



No. PEOC-2024/43
BOARD OF REVENUE, PUNJAB
PROVINCIAL DISASTER MANAGEMENT AUTHORITY
5th floor, Cricket House, 20A Jail Road, Shadman 2, Lahore
Dated 16th May, 2024

URGENT



WEATHER ADVISORY ALERT

To:

1. Secretaries to Govt. of the Punjab,
 - i. Irrigation Department
 - ii. Communication and Works Department
 - iii. Health Department
 - iv. HUD & PHED Department
 - v. Forest Department
 - vi. Livestock Department
 - vii. LG & CD Department
2. All Divisional Commissioners in Punjab
3. Director General Rescue 1122, Lahore
4. All Deputy Commissioners/Chairman DDMA's in Punjab
5. All Managing Directors, WASA
6. Additional IG Operations, Punjab Police, Lahore,
7. Director Civil Defense, Lahore

Subject: HEATWAVE CONDITIONS PREDICTED IN PUNJAB DURING UPCOMING WEEK. DUSTSTORM/THUNDERSTORM-RAIN IS EXPECTED IN UPPER PARTS FROM 16TH (EVENING) TO 19TH MAY

Reference: i- *Weather Advisory vide Pakistan Meteorological Department Letter NWFC-5(10A)/2017/75 (copy enclosed)*

ii-*Weather Advisory vide NDMA Letter F.2 (E)/2024-NDMA (MW/Weather-HeatwaveAdvisory)*

1. Met Office has informed that due to the presence of high pressure in the upper atmosphere, **Heatwave conditions** are likely to develop over most parts of the country, especially **over Punjab from 21st May** and likely to convert to severe heatwave conditions from **23rd to 27th May**.

2. Heatwave and thunderstorm Projections:

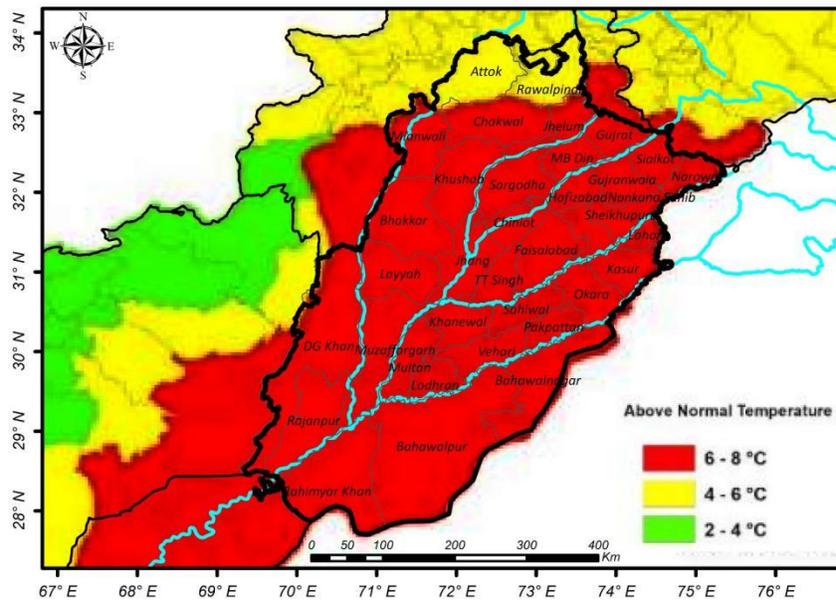
Met office further informed that a shallow westerly wave is likely to affect upper parts of the Province on 16th May(evening/night). Under the influence of this weather system:

Predicted Time Period	Weather Situation	Districts
16 th (evening) to 18 th May	Duststorm/thunderstorm with isolated rain	Rawalpindi, Murree, Galliyat, Attock, Chakwal, Jhelum, Mandi Bahaudin,

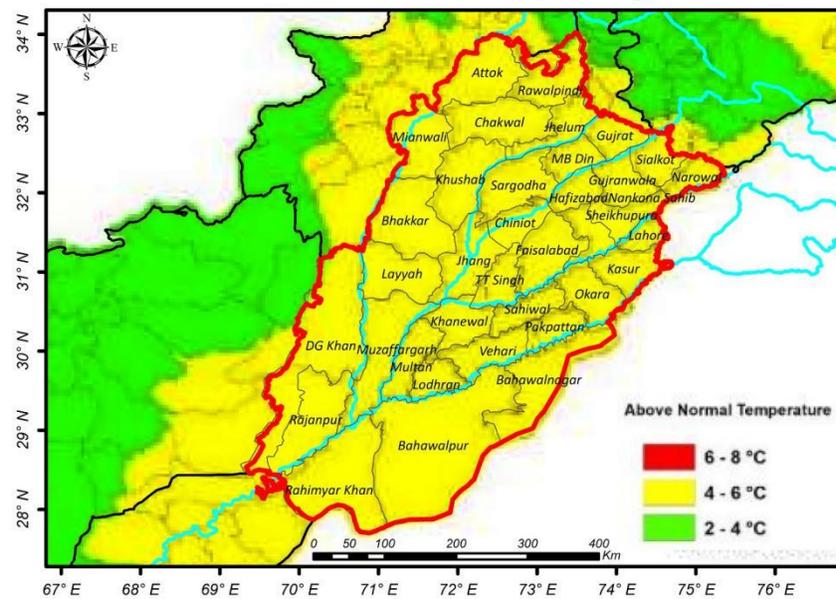
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		Gujrat, Gujranwala, Hafizabad, Sialkot, Narowal, Lahore, Kasur, Okara, Faisalabad, Toba Tek Singh, Jhang, Khushab, Sargodha and Mianwali
21st to 27th May	Day temperatures are likely to remain 04 to 06°C above normal in Punjab from 21st to 23rd and from 06 to 08°C from 23rd to 27th May	Overall Punjab

Heat Wave from 23 to 27 May, 2024



Heat Wave from 21 to 22 May, 2024



1. Perceived Impacts:

- a. Windstorm/hailstorm and lightning may affect daily routines, standing crops, loose structures like electric poles, vehicles and solar panels etc during the period.
- b. Soaring temperatures conditions are likely to subside during the wet days
- c. The farmers are advised to manage the watering of crops and wheat harvesting accordingly.
- d. General public is advised to avoid unnecessary exposure to direct sunlight.

2. Preparedness Measures:

Deputy Commissioners to issue early warnings/ awareness through local media/ TV cables/ announcements, revenue staff and all other available means to alert general public to avoid unnecessary travelling or stay under open sky during thunderstorm/ sky lightening/ hailstorm/heatwaves.

a) District Disaster Management Authority:

- i. Disaster management authorities should develop comprehensive heatwave emergency response plans that outline protocols for heatwave warnings, cooling centre operations, and public outreach strategies.
- ii. Authorities should monitor weather forecasts for heatwave conditions and issue timely warnings and advisories to residents, along with recommendations for staying safe during extreme heat events.
- iii. Disaster management authorities should coordinate with local healthcare facilities to ensure they are prepared to handle an increase in heat-related illnesses and provide medical assistance during heatwaves.
- iv. Authorities should allocate resources for heatwave mitigation measures such as urban greening initiatives, cool roof programs, and distribution of heat-relief items to vulnerable populations.
- v. DDMA/ District Administration are advised to relocate families from mud houses to safe sites and shelters during rain/hailstorm/thunderstorm in order to prevent casualties.
- vi. Forewarn travelers/visitors about risks posed from flooding/landslides and likely snowfall over mountains in vulnerable locations and provide guidance and assistance in case of emergencies through local administration, police and rescue services.
- vii. Ensure that in places where there is a high risk of urban floods, flash flooding, hill torrents and landslides - emergency services, personnel and equipment (such as Rescue 1122, Fire Brigade, Ambulance and Civil Defense, among others) are available.
- viii. Preplace necessary emergency equipment at vulnerable/strategic locations to expedite response efforts and complete stocking/replenishment of stocks.
- ix. PMD / FFD / DDMA's to proactively monitor Nullahs/storm water drains, to ensure their proper functioning and prevent blockages that may lead to inundation.
- x. Ensure widespread circulation of alerts and advisories, especially in local languages, to raise awareness and sensitize travelers/tourists and local communities in at-risk / vulnerable areas.
- xi. Coordinate with relevant departments to secure loose structures such as electrical poles, solar panels, hoardings and under-construction buildings to mitigate potential damages from dust-wind/thunderstorms.

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- xii. Conduct mass public awareness campaigns to educate residents and travelers in vulnerable areas about the risks of flash flooding/landslides/avalanches and take precautionary measures.
- xiii. Advise general public to seek shelter in safe areas, such as sturdy buildings or underground structures during dust-wind / hail-thunderstorms and avoid objects that pose a risk of falling/being struck by lightning.
- xiv. Strengthen coordination among all relevant departments and agencies to facilitate timely sharing of information and resources during emergency situations.
- xv. Advise farmers to take necessary mitigative and precautionary measures to safeguard their crops through timely harvesting, safe storage or any other precaution from adverse effects of dust-wind-thunderstorms/hailstorms.
- xvi. Share daily/routine updates with PDMA Punjab in case of any eventuality

b) Provincial Line Departments:

- i. NH&MP and Traffic Police to coordinate with Law Enforcement Agencies in order to manage and redirect traffic from affected areas to safer areas, which will prevent congestion and facilitate emergency response efforts.
- ii. NHA/Line Departments to conduct regular inspections of critical infrastructure, such as bridges and roads, to identify and address any vulnerability that may lead to structural damage during heavy rainfall.
- iii. Ensure healthcare are equipped to handle heat-related illnesses and emergencies during heatwaves, including adequate staffing, medical supplies, and cooling facilities.
- iv. Collaborate with local municipalities to integrate heatwave resilience measures into urban planning strategies, such as designing heat-resilient infrastructure, implementing cool pavement technologies, and enhancing green spaces.
- v. Provide guidance and support to farmers and agricultural communities in medium-density localities to mitigate the impact of heatwaves on crops, livestock, and agricultural productivity through measures such as water conservation, shade provision, and heat-tolerant crop activities.
- vi. Implement measures to reduce the urban heat island effect in medium-density localities, such as planting trees, increasing vegetation cover, and promoting sustainable land use practices to mitigate the intensity of heatwaves.

c) Local Community:

- i. Set up cooling centers in public buildings such as community centers or libraries to provide relief from the heat for residents without access to air conditioning.
- ii. Community organizations can organize outreach programs to educate vulnerable populations about the dangers of heatwaves and provide assistance, such as distributing fans or arranging transportation to cooling centers.
- iii. Organize water distribution initiatives during heatwaves to ensure that residents have access to clean drinking water, especially those experiencing water scarcity.
- iv. Community organizations can coordinate volunteer efforts to conduct wellness checks on vulnerable residents, distribute water and supplies, and provide transportation to cooling centers during heatwaves.

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d) NGOs:

- i. Implement community-based initiatives to build resilience and promote adaptive strategies among vulnerable populations, including the elderly, children, and low-income communities, to reduce heatwave-related health risks and impacts.
- ii. Advocate for policies and regulations that prioritize heatwave preparedness, mitigation, and adaptation measures, including investments in green infrastructure, public health programs, and social safety nets, to protect communities from heatwave hazards.
- iii. Provide capacity-building workshops, training sessions, and technical assistance to local authorities, community organizations, and frontline responders to enhance their capacity to prepare for, respond to, and recover from heatwave emergencies.
- iv. Conduct public awareness campaigns and communication initiatives to raise awareness about heatwave risks, heat safety tips, and available resources and support services, empowering individuals and communities to take proactive measures to protect themselves during heatwave events.

e) DRR Media:

- i. Disseminate timely and accurate information on heatwave risks, early warning alerts, and protective measure through various media channels, including television, radio, social media, and mobile platforms, to reach diverse audiences and raise awareness about heat-related hazards.
- ii. Conduct public education and awareness campaigns on heatwave preparedness, heat safety tips, and health risks associated with extreme heat, utilizing multimedia platforms, community events, and educational materials to promote heatwave resilience and behavior change.
- iii. Amplify community voices and experiences through storytelling, interviews, and community engagement initiatives that highlight local perspectives on heatwave impacts, adaptive strategies, and resilience-building efforts, fostering empathy, solidarity, and collective action.
- iv. Collaborate with government agencies, NGOs, academic institutions, and local authorities to ensure accurate and consistent messaging, facilitate data sharing, and strengthen communication networks for heatwave early warning dissemination, emergency response coordination, and public outreach efforts.

f) Individuals:

- i. Individuals should stay updated on heatwave warnings issued by local authorities and take appropriate precautions to stay safe during extreme heat events.
- ii. Individuals should prepare an emergency kit that includes items such as water, electrolyte beverages, sunscreen, hats and light-colored clothing to stay hydrated and protected from the sun during heatwaves.
- iii. Individuals should avoid outdoor activities during peak heat hours and seek shelter in air-conditioned or well-ventilated spaces to prevent heat-related illnesses.
- iv. Individuals should check on neighbors, especially the elderly, children, and those with chronic illnesses, to ensure they are coping with the heatwave and offer assistance if needed.

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g) Households:

- i. Households should install and maintain air conditioning units or fans to provide relief from the heat during heatwaves.
- ii. Households can designate a cool room/are in the home where family members can retreat during extreme heat, equipped with fans or air conditioning.
- iii. Stock up plenty of water and electrolyte beverages to stay hydrated during heatwaves and ensure an adequate supply of emergency supplies such as non-perishable food and first aid kit.
- iv. Use blinds, shades, or reflective window films to block out direct sunlight and reduce indoor temperatures during heatwaves.

3. Directorate General Public Relation, Punjab requested to ensure wider circulation and public awareness.

4. Forwarded for information / necessary action, please.



**INCHARGE PEOC
(PDMA, Punjab)**

CC

1. PSO to SMBR/Relief Commissioner, Punjab, Lahore
2. PA to Additional Secretary (Staff) to Chief Minister Punjab
3. PA to Secretary (Coordination) to Chief Minister, Punjab.
4. PA to Secretary (I&C) S&GAD
5. PSO to Director General, PDMA, Punjab.
6. PA to Director General, Public Relations
7. All Directors, PDMA



HEATWAVES

Heatwave Survival Guidelines



PROVINCIAL DISASTER MANAGEMENT AUTHORITY
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WHAT IS HEATWAVE?

According to World Meteorological Organization (WHO);
“A heat wave as five or more consecutive days during which the daily maximum temperature exceeds the average maximum temperature by five degrees Celsius.”

HEATWAVE DECLARATION

Type of Alert	Criteria	Response
Hot Day Advisory	Temperature rises from normal with a departure upto 4.5°C.	Increased communication in media on heat issues
Hot Day Warning	Departure from normal is >4.5°C.	High level of public awareness and preparedness of government agencies.
Heatwave Emergency	Departure from normal is >6.5°C When there are significant levels of heat related illness and even mortality there must be the declaration of a Heatwave Emergency and a rapid response regardless of specific weather criteria.	Declaration of Heatwave Emergency

NOTABLE HEATWAVE EVENTS IN PUNJAB

A significant increase in the number of heatwave days per year with a rate of 11 days per decade was observed over the period between 1980 to 2007 for Punjab Province. During the period 1961–1990s, the heatwave events were less frequent. However, from 1990 to 2011, an increase in frequency of these events was noticed. It was expected that with high temperatures in the long run, heatwaves will become more frequent and intense all over the world, including Punjab.

As per various forecasts and reports including Pakistan Meteorological Department and international satellites data, May 15th 2022, recorded the highest temperature i.e. 42°C of that month which was 6 degrees above the normal and 8 degrees above the temperature on the same date as of last year, which was a substantial reason for heat wave declaration on that year.

VULNERABLE POPULATION



OLD PEOPLE



CHRONICAL PATIENTS



WOMEN & GIRLS



PREGNANT WOMEN



CHILDREN UNDER 5



OUTDOOR WORKERS



DISABLED PEOPLE

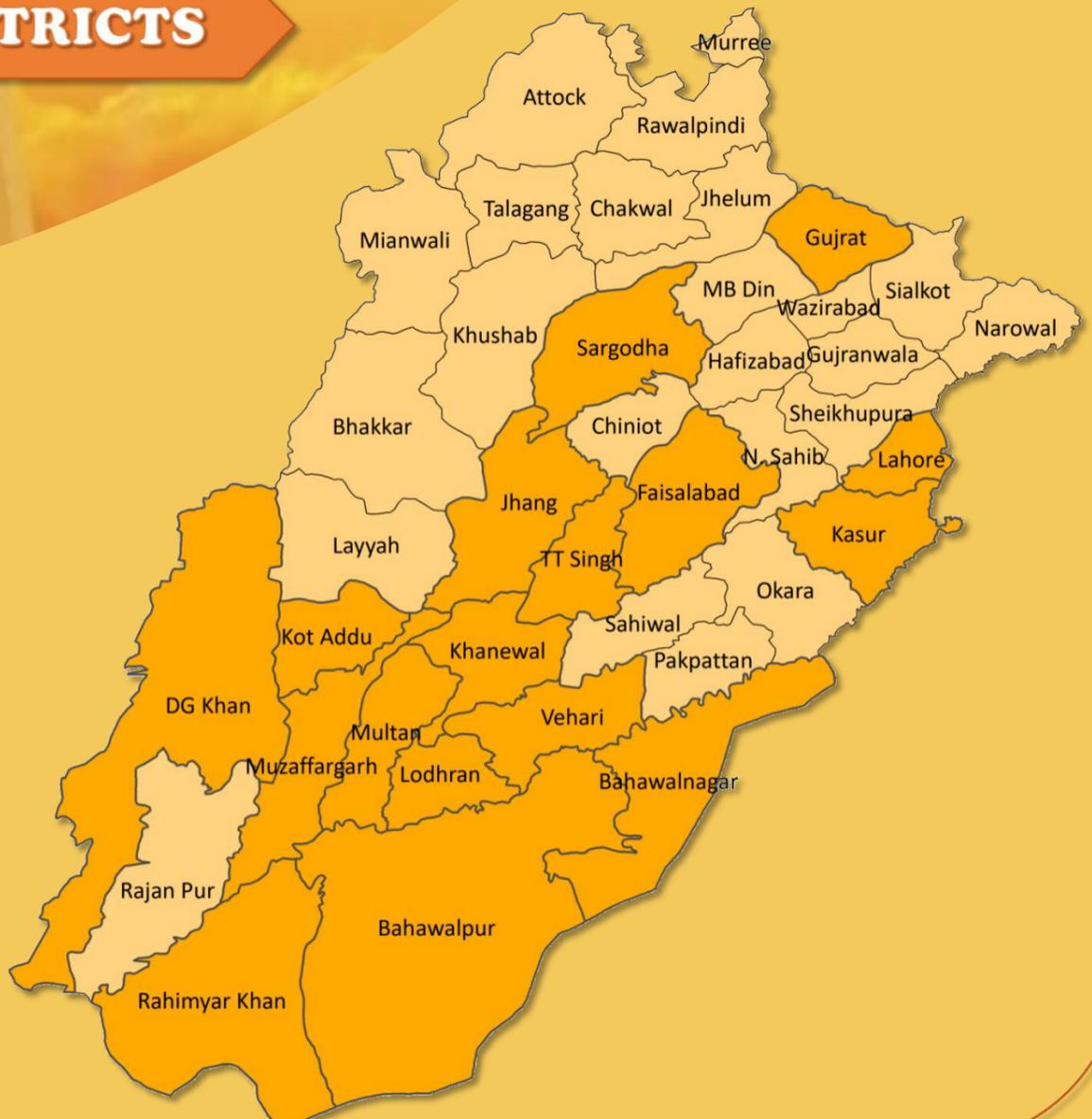


ANIMALS

HEATWAVE PRONE DISTRICTS

LEGEND

- Heatwave Prone districts
- Other Districts



IMPACTS OF HEATWAVE

IMPACTS



NATURE

- Drought stress
- Reduced growth
- Habitat loss
- Migration changes
- Habitat loss
- Migration changes
- Biodiversity loss
- Increased pests



INFRASTRUCTURE

- Structural Damage
- Overheating
- Power Outages
- Road Damage
- Rail Disruptions
- Telecommunication Issues



ECONOMY

- Structural Damage
- Decreased Agricultural Output
- Increased Energy Costs
- Impact on Tourism
- Reduced Labor Productivity



SERVICE PROVISION

- Service disruptions
- Increased Power Supply
- Water shortages
- Emergency Healthcare
- Safety adaptations in Educational Institution
- Increased Shelter demand



HEALTH

- Heatstroke cases
- Dehydration
- Elderly care
- Homeless support
- Resource allocation
- Challenges in transporting patients

GUIDELINES FOR COPING WITH HEATWAVES

1



STAY HYDRATED

STAY COOL

3



DRESS APPROPRIATELY

LIMIT OUTDOOR ACTIVITIES

5



STAY INFORMED ABOUT HEATWAVE INDEX

KEEP EMERGENCY KIT

7



STAY MOISTURIZED

CHECK ON VULNERABLE INDIVIDUALS

8



**PROVINCIAL DISASTER MANAGEMENT AUTHORITY
PUNJAB**



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