C consecutively for two days, it is also called a Heat Wave condition or HWD.			

#### Figure 1: Criteria for Heat Wave

Source: Indian Meteorological Department

**Warm Night** is declared if actual maximum temperature of a station is more than or equal to  $40^{\circ}$ C and minimum temperature departure is more than or equal to  $5^{\circ}$ 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.

#### **1.3 VULNERABILITY – THREAT POSE BY EXTREME HEAT**

Extreme heat can increase the risk of other types of disasters. Heat can exacerbate drought and hot, dry conditions can in turn create wildfire conditions. Buildings, roads, and infrastructure absorb heat, leading to temperatures that can be 1 to 7 degrees hotter in urban areas than outlying areas. This impact is most intense during the day, but the slow release of heat from the infrastructure overnight can keep cities much hotter than surrounding areas. Rising temperatures across district pose a threat to people, ecosystems, and the economy. Moreover the combination of exceptional heat stress and a predominantly rural population makes the cities vulnerable to Heat Waves. Vegetable vendors, auto repair mechanics, cab drivers, construction workers, police personnel, road side kiosk operators and mostly weaker sections of the society have to work in the extreme heat to make their ends meet and are extremely vulnerable to the adverse impacts of Heat Waves such as dehydration, heat and sun strokes. Homeless and elderly are also vulnerable for heat wave.

#### a. Impact on Human Heath Life, Livelihood, Agricultural and Livestock

Extreme heat is one of the leading causes of weather-related deaths. Heat stress occurs in humans when the body is unable to cool itself effectively. Normally, the body can cool itself through sweating, but when humidity is high, sweat will not evaporate as quickly, potentially leading to heat stroke. High humidity and elevated night time temperatures are likely key ingredients in causing heat-related illness and mortality. When there's no break from the heat at night, it can cause discomfort and lead to health problems, especially for those who lack access to cooling, which are often people who have low incomes. Other

groups that are particularly vulnerable to heat stress include older adults, infants and children, people with chronic health conditions, and outdoor workers.

Hot days are also associated with increases in heat-related illnesses, including cardiovascular and respiratory complications and kidney disease. In extreme temperatures, air quality is also affected. Hot and sunny days can increase the production of ground-level ozone, a harmful pollutant that is the main component of smog, which can damage the respiratory system and is particularly harmful for those with asthma. In addition, greater use of air conditioning requires more electricity which, depending on the electricity source, emits other types of pollution, including particulates that have an impact on air quality too. These increases in ozone and particulate matter can pose serious risks to people, particularly the same vulnerable groups directly impacted by heat mentioned above.

#### b. Impact on Agriculture and Livestock

Apart from impact on human life, the Heat Wave has also been found to profoundly affect crop production both in terms of quantity and quality. High temperatures can be damaging to agriculture. Plant growth is negatively impacted by high day time temperatures and some crops require cool night temperatures. Heat waves can exacerbate droughts and wildfires, which can lead to negative impacts on the agriculture sector.

Similar to humans, high temperatures can negatively impact livestock, leading to declines in milk production, slower growth, and reduced conception rates. High relative humidity and little wind exacerbate this issue. Animals struggle to offload excess heat through transpiration and evaporation, causing increased salivation and unmanageable body temperature. This makes it difficult to bring animals down with ice packs.

#### c. Impact on Energy

Warmer temperatures affect many aspects of the energy system, including production, transmission, and demand. While higher summer temperatures increase electricity demand for cooling, at the same time, they can lower the ability of transmission lines to carry power, possibly leading to electricity reliability issues like rolling blackouts during heat waves. In addition, warming rivers and lakes reduce waste heat absorption, reducing thermal efficiency and potential plant shutdowns.

#### **1.4 HEAT WAVE ACTION PLAN (HWAP)**

In view of the above, there is a need to a holistic Heat Wave Action/Response Plan (HWAP) for district Rajouri in order to make it more specific and strategic.

#### a. Aim of the HWAP

Rajouri District Disaster Management Authority is the primary agency with responsibility for the hazard of Heat Wave in the district. The purpose of the Heat Wave

Action Plan (HWAP) is to outline the arrangements for the management of Heat Waves in district Rajouri across preparedness, response and recovery. The aim of this plan is to enable the district to mitigate the effects of, prepare for, respond to, and recover from heat waves.

#### b. Necessity of HWAP

A coordinated multi-agency approach is needed to effectively manage heat waves in the district, requiring clear roles, responsibilities, strategic monitoring, and clear triggers for activation and data sharing and analysis of the extreme heat impacts across the community.

#### c. Objectives of HWAP

- The HWAP aims to provide a framework for implementation, coordination and evaluation of extreme heat response activities in cities/towns/panchayats that reduce the negative impact of extreme heat.
- The primary objective is to alert those at risk of heat-related illness in places where extreme heat conditions either exist or are imminent, and to take appropriate precautions.
- The Plan also calls for preparedness measures to protect livestock/animals as extreme heat causes significant stress to them as well.
- The HWAP is intended to mobilize departments and communities against avoidable health problems during spells of very hot weather.
- The Plan also intends to help early warning agencies as well as the media, taking all administrative/preventive actions that need to be taken by multiple agencies.

#### d. Goals of HWAP

- Identifying vulnerable populations and creating heat preparedness plans with all residents in mind, that may include steps like opening cooling centers during periods of extreme heat and adopting workplace heat stress standards.
- Installing cool and green roofs and cool pavement to reduce the urban heat.
- Planting trees to provide shade and to cool the air through evapotranspiration.
- Pursuing energy efficiency to reduce demand on the electricity grid, especially during heat waves.
- The climate mapping for resilience and adaptation portals to help communities understand and plan for their climate risks today and in the future, including a real-time map of wildfire, drought, flooding, and extreme heat across the district.

#### **1.5 KEY STRATEGIES**

Government agencies will have a critical role to play in preparing and responding to Heat Waves at a local level, working closely with health and other related departments on long term strategic plan.

- Establish Early Warning System and Inter-Agency Coordination to alert residents on predicted high and extreme temperatures. Who will do what, when, and how is made clear to individuals and units of key departments, especially for health.
- **Capacity building/Training Programme** for health care professionals at local level to recognize and respond to heat-related illnesses, particularly during extreme heat events. These training programmes should focus on medical officers, paramedical staff and community health staff so that they can effectively prevent and manage heat-related medical issues to reduce mortality and morbidity.
- **Public Awareness and Community Outreach** for disseminating public awareness messages on how to protect against the extreme heat-wave through print, electronic and social media and Information, Education and Communication (IEC) materials such as pamphlets, posters and advertisements and Television Commercials (TVCs) on Do's and Don'ts and treatment measures for heat related illnesses.
- Collaboration with NGOs and Civil Society to improve bus stands, building temporary shelters, wherever necessary, improved water delivery systems in public areas and other innovative measures to tackle Heat wave conditions.

#### **CHAPTER II**

#### **DISTRICT RAJOURI - AT A GLANCE**

#### 2.1 GENERAL PROFILE OF DISTRICT

District Rajouri is located at a distance of 150 KM North West of the winter Capital Jammu in the foot hills of Pir Panchal ranges with the line of control passing through the South Western side of the District. Rajouri District had been part of Poonch district prior to 1967. On 22nd September 1967, Government bifurcated district Poonch into two districts namely 'Rajouri' and 'Poonch', to facilitate the process of development and better supervision of economic activities in this area. By this way, Rajouri emerged as a District from 1st January 1968. The District has an area of 2630 Sq. Kms. with peculiar physical features. The District is situated in the west of Jammu Division and is surrounded by the Poonch, Reasi and Jammu Districts. The District comprises of 13 Tehsils and 19 Blocks.

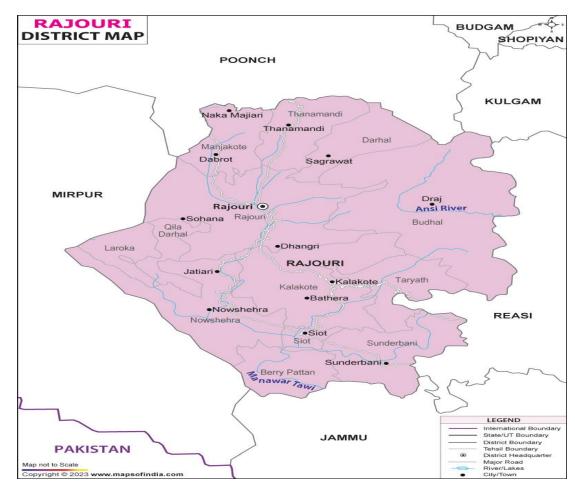


Figure 2. Map of Rajouri District

#### 2.2 HAZARD PROFILE OF DISTRICT

Rajouri has several bio-geographic, hydro-meteorological and agro-climatic zones and it is vulnerable to multiple natural hazards as well as was disaster. Rajouri occupies a strategic position in Jammu and Kashmir with Line of Control touching Pakistan all along the

west and south-west border. The climate of the district differs from region to region on account of variations in its geography. The area has different weather conditions of different places because of the lofty mountains that check the moisture-laden winds from entering the district. Extreme heat can further create the conditions for drought and can exacerbate the impacts of drought by putting additional stress on available water supplies. Extreme heat can also lead to increased storm activity, which is linked to both high wind and flash flood hazards. It can also contribute to the spread of wildfires.

Type of Hazard	Time of Occurrence	Potential Impact	Vulnerable Areas
Flood	July - September	Loss of crops, infrastructure, humans and bovine life. Livelihood system, houses,private public property etc.	Any place of the District
Drought	April-June	Loss of crops and Livelihood system.	Any place of the District
Earthquake	Any time	Loss of property and life.	Complete District.
Fire	Any time	Loss of property and life.	Any place of the District.
Accident	Any time	Loss of assets and life.	Any place of the District.
Lightning	Any time	Loss of assets and life.	Any place of the District.
Heat Wave	April- September	Loss of Life, Crops and Livelihood system.	Any place of the District.

#### Table No. 1 Risk Assessment Profile of Rajouri District

#### 2.3 DISTRICT RAJOURI MINIMUM AND MAXIMUM TEMPERATURES

Minimum and maximum temperatures are the two extreme points of temperature in a given place during a specific period. These temperatures are significant factors in determining the climatic conditions of a particular location. Maximum and minimum temperatures are used to predict heat waves and cold spells, which can have a significant impact on human health. Following table shows the min. and max. temperature of district Rajouri (March-June) for the year 2023 and 2024 for the better analysis of Heat Wave conditions.

Sr. No.	Year	Month	Minimum Temperature	Maximum Temperature
1.	2023	March	3°C	23°C
		April	3°C	28°C
		May	6°C	30°C
		June	10°C	35°C

 Table 2. Minimum and Maximum Temperature of Rajouri District (March-June)

2.	2024	March	-2°C	31°C
		April	11°C	31°C
		May	15°C	34°C
		June	15°C	39°C

Source: Accuweather Weather Forecast

#### **2.4 VULNERABLE HOTSPOTS**

Based on the analysis of minimum and maximum temperatures of 2023 and 2024 weather predictions, Tehsil Sunderbani and Tehsil Nowshera, can be the vulnerable hotspots during the Heat Wave as the maximum temperature recorded is 40°C and 41°C respectively.

#### 2.5 TEHSIL PROFILE OF DISTRICT

At present, the District comprises 5 Sub-Divisons, 13 Tehsils and 19 Blocks. Following table shows the preliminary Tehsil profile of District Rajouri.

Sr. No	Name of Tehsil	Name of Tehsildar	Official Email	Contact No.
1.	Rajouri	Sh. Virender Kumar (CPIO)	tehsildarrajouri@gmail.com	94192850 55
2.	Manjakote	Smt. Jazia Kazmi (JKAS)	<u>tehsildarmanjakote@gmail.co</u> m	70065531 67
3.	Thannamand i	Sh. Sayed Mazhar Ali Jafri (JKAS)	tehsildarthannamandi@gmail.c om	70064477 57
4.	Darhal	Sh.Ram Pal	tehsildardarhal@gmail.com	70065412 04
5.	Koteranka	Sh. Sayed Sahil Ali (JKAS)	tehsildarkoteranka@gmail.com	94192354 54
6.	Khawas	Sh. Sohan Lal Rana	tehsildarkhawas@gmail.com	70063372 89
7.	Kalakote	Sh. Manik Singh Rathore	tehsildarkalakote84@gmail.co m	94191190 33
8.	Taryath	Smt. Kashyap Neha Pandit (JKAS)	<u>tehsildarteryath004@gmail.co</u> m	60057328 46
9.	Nowshera	Sh. Ram Pal Sharma	tehsildarnowshera@gmail.com	95967138 09
10.	Qila Darhal	Sh. Jahangir Hussain	giladarhaltehsildar@gmail.com	97975810 00
11.	Sunderbani	Sh. Diljeet Singh Parihar	tehsildarsunderbani123@gmail .com	94191549 63
12.	Beripattan	Sh. Zaheer Rana		80821329 31

Table 3. Tehsil Profile District Rajouri

13.	Siot	Sh. Diljeet Singh	 94191549
		Parihar (Add.Charge)	63

#### 2.6 RAJOURI DISTRICT DISASTER MANAGEMENT AUTHORITY

According to the DM Act, 2005, in collaboration with the Divisional Disaster Management Authority, the District Disaster Management Authority (DDMA) serves as the planning, organizing, and executing body for disaster management at the district level, and shall take all appropriate steps for disaster management.

Sr. Name Designation Name Contact No.					<u>,</u>
No.		Designation		Office	Mobile
1.	Deputy Commissioner	Chairman	Sh. Om	01962-	941952030
			Prakash Bhagat	262244	2
			(JKAS)		
2.	Senior Superintendent	Member	Sh. Amritpal	01962-	954190072
	of Police		Singh (IPS)	262240	1
3.	Additional Deputy	CEO	Sh. Rajeev	01962-	959670137
	Commissioner		Kumar	264482	9
			Khajuria		
			(JKAS)		
4.	Chief Medical Officer	Member	Dr. Rajinder	01962-	941918440
			Kumar	262640	4
5.	Superintending	Member	Sh. Devi Dayal	01962-	941913924
	Engineering PWD			264040	4
	(R&B)				
6.	Assistant Director CA	Member	Sh. Rohit	01962-	990615957
	& PD		Kumar	263419	7
7.	Assistant Regional	Member	Sh. Pawan	01962-	941919010
	Transport Officer		Kumar	264548	1
8.	AD Fire & Emergency	Member	Sh. Himanshu		700686002
	Services		Gandotra		6
9.	Executive Officer MC	Member	Sh. Yousaf		705106177
	Rajouri		Bhatt		0
10.		Member	Sh. Varinder	01962-	941928505
	3		Kumar	263223	5
11.	Superintendin	Member	Sh. Bram Jyoti	01962-	941919774
	g Engineering			263219	8
	(I&FC)				

#### Table No. 4 Rajouri District Disaster Management Authority

#### 2.7 TEHSIL/BLOCK DISASTER MANAGEMENT COMMITTEE

For the effective coordination, enforcement and implementation of disaster management plans, policies and guidelines at the Tehsil level following table shows the composition of Tehsil Level Disaster Management Committee IN District Rajouri.

#### Table No. 5 Composition of Tehsil Disaster Management Committee

Sr. No.	Official Members	Non-Official Members
1.	Tehsildar concerned	Elected Representative of the District/Hon'ble MLAs/MLCs
2.	BDO concerned	Chief Warden Civil Defense.
3.	SHO concerned	At least three prominent citizens of the District
4.	AEE R&B/PHE/Irrigation/PDD concerned	
5.	Tehsil Supply Officer CA&PD concerned	
6.	Executive Officer MC concerned	

#### CHAPTER III

# EARLY WARNING AND COMMUNICATION 3.1 INTRODUCTION

A warning system aims to empower individuals and communities to respond promptly and appropriately to hazards, reducing the risk of death, injury, property loss, and damage. To effectively communicate warnings and encourage action, measures should include extending lead time of warning, improving accuracy, increasing demand for probabilistic forecasts, improving communication using new technologies, targeting services to relevant users (right information to right people at right time at the right place) and understanding warning messages.

#### 3.2 FORECASTING AND ISSUANCE OF HEAT WAVE ALERT/WARNING

The India Meteorological Department is mandated to meteorological observations and provides current and forecast meteorological information for optimum operation of weathersensitive activities. It provides real time data and weather prediction of maximum temperature, Heat-Wave warning, heat-alert for the vulnerable cities/rural area of the severity and frequency. IMD provides following range and validity of time forecast:

#### Figure 3. Temperature Forecast: Specific Range, Time Duration and Area

Now Casting: (Lead time/validity of 3 to 6 hours)	Short Range: (Lead time/validity of 1 to 3 days)	Medium Range: (Lead time/validity of 4 to 10 days)	Long Range: (Lead beyond 10 days)	Local range:(Its intensity,frequency and time of occurrence is
				indicated)

#### 3.3 IDENTIFICATION OF COLOR SIGNALS FOR HEAT ALERT

The heat alerts based on thresholds determined by the IMD using the following color signal system shall be issued:

	0		8			
Red Alert (	Severe (	Condition)	Extreme Heat Alert for the	Normal	Maximu	ım Temp
			Day	increase	6° C to mo	re
Orange	Alert	(Moderate	Heat Alert Day	Normal	Maximu	ım Temp
Condition)				increase 4	4° C to 5° (	<u> </u>
Yellow	Alert	(Heat-wave	Hot Day	Nearby	Normal	Maximum
Warning)				Temp.		
White (Nor	rmal)		Normal Day	Below	Normal	Maximum
			-	Temp.		

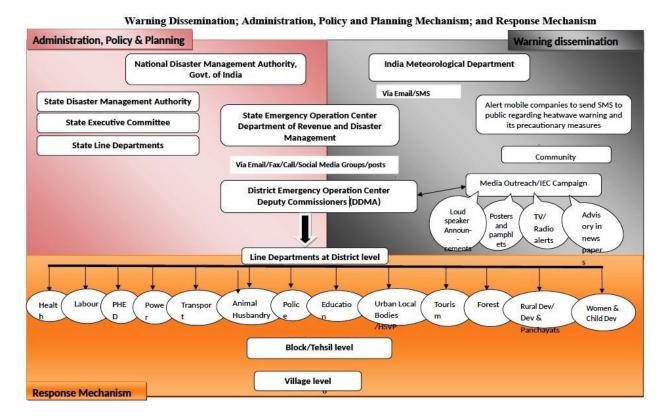
El anno /	Calan	Cianala	for II och	Warra Alant
FIGHTE 4.	COLOR	SIGUAIS	IOF HEAL	Wave Alert
I ISUIC II	COIOI	<b>DISHUD</b>	IOI HICUU	······································

Impact & action suggested by NDMA Guideline on heat wave-2019

#### 3.4 WARNING DISSEMINATION & ADMINISTRATION

Heat Wave forecast is transmitted to Divisional Commissioners, District Commissioners and all other concerned authorities through email by State Control Room for alertness and preparedness for action. The warning is further transmitted to SSP, ADC/ADM, SP, SDMs, Tehsildars and all the heads of line departments through mass text and image message in the WhatsApp group. Department of Public Information and Public Relation disseminate of heat alerts/advisories, DOs and DONTs to various district as well as local level newspapers and other electronic media. A chart showing Warning Dissemination; Administration, Policy and Planning Mechanism; and Response Mechanism regarding Heat Wave in the State are at Figure 4.

## Figure 5. Warning Dissemination, Administration, Policy & Planning and Response Mechanism.



#### **CHAPTER IV**

#### **INSTITUTIONAL MECHANISM - ROLES & RESPONSIBILTIES**

#### 4.1 HEAT WAVE ACTION PLAN – INSTITUTIONAL MECHANISM

Heat Wave Action Plan is a framework for implementation, coordination and evaluation of extreme heat response activities. It defines the roles and responsibilities of departments concerned observing multi-sectoral and multi-dimensional administrative approach. The DDMA has the responsibility for overall management of disasters in the district, with the Chairman-cum-Deputy Commissioner mobilizing response machinery and financial powers. Deputy Commissioner oversees the cooperation of all stakeholder participation. Empowerment and capacity building of all the stakeholders should be the main priorities of DDMA/District administration.

The heat wave mitigation measures involve a multi-sectoral approach, including provision of drinking water, temporary shelter, rescheduling working hours, and improved emergency medical services. This action plan provides a framework for Departments/Authorities to implement, coordinate, and evaluate activities to reduce the detrimental effects of intense Heat Waves in the District Rajouri. In light of the aforementioned, the following departments have been designated, and their roles have been assigned, in order to ensure that Heat Wave is managed effectively in the District:

Sr.	Dist	rict Agencies and their Role/Responsibilities
No.	Agencies	Role/Responsibilities
1.	District Administration /DDMA	<ul> <li>Preparation/revision of Heat Wave Action Plan based on NDMA revised guidelines and localexperiences.</li> <li>Coordination among all stakeholders with clearly defined roles and responsibilities.</li> <li>Real-time surveillance and evaluation of weather situation.</li> <li>To disseminate the information received from IMD to the public atlarge.</li> <li>Disseminate the heat-health warning, determine the threshold for action and communicate the risks.</li> <li>Prepare SoP for heat wave response based on forecast and Weather Prediction</li> <li>Flexible timing of market and offices.</li> <li>Collaboration with non-governmentand civil society.</li> <li>Special care for vulnerable groups- children, disabled, women and old aged.</li> <li>Take necessary measures, wherever applicable.</li> </ul>
2.	PRIs/ULBs	<ul> <li>Appointment of Nodal Officer at each level (district, tehsil and block, department etc.)</li> <li>Implementation of Heat Wave Action Plan.</li> </ul>

#### Table 6. District Agencies and their Role/Responsibilities

Department of• Promote short duration and heatresisting crops.	3.	Department of Health	<ul> <li>Heat wave should be included inannual disaster training calendar.</li> <li>Open parks/open areas during daytime for providing spaces with shade.</li> <li>Sprinkling of water on roads.</li> <li>Construct shelters, sheds at public places, provide access to public parks during heat wave season.</li> <li>Promote cool roofs initiative such as paint roof white, create greenroofs and walls, and plant trees in neighborhood to keep them cool.</li> <li>Reviewing preparedness &amp; mitigation measures.</li> <li>Implementation of instruction for mainstreaming heat health precautionary measures, including re-scheduling of working hours in all schemes and programmes.</li> <li>Ensure shed for resting and drinkingwater facilities for workers at all work places.</li> <li>Inter district collaboration for sharing experiences and data.</li> <li>Prepare hospital preparedness plans</li> <li>Dissemination of heat wave health plan by organizing awarenesscampaigns.</li> <li>Undertake orientation/training and issue alerts to village level functionaries.</li> <li>Adopt heat focused examination procedures at local hospitals.</li> <li>Deploy additional staff to take care of persons affected due to sunstroke.</li> <li>Activate Emergency services and keep sufficient stock of ORS and glucose etc. in all hospitals or dispensaries.</li> <li>Adopt a uniform process for registration of causalities or deaths due to heat wave.</li> <li>Standard protocol for death investigation.</li> <li>Establish a data monitoring cell and collect data from tehsils and maintain district level data base.</li> <li>Preparedness of the heat health facilities with adequate provision of basic medicines.</li> <li>Dissemination of heat wave health plan by organizing awareness campaigns.</li> <li>Develop monitoring mechanism for implementation of heat wave action plan.</li> <li>Provision of funds for heat action mitigation plans.</li> </ul>
<ul> <li>Agriculture/ Horticulture</li> <li>Promote sprinkler irrigation during the evening and early morning.</li> <li>Police Department</li> <li>Ensure shade for on duty traffic police, as they are more</li> </ul>		Agriculture/ Horticulture	• Promote sprinkler irrigation during the evening and early morning.

		exposed to heat wave and distribution of cool jackets for traffic police personals.
5.	Department of PHE	<ul> <li>Ensure drinking water facilities at all common places.</li> <li>Identify vulnerable places and ensure drinking water facilities.</li> <li>Repair/maintenance of mechanical faults of tube wells, ponds at priority basis to ensure water storage.</li> <li>Suitable arrangement for drinking water supply and promptly respond to water scarcity.</li> </ul>
6.	Department of School Education/Higher Education	<ul> <li>Rescheduling of school timing and vacation as per heat wave situation.</li> <li>Ensuring cool places for all educational institutions, and availability of water facilities.</li> <li>Ensure that students avoid outdoor physical activities during the summer in schools.</li> <li>Heat wave management should be added in school curriculum to sensitize school children and local people.</li> <li>Encourage research on heat wave related issue through universities/colleges.</li> <li>Develop training module and conduct proper training program for different stakeholders.</li> <li>Heat wave management should be added in school curriculum to sensitize school children and local people.</li> <li>Conduct capacity building and training program as per domain andexpertise of department.</li> </ul>
7.	Department of PWD/ Roads & Building	<ul> <li>Long term planning for heat resilience infrastructure.</li> <li>Promote cool roofs technology and use other similar heat reducing technology.</li> <li>Ensure implementation of mixed- use planning adopted in heat wave affected cities/towns.</li> <li>Heat appropriate planning of new buildings (consideration, e.g., in architecture, width/height ratio, street development, orientation and site) in urban and rural areas.</li> <li>Ensure capacity building of structural engineers, civil engineers and architects for construction of green buildings, maintenance andfire safety of the structures.</li> <li>Ensure to construction of green buildings, environment and building code related to heat wave risk mitigation.</li> <li>Ensure implementations of latest Building Code for the construction.</li> </ul>
8.	Department of Information and Public Relation	<ul> <li>IEC Campaign to create awareness through print media, electronic media, social media, etc.</li> <li>Display board with color coding for heat wave alert.</li> <li>Display Do's and Don'ts in the Public Areas, Hospitals, Parks, etc.</li> <li>Develop of mobile application for faster spread of heat related issues, alertness, space for shelters and drinking</li> </ul>

		water.
9.	Department of Forest	<ul> <li>Ensure proper afforestation and mass plantation at public places.</li> <li>Promote rain water harvesting.</li> <li>Continuous watch in the forest area to avoid forest fires.</li> <li>Provide safety drinking water and shade in forest areas.</li> <li>Maintain water bodies/ponds in the forest area for wild animals and birds.</li> <li>Increase forest coverage and greenarea.</li> <li>Coordinate with Transport Department and Road Construction Department for plantation of trees along roadside, barren land and other areas.</li> <li>Identify "heat hot-spots" using framework for tracking based on IMD data.</li> </ul>
10.	Department of Tourism	<ul> <li>Ensure proper registration of tourists who are visiting the State/UT/District.</li> <li>Publicize advisories for tourists on Heat Wave conditions in the State/UT/District.</li> <li>Build temporary shaded areas and ensure availability of safe drinking water for pilgrims at religious places.</li> </ul>
11.	Department of Railways	<ul> <li>Repair/maintenance of mechanical/electrical system on priority basisincluding fan and cooling system.</li> <li>Ensure drinking water facilities in trains and railway stations.</li> </ul>
12.	Department of Transportation	<ul> <li>To ensure shelter/sheds at bus stops, drinking water facilities at busstops.</li> <li>Enable better emergency transport system for affected people to health care facilities with adequate essential equipments.</li> </ul>
13.	Department of PDD	<ul> <li>Create awareness among people on energy conservation.</li> <li>Ensure repair &amp; maintenance work for uninterrupted power supply before and during the summer.</li> <li>Re-scheduling load shedding.</li> </ul>
14.	Department of Animal Husbandry	<ul> <li>Follow the advisory on heat wave.</li> <li>Shelter for livestock and animal husbandry should be maintained.</li> <li>Pre-positioning of adequate veterinary medicines and supplies.</li> <li>Update contingency plan regarding provision of drinking water for animals.</li> <li>Awareness on the impact of heat on animals and coping mechanisms.</li> </ul>
15.	Department of Labour/Social Welfare	<ul> <li>Training with construction/industries/commercial entities regarding Heat Wave related illness.</li> <li>Implement the directions for heat wave season.</li> <li>Re-scheduling of working hours for employees in different sectors.</li> </ul>

		<ul> <li>Ensure drinking water facilities at work places.</li> <li>Coordinate with Health Department and ensure regular health check-up of the workers and provide emergency ice packs and heat illness prevention material to construction workers.</li> <li>Awareness activities for construction workers, factory laborers, manual laborers and workers whose occupations require intensive work outdoors during extreme heat about the risks, signs, and symptoms of heat stress</li> </ul>
16.	Department of Science & Technology	<ul> <li>To develop application related to awareness generation, quick information sharing on the Heat Wave Risk Reduction.</li> <li>Research &amp; development activities to promote utilization of science &amp; technology in the field of Heat Wave Risk Reduction.</li> <li>Promote research on Heat Wave related issues.</li> </ul>
17.	Civil Society/NGOs/ Corporate Social Sector	<ul> <li>To support the government departments in generating awareness in community.</li> <li>Coordinate with government for implementing the Heat Wave managementmeasures.</li> <li>Support in setting up water kiosks on highways, remote places etc.</li> <li>Distribute IEC materials duly accredited by the State Government.</li> <li>Promote healthy living style during summer.</li> </ul>
18.	Department of Election Cell	<ul> <li>Coordination with relevant departments and stakeholders to integrate heat wave management into election preparations.</li> <li>Ensure that polling stations have adequate shading and water facilities for voters and polling staff.</li> <li>Coordinate with local authorities to adjust polling hours if necessary to mitigate the impact of extreme heat on voters and election staff.</li> <li>Collaborate with the Department of Information and Public Relations to disseminate information about voting procedures and safety measures during the heat wave.</li> <li>Monitor the health and well-being of election officials and workers, providing necessary support and resources to prevent heat-related illnesses.</li> <li>Implement contingency plans to address any disruptions caused by the heat wave on polling day.</li> <li>Work closely with the Department of Health to ensure that medical support is available at polling stations and election offices.</li> </ul>

#### 4.2 NODAL OFFICERS FOR THE IMPLEMENTATION OF HWAP 2024-25

The Nodal Officer at both District and Block Levels is the responsible authority for the implementation of the Health Action Plan at their respective level. This authority will serve as a point of coordination and communication, to implement relevant measures before, during, and after the extreme heat season.

	DISTRICT LEVEL NODAL OFFICER				
S.No.	Name of the Officer	Designation	Mobile No.		
1	Sh.Shrez Ahmed	Assistant Commissioner Panchyat	8492013266		
	BLO	CK LEVEL NODAL OFFICERS			
1	Sh.Khadam Hussain Shah	BDO Budhal	7051302538		
2	Sh.Ayaz Ahmed Bhat	BDO Rajnagar	9797512151		
3	Sh. Madan Mohan	BDO Dangri	9419154419		
4	Sh.Khalil Ahmed	BDO Darhal	9419155972		
5	Sh.Rakesh Thapa	BDO Doongi	9419789944		
6	Sh.Mohd Ibrahim	BDO Kalalote	9697532815		
7	Sh.Khadam Hussain Shah	BDO Khawas	7051378922		
8	Sh. Naveel Hamdani	BDO Lamberi (Addl. Charge)	9419107768		
9	Sh.Madan Mohan	BDO Manjakote (Addl. Charge)	9419154419		
10	Sh.Mohd Ibrahim	BDO Moughla (Addl. Charge)	9697532815		
11	Sh.Naveel Hamdani	BDO Npwshera	9419107768		
12	Sh.Pradeep Kumar	BDO Pnjgrain (Addl. Charge)	6006458311		
13	Sh.Sheikh Wajid Ahmed	BDO Planger	9910061323		
14	Sh.Rakesh Thapa	BDO Qila Darhal (Addl.Charge)	9419789944		
15	Sh.Pradeep Kumar	BDO Rajouri	6006458311		
16	Sh.Naveel Hamdani	BDO Seri (Addl. Charge)	9419107768		
17	Ms.Neha Choudhary	BDO Siot	9906784614		
18	Sh.Inderjeet	BDO Sunderbani	7006965118		
19	Sh.Sheikh Wajid Ahmed	BDO Thanamandi (Addl. Charge)	9419141711		

#### Table 7. Nominated Nodal Officers for the Implementation of HWAP 2024-25

#### **ROLES & RESPONSIBILITIES OF NODAL OFFICERS**

#### Phase 1 - Pre-Heat Season (January-March)

- Convening high-level inter-agency meetings for a periodic review of the Heat Wave Action Plan.
- Area mapping to plan and execute targeted activities.
- Enlisting high-risk areas of the District/Block vulnerable to heat waves for more focused activities on heat prevention.
- Re-engaging district and local agencies to facilitate internal communications.
- Identifying the key community and non-governmental actors to facilitate the implementation of the HWAP and awareness generation activities, especially last-mile outreach.

- Organizing preventative training and outreach efforts for health workers, link workers, school children, and the local community.
- Setting up targeted distribution channels for multilingual awareness materials and IEC among different population groups.
- Establish Heat Wave Action Web Page on Disaster Management / District Website.

#### Phase 2 - During the Heat Season (March-July)

• Creating an active heat alert and appropriate local response when a heat wave event is identified by the meteorological department.

- Notifying key agency leaders and ensuring functioning communication channels with all the stakeholders.
- Modifying heat alert level in accordance with the severity of changing temperature thresholds and the latest forecast.
- Notifying relevant stakeholders when the heat alert has passed.
- Communicating locations of emergency facilities and cooling centers / shaded areas with each department /organization.
- Expanding access to shaded areas for outdoor workers, slum communities, and other vulnerable populations. For example, confirm that night shelters stay open all day for migratory populations during a heat alert.
- Conducting daily conference calls to discuss reports and breaking developments during a heat alert, and ensure that communication channels remain operational.
- Identifying and setting up public displays of temperature and forecasts, such as LED electronic scrolling boards.
- Continued surveillance of temperature data and forecasts.
- Instructing water department or local municipal department to ensure availability of staff and clean drinking water during a heat alert.
- Informing power supply, companies to prioritize maintaining power to critical facilities (such as hospitals and UHCs).
- Notify the Steering Committee and relevant agencies when the heat alert is over.

#### Phase 3 - Post-Heat Season (July-September)

- Convening annual evaluation meetings with relevant stakeholders for the review of the Health Wave Action Plan.
- Review of quantitative and qualitative data for process evaluation and improvement.
- Evaluate the reach and impact of the plan and revise accordingly. Revision of the plan is to be based on the performance feedback.
- Build on the "Green Cover" activity to establish a tree-plantation campaign in hotspot areas such as roadsides and during the plantation festival in June. Incorporate student volunteers or incentivize builders to plant trees to help this effort.

#### **CHAPTER V**

### PROPOSED TRAINING PROGRAMME - EXTREME HEAT PREVENTION & MANAGEMENT

#### 5.1 IMPORTANCE OF TRAINING PROGRAMMES

The first and very foremost important learning of the training is making the participants clearly understand the distinction between extreme heat and Heat Wave. Both of these terminologies are often used very lucidly and interchangeably but in reality, they are not the same. While all the Heat Wave events are extreme heat events, not all extreme heat events need to be a Heat Wave. It is very much possible that an event of very high-temperature day/s during summer may not satisfy the criteria for Heat Wave (if any) and can still be an extreme heat event...! What is that distinction? Why it is important? This will be explained to participants during the training programme.

The proposed training programme will also draw the attention of participants to the most important climatological and weather-related global and regional phenomenon's which are climate change and global warming. The way they are linked with each other and how they are related to extreme heat will be described. Lastly, the training programme will end with examples of some of the extreme heat and Heat Wave events of the past in India and in J&K that made a major impact in the field of extreme heat prevention and management.

#### Table 8. Proposed Training Programme Dealing with Extreme Heat Prevention &

Sr.	Training	Participants	Purpose of Training	Methodology	Timeframe
No.	Module				
1.	Institutional	Appointed	(i) To illustrate	The trainer may	March-
	Mechanisms	Nodal Officers	institutional	narrate the topic	June
	to deal with	and Line	mechanisms Heat	through a	
	extreme heat	Departments	Wave prevention	PowerPoint	
	and Heat		and management	presentation and	
	Waves.		measures at district	then engage	
			and block levels.	with	
				participants on	
				the question	
				given above at	
				the end of this	

session.

2. Awareness	Students,	(i) To illustrate the	(i) Interactive	March-
about Heat Wave Risks and Prevention	Labour Class, Farmers, Aanganwadi Centres, Vulnerable Groups	(i) To mustrate the understanding of Heat Wave Risks and Prevention. (ii) To enable them understanding the early warning alerts and community action	<ul> <li>(i) Interactive presentations tailored for student engagement.</li> <li>(ii) Group discussions and Q&amp;A sessions.</li> <li>(iii) Distribution of educational materials and resources.</li> <li>(iv) Performing mock exercises or "Nukkad Nataks" engaging Civil Defence Volunteers/</li> </ul>	June

#### **5.2 POST TRAINING EVALUATION**

The Nodal Officers appointed at district and block levels shall assess the overall effectiveness of the training. The difference between participants understanding of the subject during pre-training evaluation and during the post- training evaluation will give a fair about the aptness of topics covered in the training and the trainer's ability to efficiently delivering the subject. This will also be useful in improving the training module in the future.

idea

#### a.Objectives of the Evaluation

- □ Assess changes in participants understanding of various topics of the training.
- Check whether the topics covered are aligned with the needs of participants.
- □ To get feedback from participants and trainees on changes required in future.

### Annexure - I LIST OF KEYAPPOINTMENTS IN DISTRICT RAJOURI FOR QUICK RESPONSE

Sr. No	Name	Designation	Official Email	Contact No.
1.	Sh. Om Prakash Bhagat (JKAS)	Deputy Commissioner, Rajouri	pa.dcrajouri@gmail.com	941952030 2 01962- 262481
2.	Sh. Rajiv Kumar Khajuria (JKAS)	Additional Deputy Commissioner, Rajouri	adcrajouri112@gmail.com	959670137 9 01962- 263378
3.	Sh.Mohd Jhangir Khan (JKAS)	Assistant Commissioner Revenue, Rajouri	acrrajouri123@gmail.com	979797707 8 01962- 263369
-4.	Sh. Vijay Kumar	Assistant Commissioner Development		959683999 9
5.	Sh. Tejinder Singh (IPS)			941990210 0

6.	Ch Ameritaal	Senior		054100072
0.	Sh. Amritpal			954190072
	Singh (IPS)	Superintendent of Police		1
	Sh. Isar	Assistant	cladraj@gmail.com	959670929
	Ahmed		<u>clauraj@ginan.com</u>	939070929
		Commissioner		
	(JKAS)	(Defence)		
		Rajouri/Poonch		
_		HQ Rajouri		
5.	Sh. Babu	ADC Nowshera	nowsheraadc@gmail.com	979767026
	Ram Tandon			5
	(JKAS)			
6.	Sh. Rajiv	ADC Sunderbani	adcsunderbani@gmail.com	941929724
	Mangotra			2
	(JKAS)			
7.	Sh. Krishan	ADC Kalakote	adckalakote@gmail.com	941933382
	Lal (JKAS)			4
8.	Sh. Dil Mir	ADC Koteranka	koteranka@gmail.com	941917490
	(JKAS)			2
9.	Sh.	SDM	sdmthannamandi@gmail.com	959697979
	AbidHussain	Thannamandi		8
	(JKAS)			-
10.	Sh. Rajinder	Chief Medical		941918440
	Kumar	Officer Rajouri		4
11.	Sh. Ashwani	Executive		941919833
	Sharma	Engineer PWD		2
12.	Sh. Rashid	Executive		700624747
	Choudhary	Engineer		1
		PDD/JPDCL		
13.	Sh. Rashid	Executive		700624747
	Choudhary	Engineer Elect M		1
		&RE Division		
		Rajouri (Clubed)		
14.	Sh. Manoj	Executive		941918121
	Gupta	Engineer		4
		Mechanical		
		Division Rajouri		
15.	Sh. Mohd	Chief Planning		941967922
1 -	Maqsood	Officer		6
16.	Sh.	Assistant Director		700686002
	Himanshu	F&EM Rajouri		6
17	Gandotra	0 1 1 1 1 1 0		041010602
17.	Sh.Wakeel	Social Welfare		941919682
10	Bhat	Officer Rajouri		D
18.	Sh. Yousaf	Executive Officer		705106177
10	Bhatt	Municipality		041010010
19.	Sh. Pawan	ARTO Rajouri		941919010
20	Kumar	DEO D ' '		0(2224177
20.	Sh. Ranjeev	DFO Rajouri		962224177
	Sharma			6

21.	Sh Asrar	Executive	 979731824
	Ahmed	<b>Engineer</b> Irrigation	0
	Khan	& Flood Control	
22.	Sh. Sardar	Executive	 941922857
	Khan	Engineer PWD	2
23.	Sh. Vinod	Warden Pahari	 941917214
	Gupta	Gupta	2
24.	Sh. Rafiq	Warden Gujjar	 990613145
	Ahmed	Hostel	4
25.	Deputy	Police Control	 01962-
	Officer	Room	262515,
			264493
26.	Deputy	Army Exchange	 01962-
	Officer		262002,
			262003
27.	Official On	BSNL Exchange	 01962-
	Duty		263498

#### Annexure - II IMPORTANT VITAL INSTALLATIONS OF THE DISTRICT RAJOURI

	Vital Installations	Locations	HOD	Designation	Contact No.
1.	Hospitals	GMC Kheora	Dr. Mehmood Ahmed Bajar	Suprintendent	849289351 1
2.	Revenue Offices	DC Office Rajouri	Sh. Mohd Jahangir Khan (JKAS)	AC Revenue	979797707 8
3.		DIG Office Rajouri	Sh.Tejinder Singh (IPS)	DIG	941990210 0
			S. Amritpal Singh (IPS)	SSP	954190072 1
4.	BSNL Towers	43 (In District Rajouri)	Sh. Mohria	TDE Rajouri	941500979 8
			Sh. Javed Ahmed	JTO Rajouri	941912007 4
5.	Water Reservoirs	Division Rajouri	Sh. Ashwani Sharma	XEN PHE	941919833 2
6.		PDD Division Rajouri	Sh. Rashid Khan	XEN PDD	700624747 1
7.	Power	Power Station	Sh. Dildar	JE	941922112

	Stations	Kheora	Ahmed		3
			Choudhary		
8.	Bridges	PWD	Sardar Khan	XEN PWD	941922857
					2
9.	Financial	District	Sh. Mohd	District	941927909
	Institutions	Treasury	Bashir	Treasury	8
		Rajouri		Officer	01962-
					263303
10.	Post Offices	Post Office	Sh. Sandeep	Superintenden	962225551
		Rajouri	Kumar	t	0

Heat Disorder	Symptoms	First Aid
Heat rash	Skin redness and pain, possible swelling, blisters, fever, headaches.	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 seek medical attention.
Heat Cramps	Painful spasms usually in leg and abdominal muscles or extremities. Heavy sweating.	Move to cool or shaded place. Apply firm pressure on cramping muscles or gently massage to relieve spasm. Give sips of water. If nausea occurs, discontinue.
Heat Exhaustion	Heavy sweating, weakness, Skin cold, pale, headache and clammy extremities. Weak pulse. Normal temperature possible. Fainting, vomiting.	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, call 108 and 102 for ambulance.
Heat Stroke (Sun Stroke)	High body temperature. Hot, dry skin. Rapid, strong pulse. Possible unconsciousness or altered mental status. Victim will likely not sweat.	Heat stroke is a severe medical emergency. 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 spraying water, cold water on body & fan the wet body. If possible sponging or cool bath sponging to reduce body temperature. Use extreme caution. Remove clothing. Use fans and/or air conditioners. <b>DO NOT GIVE FLUIDS ORALLY if the</b> <b>person is not conscious.</b>

### Annexure - III Symptoms and First Aid of Heat Illnesses

#### Annexure - IV HEAT WAVES - DOS & DONTS

#### DOs

#### Must for all

- □ Listen to Radio; watch TV; read Newspaper and other sources for local weather news/heat advisories.
- Drink sufficient water even if not thirsty. Persons with epilepsy or heart, kidney or liver disease who are on fluid-restricted diets or have a problem with fluid retention should consult a doctor before increasing liquid intake.
- Use ORS (Oral Rehydration Solution), homemade drinks like lassi, torani (rice water), lemon water, buttermilk, coconut water, etc. to keep yourself hydrated.
- Wear lightweight, light-coloured, loose, cotton clothes.
- If outside, cover your head: Use a cloth, hat or umbrella. Use sunglasses to protect your eyes and sunscreen to protect your skin.
- □ Get trained in first aid.
- □ Take special care for the elderly, children, sick or overweight as they are more likely to become victims of excessive heat.

#### **Employees & Workers**

- Provide cool drinking water near workplace.
- □ Caution workers to avoid direct sunlight.
- □ Schedule strenuous jobs to cooler times of the day.
- □ Increasing the frequency and length of rest breaks for outdoor activities.
- Pregnant workers and workers with a medical condition should be given additional attention.
- □ Notify workers about heat wave alerts.

#### **Other Precautions**

- □ Stay indoors as much as possible.
- Traditional remedies like onion salad and raw mango with salt and cumin can prevent heat stroke.
- □ Use fans, damp clothing and take a bath in cold water frequently.
- □ Offer water to vendors and delivery people who come to your home or office.
- <sup>D</sup> Use public transport and car-pooling. This will help reduce global warming and heat.
- Don't burn dry leaves, agriculture residue and garbage.
- <sup>□</sup> Conserve water bodies. Practice rainwater harvesting.
- <sup>D</sup> Use energy-efficient appliances, clean fuel and alternative sources of energy.
- If you feel dizzy or ill, see a doctor immediately or ask somebody to take you to the doctor immediately.

#### For Cooler Home

- Use solar reflective white paint, cool roof technology, air-light and cross ventilation and thermo cool insulation for low-cost cooling. You can also keep haystacks or grow vegetation on roofs.
- □ Install temporary window reflectors such as aluminum foil-covered cardboard to reflect heat back outside.
- Keep your home cool, use dark colour curtains, tinted glass/ shutters or sunshade and open windows at night. Try to remain on the lower floors.
- Green roofs, green walls and indoor plants reduce heat by cooling the building naturally, reducing air-conditioning requirements and release of waste heat.
- Maintain AC temperature at 24 degrees or higher. This will reduce your electricity bill and make your health better.

#### Treatment of a Person Affected by Sunstroke

- □ Use a wet cloth / pour water on the victim's head.
- Give the person ORS to drink or lemon sarbat or whatever is useful to rehydrate the body.
- □ Take the person immediately to the nearest health centre.
- If consistently experiencing high body temperature, throbbing headache, dizziness, weakness, nausea or disorientation in the summer, call an ambulance.

#### DONTs

- Avoid going out in the sun, especially between 12:00 Noon and 03:00 PM.
- Avoid strenuous activities when outside in the afternoon.
- Do not go out barefoot.
- Avoid cooking during peak hours.
- Open doors and windows to ventilatecooking area adequately.
- Avoid alcohol, tea, coffee and carbonated soft drinks, which dehydrates the body.
- □ Avoid high-protein food and do not eat stale food.
- Do not leave children, pets or anybody in parked vehicles as they may get affected by Heat.
- Don't drink ice-cold drinks as they can cause stomach cramping.