



Relief, Rehabilitation & Settlement Department
Government of Khyber Pakhtunkhwa

HEAT WAVE CONTINGENCY PLAN 2023



PROVINCIAL DISASTER MANAGEMENT AUTHORITY
GOVERNMENT OF KHYBER PAKHTUNKHWA

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RELIEF, REHABILITATION & SETTLEMENT DEPARTMENT
GOVERNMENT OF KHYBER PAKHTUNKHWA

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LIST OF ACRONYMS

PDMA	:	Provincial Disaster Management Authority
PMD	:	Pakistan Meteorological Department
GLOF	:	Glacial Lake Outburst Flood
UHI	:	Urban Heat Island
PEOC	:	Provincial Emergency Operation Center
DDMU	:	District Disaster Management Unit
NDMA	:	National Disaster Management Authority
NEOC	:	National Emergency Operation Center
ENSO	:	El Nino-Southern Oscillation
IOD	:	Indian Ocean Dipole
DSR	:	Daily Situation Report
NDVI	:	Normalized Difference Vegetation Index
FFMT	:	Divisional Forest Fire Management Team
SUPARCO	:	Pakistan Space and Upper Atmosphere Research Commission
BTTP	:	Billion Tree Tsunami Project
DFO	:	Divisional Forest Officer
CCF	:	Chief Conservator Forest

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1. Introduction

Climatic changes have many adverse impacts on global temperature which is unfolding in various parts of the world including Pakistan. It is predicted that many countries including Pakistan will be severely hit in the form of heat waves which have the potential to endanger human lives especially in urban centers of our country. Khyber Pakhtunkhwa has been facing the brunt of climate change hazards because of its unique topography. Being home to extreme cold and hot weather significant losses have been incurred which can be attributed to climate change related disasters i.e. floods, glacial melting, drought and heat waves etc.

According to Pakistan Meteorological Department, heatwave is the condition where the maximum temperature situation reaches to 40°C for the plain and 30°C for the hilly areas with a departure from normal 4.5°C to 6.4°C. 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.

The upcoming month of April, May & June 2023, it is forecasted by the Pakistan Meteorological Department that Khyber Pakhtunkhwa may receive slightly above normal precipitation and the seasonal mean temperatures are expected to remain normal to above normal. However, high temperature episodes may develop during clear sky conditions, especially over northern parts that may contribute in glacier related hazards such as Glacial Lake Outburst Flood (GLOF).

The combination of heat and humidity (wet bulb temperature) exceeds the temperature of human body which may lead to heat strokes. The situation of heat wave may cause heat strokes mainly in urban centers affecting the most vulnerable.

2. Heat Index

Heat index is the measure of how hot it is actually felt when the effect of relative humidity is coupled with actual temperature. The following table describes various scenarios taking into account actual temperature and relative humidity.

Relative Humidity %	Temperature °C																
	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43
40	27	28	29	30	31	32	34	35	37	39	41	43	46	48	51	54	57
45	27	28	29	30	32	33	35	37	39	41	43	46	49	51	54	57	
50	27	28	30	31	33	35	36	38	41	43	46	49	52	55	58		
55	28	29	30	32	34	36	38	40	43	46	48	52	54	58			
60	28	29	31	33	35	37	40	42	45	48	51	55	59				
65	28	30	32	34	36	39	41	44	48	51	55	59					
70	29	31	33	35	38	40	43	47	50	54	58						
75	29	31	34	36	39	42	46	49	53	58							
80	30	32	35	38	41	44	48	52	57								
85	30	33	36	39	43	47	51	55									
90	31	34	37	41	45	49	54										
95	31	35	38	42	47	51											
100	32	36	40	44	49	56											

Caution
 Extreme Caution
 Danger
 Extreme

Source: United States's National Oceanic and Atmospheric Administration Calculator endorsed by World Health Organization (WHO)

3. Causes of Heat Wave

There are various causes of heat-wave that range from atmospheric conditions to human activities resulting in release of heat in the atmosphere. The major causes that further decrease the capacity of inhabitants to combat adverse impacts of heat wave include:

- Atmospheric conditions of the area.
- Persistent and somewhat unplanned urbanization.
- Deforestation, lack of green areas and open spaces.
- Lack of hygiene practices.
- Frequent and prolonged power outages.
- Water supply constraints.
- The principle reason for the night time warming is the retention of short-wave solar radiation absorbed during the day time by the building materials consisting of concrete and asphalt.
- Geometric effects in terms of rising number of tall buildings are a significant contributing factor to urban heat island effect.
- The number of tall buildings within the city has increased that provide multiple surfaces for the reflection and absorption of sunlight and thus increasing the efficiency with which the city is heated.
- This is called the "Urban Canyon Effect". Increased number of buildings results in blockage of wind, which also inhibits cooling by convection and pollution from dissipating.
- Combustion heat generated from automobiles, air conditioning, industry, pollution and other sources also contributes to the Urban Heat Island (UHI).

4. Impacts of Heat Wave

- The urban heat island effect further worsens the heat wave conditions. It significantly contributed to the blistering heat wave and large number of casualties in Karachi in 2015.
- Induces stress for outdoor workers.
- Human morbidity and mortality, particularly among the elderly and infirm.
- Death cases due to heatstroke; same was observed in Karachi, Hyderabad, Nowshera Feroz, Dadu, Badin, Thatta and Tharparkar in 2015.
- Induces stress in animals.
- Increased energy demand e.g. greater demand for air conditioning.
- Damage to crops and vegetation.
- Increased demand for water e.g. Human, Agriculture and Livestock consumption.
- High temperatures may increase the base flow in the rivers.
- Infrastructure stress, buildings, roads, rail and other infrastructures.
- Shifts in tourism preferences due to higher temperatures.
- Increased risks for sporting and outdoor recreation activities.

5. Heat Wave in Khyber Pakhtunkhwa

The diverse geography of Khyber Pakhtunkhwa makes the province more vulnerable to the adverse impacts of climate change including heat waves. In the southern dry plains and urban centers of Khyber Pakhtunkhwa the threshold for a heat wave is much higher than the northern parts of the province. Based on the aforementioned analogy Khyber Pakhtunkhwa can be divided in:

- (i) Northern Region
- (ii) Central Region
- (iii) Southern Region

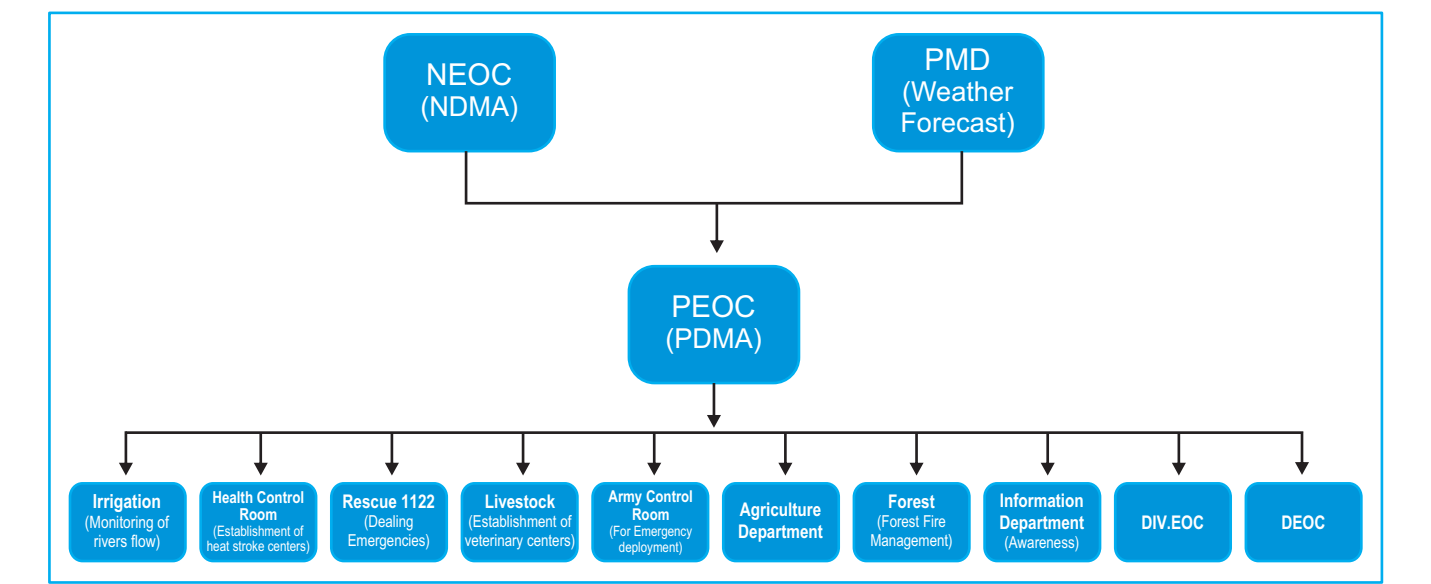
Northern Region (Malakand & Hazara Divisions)	Central Region (Peshawar & Mardan Divisions)	Southern Region (Kohat, Bannu & D.I.Khan Divisions)
<ul style="list-style-type: none"> The heat wave may trigger the hazards like: <ul style="list-style-type: none"> Rapid Glacier Melting Glacial Lake Outburst Flood (GLOF) Land Sliding Episodic rainfall and high-speed winds The impacts can be felt as: Human and capital loss of the local communities, disruption of the tourist services, damages to the Infrastructures (especially road & bridges), adverse impact on crops / orchards yield / production and forest fire eruption etc. 	<ul style="list-style-type: none"> The heat wave may trigger the hazards like: <ul style="list-style-type: none"> Sudden weather changes Local Phenomena Sudden rise of the local winds Winds (Cyclones) Increased River Flows (Indus & Kabul) Forest Fire The impacts can be felt in the form of: medical emergencies, high demand of energy which may lead to electricity disruption, adverse impacts on crops/orchards yield/production, and damages to electricity lines and falling of billboards etc. 	<ul style="list-style-type: none"> The heat wave may trigger the hazards like: <ul style="list-style-type: none"> Drought Sudden rise of the local winds Forest Fire Winds The impacts can be felt in the form of: medical emergencies, irrigation water scarcity, high demand of energy which may lead to electricity disruption and adverse impacts on crops/orchards yield/production

6. Heat Wave Early Warning & Coordination

Provincial Emergency Operation Center (PEOC) at PDMA, Khyber Pakhtunkhwa aims to provide a platform and bridge for timely and accurate coordination between Provincial Government Line Departments and Districts Administration in time of emergencies and calamities. It provides a well-coordinated response mechanism in times of disaster. It has strengthened the early warning system and has improved the disaster response capacities of District Governments through a centralized command and control unit. PEOC has enhanced the capacities of the District Disaster Management Units (DDMUs) through increased mobility and facilitation. By coordinating the efforts of all stakeholders for effective disaster risk management

in the province, PEOC coordination mechanism is simple but effective for the dissemination of early warning, surveillance and management of the disaster situation. It entails horizontal coordination with the relevant Provincial Line Departments and Headquarters Engineers 11 Corps Peshawar on one side and with the Humanitarian Community on other side. On the other hand, vertical coordination occurs with Federal Agencies including National Disaster Management Authority (NDMA), Pakistan Meteorological Department, Divisional and District Administrations. The center is connected with Rescue 1122, Health, Irrigation, Livestock, Climate Change, Forestry, Environment & Wildlife Departments, Police, NDMA and Pakistan Army. It remains active 24/7 and provides access to general public through toll free No 1700.

During heat wave the PEOC receives the heat wave alert and forecast from Pakistan Meteorological Department and National Emergency Operation Center (NEOC) at NDMA and accordingly issues Advisory to the Provincial Line Departments, Districts Administration, media and other stakeholders. The coordination is illustrated as below:



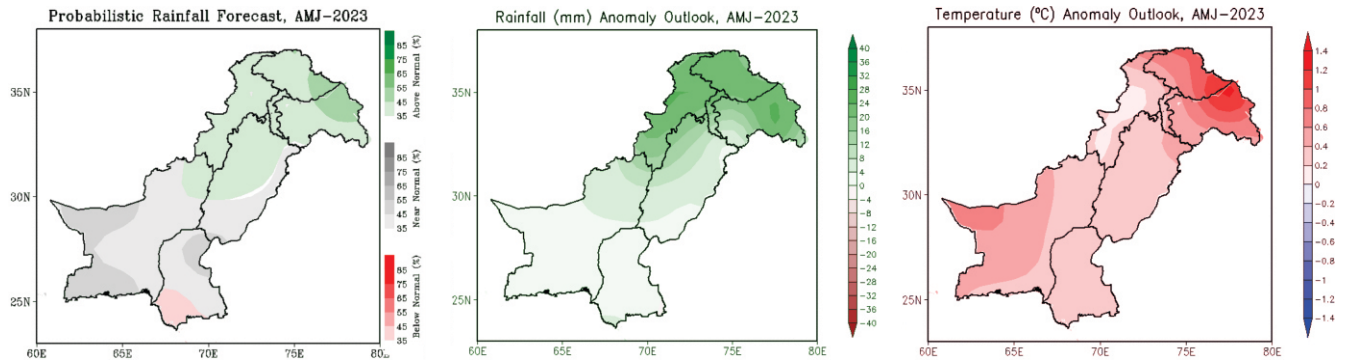
7. Heat Wave Declaration

Moisture contents in the atmosphere and the temperature forecasts are the integral part of declaring heat days and heat wave emergencies. Surveillance and records on heat-related illness and mortality give an additional measure of the ongoing impacts of heat in the weather conditions.

Type of Alert	Criteria	Response
Hot Day Advisory	Temperature rises from normal with a Departure up to 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
Heat Wave Emergency	Departure from Normal is > 6.4°C When there are significant levels of heat related illness and even mortality there must be the declaration of a Heat Wave Emergency and a rapid response regardless of specific weather criteria.	Declaration of Heat Wave emergency

8. Pakistan Meteorological Department (PMD) Seasonal Outlook for April-May-June (AMJ) 2023

Date: 3rd April 2023



8.1 Synoptic Situation

During the season AMJ, 2023, the El Niño-Southern Oscillation (ENSO) conditions are expected to remain neutral with a tendency of shifting to El Nino phase towards the end of the season. Meanwhile the Indian Ocean Dipole (IOD) is expected to remain in neutral phase, as well. Based on the global and regional circulation patterns, the outlook for AMJ, 2023 in Pakistan is as under:

8.2 Seasonal Outlook

Overall, a tendency for **normal to slightly above normal precipitation** is likely to prevail over most parts of the country. Northern parts of Punjab and most of Khyber Pakhtunkhwa, Kashmir and Gilgit- Baltistan may receive slightly above normal precipitation. Seasonal mean temperatures are expected to remain normal to above normal over most parts of the country. High temperature episodes may develop during clear sky conditions, especially over parts of Gilgit-Baltistan that may contribute in glacier related hazards such as GLOF. Furthermore, the expected nearly normal temperature during the season is indicative of the normal rainfall during the upcoming monsoon season in Pakistan.

8.3 Impacts

- The seasonal rainfall may provide water for crops in the rain fed areas of the country while lower parts of the country will remain deficient during the Kharif season.
- Strong dust raising winds and isolated hailstorm events are expected in the plain areas during the season.

Note: The current outlook is based on the March atmospheric conditions. Keeping in view the rapid changes in climate system dynamics, the outlook is updated during the last week of each month.

9. Heat Wave Surveillance & Coordination

Close coordination with all relevant stakeholders and review of information are important factors for ensuring better response to Heat Wave Management. In 2022, the Federal Ministry of Climate Change had notified a task force which included the Minister for Climate Change (chairperson), Minister for Water Resources, Minister for National Food Security & Research,

Minister for Information and Broadcasting, Secretaries of Ministry of Climate Change, Ministry for Water Resources, Ministry of National Food Security & Research, Ministry of Information and Broadcasting, Ministry of National Health Services Regulation and Coordination, Chairman NDMA, Director General Pakistan Metrological Department, All Chief Secretaries and other co-opted member for taking stock of immediate preparedness and response for heat wave mitigation and management.

The Provincial Government via PDMA has established the following heat wave surveillances pathways for monitoring the situation in the province. These pathways will help in identifying all the heat waves hot spots and trends which will bear the adverse consequences to human health, food security and conservation of nature (forest & wildlife).

9.1 Heat Wave Surveillance Pathway for Human Health

Continuous improvement through sustained collection and review of information is an objective of this Heat Wave Contingency Plan (2023). Throughout the heat season in 2022 the daily coordination meetings of NDMA, PDMA, PMD, NIH and Provincial Health Department were held for monitoring the situation and review of the below information for initiating appropriate actions.

- Forecast maximum and minimum temperatures for the next 24 hours and next 7 days from PMD; and
- Reports on numbers of heat related illnesses, fatalities at all hospitals and heat stroke centers by health department.

The temperature forecasts are an integral part of declaring heat days and heat wave emergencies. Records on heat-related illness and mortality give an additional measure of the ongoing impacts of heat independent of the current weather conditions.

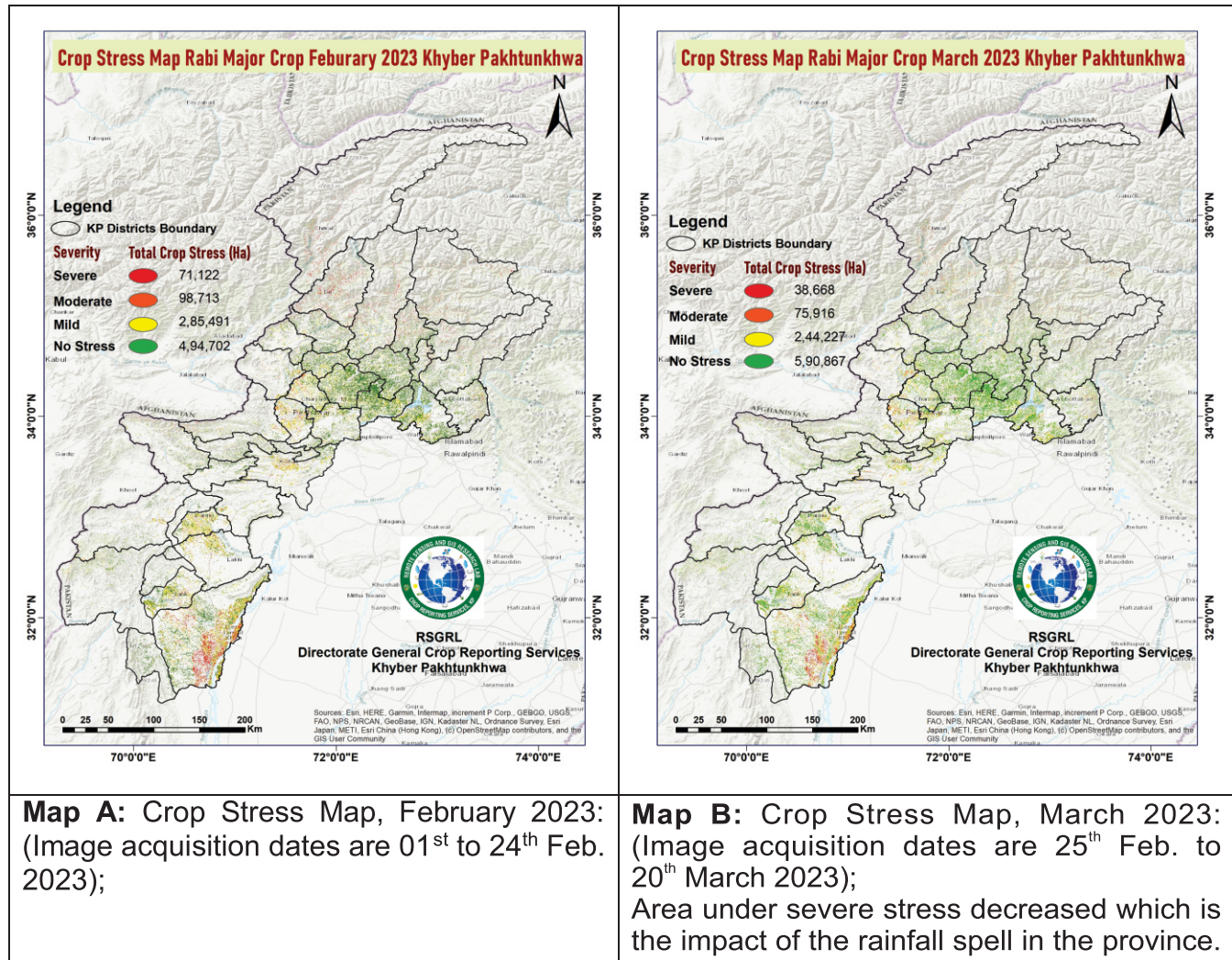
In current year (2023), PDMA will regularly monitor the situation and issue the Daily Situation Report (DSR) which describes the influx of heatstroke patients in the heat stroke centers and the mortality of human beings, livestock and crops stressed area. Furthermore, DSR will also include the number of forest fire incidents in the province.

9.2 Heat Wave Surveillance Pathway for Agriculture Sector

The first meeting was convened by the Director General, Agriculture Extension, Government of Khyber Pakhtunkhwa in coordination with PDMA on 10th March, 2023 with regard to the surveillance of heat wave and formulation of the Agriculture sector mitigation strategy. In the meeting, agriculture sector heat wave working groups were formed, comprising of the technical representatives from Agriculture Extension, PDMA, PMD, Agriculture Research, On Farm Water Management, Soil & Water Conservation, Crop Reporting Services and Irrigation Department.

Directorate of the Crop Reporting Services of the Agriculture Department, Khyber Pakhtunkhwa has been assigned the task for the surveillance of the heat wave impacts on agriculture sector in coordination with PDMA & PMD. Aforementioned directorate has adopted a scientific methodology for monitoring crop stress situation in the province through a data input model operating in Geographic Information System (GIS) & Remote Sensing environment. Integration of satellite-derived information with ground data is helpful to provide Agriculture stress warning and declaration during the cropping season. The outputs of the model are obtained as crop

Stress Maps on fortnightly basis for Monitoring the Heat Wave situation in the Province (as shown in the below maps).

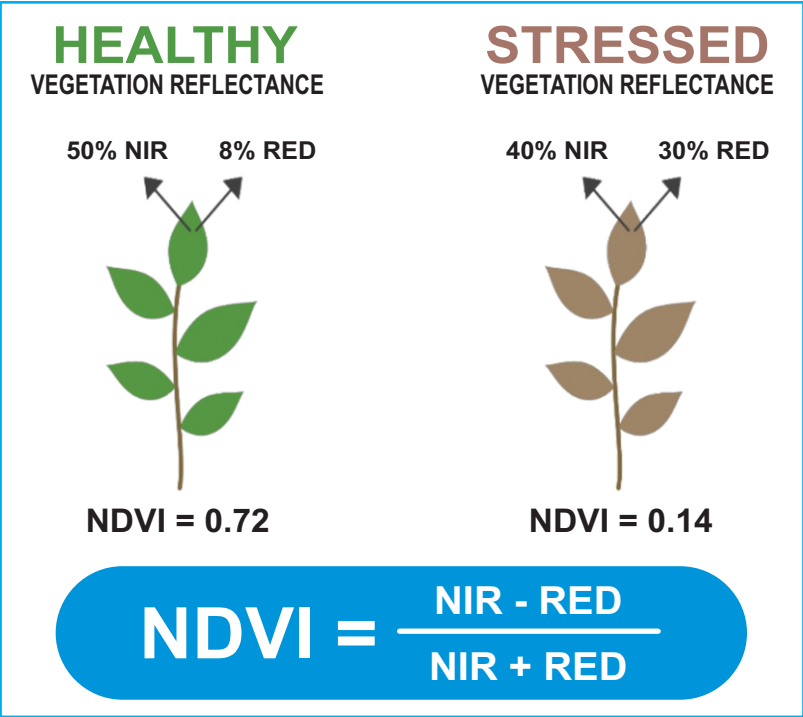


Crop Stress Class	1 st – 24 th February 2023 (Map A)	25 th Feb – 20 th March 2023 (Map B)
Severe	71,122 Ha	38,668 Ha
Moderate	98,713 Ha	75,916 Ha
Mild	2,85,491 Ha	2,44,227 Ha
None	4,94,702 Ha	5,90,867 Ha

The Crop Stress is classified into four classes as; Severe, Moderate, Mild and No Stress, respectively. The Stress in crop is identified based on the decline in Current NDVI (Normalized Difference Vegetation Index) in comparison with the average NDVI of past 5 Years.

1. The High Decrease in NDVI is labeled as Severe Stress when the NDVI Value is below 0)
2. Moderate Stress when the NDVI Value ranges (0- 0.2)
3. Mild Stress when the NDVI Value ranges (0.2-0.3)
4. No Stress when the NDVI Value ranges (0.3 – 0.643)

The threshold values are set in Arc GIS 10.8 Environment to categorize the stress according to chlorophyll reflectance.



9.3 Heat Wave Surveillance Pathway for Forest Fires

The Advisory issued by the Climate Change, Forestry, Environment and Wild Life Department, Government of Khyber Pakhtunkhwa to the Divisional Commissioners and Deputy Commissioners of the province comprises on the following arrangements for Forest Fire Surveillance and Control:

Oversight arrangements through a Divisional Forest Fire Management Team (FFMT) headed by the Commissioner and including all stakeholders. The FFMT is to map vulnerabilities in advance, formally assign responsibility to concerned Departments, the incident reporting and taking punitive measures against culprits for deliberate adverse action, amongst others. The incident reported will be shared with the Provincial Cell in the Forest Department and subsequently with the Provincial Emergency Operation Center (PEOC) at PDMA, Khyber Pakhtunkhwa. The incident will also be reported through PDMA “Information Highway” (a Whatsapp Communication Group of Deputy Commissioners) from the District Disaster Management Units (DDMUs) of the province. The Additional Deputy Commissioner (Relief & Human Rights) will be the overall lead of the field operations.

10.Roles and Responsibilities

The management of heat wave is a complex task involving different stakeholders for taking necessary actions for mitigation of the overall heat wave situations. The following section entail detail roles and responsibilities of various departments already notified by the Relief, Rehabilitation and Settlement Department, Government of Khyber Pakhtunkhwa.

10.1 Immediate Measures

S.No.	Action	Responsibility
1.	Establishment of Heat Stroke Centers in all Health Facilities across the province and ensuring availability of Emergency Medicines and Human Resource. Mobile Health Centers for major public places coverage	Health Department
2.	Ambulatory services readiness for stroke patients	Rescue 1122
3.	Awareness amongst farmers, meeting the water demand of the Livestock, crops / orchards and strategy for ensuring food security	Agriculture Department
4.	Availability of drinking water at public places especially in bus stations, markets, mandis and parks etc.	Local Government Department
5.	Installation of Sheds for market / mandis	Local Government / Districts Administration
6.	Un-interrupted power supply and activation of Complaint Centers	PESCO / TESCO
7.	Ensuring smooth supply of Clean Drinking Water	Public Health Engineering Department
8.	Continuous monitoring of the rivers flow and timely coordination with relevant departments	Irrigation Department
9.	Timely issuance of heat wave alerts and weather forecast to all departments and general public	Meteorological, PDMA / Information Departments
10.	To ensure better working condition for Labours and Industrial Workers.	Labor / Industry Departments
11.	Taking measures to prevent forest fires	Forest Department / Districts Administration
12.	Ensuring precautionary measures for field staff working under direct sun light	All Departments especially Police Department
13.	Safety of petrol/diesel/CNG usage-enforcement	Districts Administration
14.	Panagahs activation for shelter less people	Social Welfare Department
15.	Raising awareness regarding heat wave related illness and its prevention amongst teachers and students. Review school timings and other precautionary measures.	Education Department
16.	Establishment of Provincial and District Control Rooms	All Relevant Departments / Districts Administration
17.	Public Awareness Campaign	Information Department
18.	Daily situation reports and continuous monitoring of the situation	PEOC PDMA
19.	To issue proper advisory and make necessary arrangements for various events accordingly	Tourism Department
20.	Real time monitoring of the evolving GLOFs situation in the glaciated regions of the province	PMD in coordination with SUPARCO

10.2 Preparedness Measures

Keeping in view the aforementioned responsibilities the actions to be taken by the departments are as under:

10.2.1 Health Department

The effects of rising temperatures and extreme heat result in numerous illnesses and deaths each year. For many people, warm weather is a time for fun-filled outdoor activities. However, hot weather and outdoor activities don't always mix well, especially during periods of extreme heat—times when temperatures are substantially hotter and or more humid than average for a location and date. Extreme heat can cause people to suffer from heat-related illness and even death. People suffer heat-related illness when their bodies are unable to properly cool themselves. Older adults, young children and people with chronic medical conditions are at high risk for heat-related illness and death.

Heat Wave may cause heatstroke and pose serious consequences to human health especially in the Central and Southern regions of Khyber Pakhtunkhwa. During days of high temperature, it is noteworthy to track extreme heat in your locality. PDMA provides local heat and health information, so communities can better prepare for and respond to extreme heat events.

In this connection, during the heat wave forecast the health department will have to establish the heat stroke centers for dealing with the heat wave patients at each Tehsil level hospital and in each secondary and tertiary care center:

10.2.2 Agriculture Department

Heat stress causes disturbance of several important plant physiological processes including photosynthesis, respiration and transpiration. Further, it causes the accumulation of toxic substances in plant cells including phenolic compounds.

Worrying is the fact that crop damaging pests such as the fall army worm, locusts, pests that have emerged to be serious pests when temperatures exceed the normal.

10.2.2.1 Impact of Heat Wave on Wheat

- Wheat crop is at fertilization and grain filling stage in majority of district of Khyber Pakhtunkhwa. High temperature at flowering or grain filling stage reduces grain weight and size.
- Increase in temperature at flowering stage also affect pollination process by causing failure of fertilization.

10.2.2.2 Mitigation strategies for Wheat

- Heat stress can be avoided by maintaining soil moisture (light and frequent irrigations) and Irrigation in appropriate time i.e. early morning, evening or night.
- Sprinkle Irrigation system is suggested during limited water availability.
- Application of potassium will reduce transpiration to maintain moisture.
- Foliar application of Potassium enhances photosynthetic activities and accumulation of nutrient.

- Foliar application of growth regulators and growth hormone will improve nutrients uptake and reduce transpiration.
- Proper monitoring of insect pest and diseases attack

10.2.2.3 Impact of Heat wave on Horticulture Crops

The impact of heat wave on horticulture crops can be direct (physical damage to fruits) as a result in potential yield losses. In general, in response to heat stress leaves, branch burning is occur that inhibits shoot and root growth and damaging of fruits. Increased maximum temperature can lead to slow plant growth, high attack of white fly and wilting of plants.

- The sudden rise in temperature speed up new vegetative growth in mango, which results in severe fruit drops.
- The average temperature is 25-30°C for ripping of tomatoes. High temperatures above 25°C affect fertilization and fruit yield in tomatoes. The possible heat wave may decrease the yield from 30-40% by speedup the over maturity of fruits that causes low prices.
- Warm humid temperature increases plant growth and results in poor production like bottle gourd and pumpkin. Due to rise in temperature from 25-32°C there may be more flowers but few fruit sets. The anticipated increase may delay the produce and drop the yield 20-25%.
- Being tropical and subtropical in nature the rise in temperature may improve the yield in Okra. The white fly may attack the crop with more severity which may reduce the yield by 10-15%.
- The average temperature for growth, flowering and fruit set in green peas is 13-18 °C. The rising temperature may cause under development of fruit setting and thus decrease the yield. The yield reduction may be 15-20%.

10.2.2.4 Mitigation strategies for Horticulture Crops

- Heat stress can be avoided by maintaining soil moisture (light and frequent irrigations) and irrigation in appropriate time i.e., early morning, evening or night.
- Sprinkle / Spray irrigation can be used for maintaining moisture in vegetables.
- Using organic dry grass to prevent excess evaporation. . Shade cloth to cover vegetable beds to reduce the amount of direct sunlight reaching the plants
- Two foliar spray of potassium nitrate will help the plant to resist heat.
- Copper oxy chloride application for controlling fruit damages.
- Water stress and hot conditions aggravates mite problems, miticide should be sprayed. Avoid pruning as removal of leaves and branches expose, a new part of the canopy, to sunlight. In times of intense heat, this can lead to sunburn in leaves that were previously shaded.
- Many weeds are better adapted to extremes than ornamental plants: weeds compete with garden plants for water and nutrients.
- Foliar application of amino acid will improve nutrients uptake and reduce transpiration.
- Proper monitoring of insect pest and diseases attack

Agriculture inputs rendered by the Agriculture Extension Department, Khyber Pakhtunkhwa in the wake of heat wave in the shape of pesticides and other available resources will be given to the small land holding farmers (farming land equal or less than 2.5 Acre) and which are on the tail end of the Irrigation network. The assessment information of all such farmers is available with the district formation of Agriculture Extension Department. The Additional Deputy Commissioner (Relief & Human Rights) will be the overall lead of the field operations to combat the heat wave impacts on Agriculture sector. Resource Mapping of the Agriculture Extension Department for catering the emergency needs of the small land holding farmers is given in the **Annexure I**.

10.2.3 Climate Change, Forestry, Environment & Wildlife Department (Forest Fire Control in the wake of Heat Wave)

It was observed from the heat waves situation in 2022 that an increased number of forest fire incidents across the Province of Khyber Pakhtunkhwa had erupted. In this context, the Climate Change, Forestry, Environment and Wild Life Department Government of Khyber Pakhtunkhwa issued an Advisory to Divisional Commissioners & Deputy Commissioners of Khyber Pakhtunkhwa for taking mitigation, preventive and preparedness measures before the onset of "Forest Fire" season in Khyber Pakhtunkhwa from 15th April onwards. In this connection, a detail SOP's was also notified for the field formations of the Forest Department.

The Advisory comprised of the following arrangements for Forest Fire control:

- i. Oversight arrangements through a Divisional Forest Fire Management Team (FFMT) headed by the Commissioner and including all stakeholders. The FFMT is to map vulnerabilities in advance, formally assign responsibility to concerned Departments, take punitive measures against culprits for deliberate adverse action, amongst others.
- ii. General arrangements include development of fire lines by Forest Department, support of Rescue-1122 to the fire fighting setup, imposition of Section 144 between May and September banning fireworks/campfire etc, making buffer zones by government installations with removal of grass & brush, awareness to the communities;
- iii. Emergency arrangements, especially for private forests and waste lands, including nomination of "Incident Commander", fire management in state owned forests by Forest Department and other measures.

It was instructed that as soon as possible, the meetings of FFMTs may be called to review the arrangements and coordination as per the SOPs already issued, as well as any further improvements. This will be followed up by regular meetings so that all arrangements are reviewed and updated timely.

The Chief Conservators Forest (I, II & III) & Chief Conservator Wildlife have been advised for the following additional actions:

- (i) With regard to fire lines, these should be planned in advance and wide publicity should be given before initiating them so that the general public knows beforehand that it is a deliberate protective activity;

- (ii) Plotting of forest fires in the last 10 years through GPS towards rough indication of hotspots. This should be aided by completion of Observation Posts where possible (like Mankiyal) and daily observation through drones for any sign of fire, where possible.
- (iii) Rapid Response Teams dedicated to fire-fighting along with their equipments should then be placed as near to the hotspots as possible. Such squads must be headed by the SDFOs concerned and have the required mobility;
- (iv) A mapping of water sources may also be carried out to pre-indicate nearest such sources to hotspots in advance;
- (v) Completion of procurement process for additional fire-fighting equipment and its placement in stores near to the hotspots. Proposal of hand-held grass cutting machines may also be considered for removal of dry grass;
- (vi) Collection and disposal of pine needles on time to avoid chances of fire;
- (vii) Sustained Social Mobilization Campaigns in the concerned communities through village committees, mosques, hujras etc and public representatives. This should be backed by installation of billboards with "precautionary messages", printing of material on that account & its distribution through mosques, public places and other modes (language should be one understood by locals). Further, in specific areas, loud speakers mounted on vehicles should also be used for announcement purposes;
- (viii) For private community forests and Guzara too, making rights holders also responsible and bound for aid in extinguishing of fires;
- (ix) For forestation under BTTP and/or 10-BTTP, capacity building of nighbans must be carried out along with frequent trainings/capacity building of regular staff;
- (x) An updated list of types/classifications of forests may be shared with the FFMT indicating private forests, forests under the domain of cantonment boards etc. so that proper planning is done and responsibilities are assigned.
- (xi) Wherever available, drone cameras may be used for forest surveillance as well as the newly established watch-towers may also be utilized.
- (xii) All Conservators MUST ensure theirs & their Divisional Forest Officers (DFOs) presence in areas of responsibility. This should be checked daily. Any permission to leave area of responsibility should be expressly given by the Chief Conservator Forest (CCF) concerned.
- (xiii) Lastly, all the Conservator of Forests shall ensure timely legal action against the Forest Fire offenders under the relevant section of Law in Designated Forests.

The Additional Deputy Commissioner (Relief & Human Rights) will be the overall lead of the field operations.

10.2.4 Rescue 1122

During the heat wave episode in 2022, the departmental instructions had been passed to Rescue 1122 to keep staff, medicines and other essential equipment in Rescue 1122 Ambulances in order to deal with heat stroke patients.

The detail resource directory of the Rescue 1122 for the year 2023 are placed as **Annexure II**.

10.2.5 Livestock Department

High temperatures and humidity can cause heat stress to animals, just like it does in human beings. It's important to monitor the pets animals, cattle and other animals at the time of heat wave to make sure they remain cool, healthy and safe.

There are several visible signs associated with heat stress in animals including:

- increased effort in breathing or difficulty in breathing.
- excessive panting.
- drooling.
- bright red gums.
- anxious behavior which includes agitation and excessive barking.
- excessive water consumption.
- vomiting or diarrhea.
- weakness, dazed expression or incoherent behavior; and
- collapse or seizure.

It is important to try to keep an animal dealing with heat stress as calm as possible. If symptoms are less severe, immediately move the animal to a cool and shady area. To help bring down body temperature, you can:

- place the animal near a fan;
- wrap the animal in wet, cool towels or place ice packs wrapped in towels on the animal;
- splash cool water on the animal;
- spray the animal's body with a spray bottle filled with cool water; or
- offer water to drink if the animal is not vomiting.

If the animal is showing symptoms related to non-complicated heat stress, the actions above should result in the symptoms improving within about 5 minutes. If the signs worsen over time or the animal appears distressed, it should be taken to veterinary center immediately.

Some types of animals are more susceptible to heat stress and should be more closely monitored, including those that are:

- dark colored and with long or thick coats,
- flat-faced,
- overweight,
- very old or young,
- naturally hyper, anxious, or active, or
- living with underlying medical conditions, such as heart or lung disease.

During the Heat Wave episodes of 2022 the Livestock Department of the Government of Khyber Pakhtunkhwa established 1665 centers at each Veterinary Unit of the province for the treatment of the heat stressed livestock. This year the same practice will be re activated if there is any heat wave forecast in the province.

10.2.6 Civil Defense

Directorate of Civil Defense, Khyber Pakhtunkhwa offices in the district are conducting training of volunteers in Fire Fighting, Search and Rescue, Medical First Aid and established the post of volunteers in each district of the province. Pakistan Civil Defense volunteers' services are available for District Disaster Management unit all over the province during emergencies. Currently, 25,468 numbers of registered volunteers are on board with Civil Defence in the Province who will be kept on alert during forest fire or any other heat wave disaster.

Regarding heat wave, Civil Defense has issued an Advisory to the field formation and volunteers in the province. Moreover, coordination plan of the Chief Wardens (volunteer heads) is placed on **Annexure III**.

10.2.7 Traffic Police

The on-duty traffic police personnel are more vulnerable to heat stroke due to direct exposure to sunlight. The traffic police department has taken stock of the on-duty police personnel and is in the process of making necessary arrangements as follow;

Provision of Information Traffic Police Khyber Pakhtunkhwa			
S.No.	Regions / Divisions	Number of on Duty Traffic Personnel	Available Shades
1.	Peshawar	990	30
2.	Mardan	217	10
3.	Malakand	946	563
4.	Hazara	537	26
5.	Kohat	225	14
6.	Bannu	325	2
7.	D.I.Khan	132	76
Total		3372	721

In order to fill the gap of the resources and to combat any potential heat wave shock the Police Department has shared the resources deficiency with PDMA (placed as **Annexure IV**). The same will be placed before the concerned forum for filling the gap.

10.2.8 Labor Department

The Directorate of Labor (like its administrative Department i.e., Labor Department) is the custodian of the guaranteed rights of the workers i.e. right to organize, right to collective bargaining, participation in the affairs of the respective organization, health & safety, minimum wages, compensation, etc. For realization of its role, it enforces various labor laws. Through the implementation of the labor laws, it ensures compliance to the International Labor Standards.

In case of developing the heat wave situation in the province, Labor Department will carry out all such decisions to safe guard the health of the labor working in different sectors. The details

of the Worker Welfare Hospitals which will provide care to the heat affected workers are shown in **Annexure V**.

10.2.9 Information Department

Information department, Government of Khyber Pakhtunkhwa will implement awareness campaign in close collaboration with Health Department and PDMA. The primary audience for the awareness campaign about heat wave and its precautions will be the general public, who will be provided information about risk characteristics, preventative actions, symptoms (heat cramps, heat exhaustion and heat stroke) and appropriate behavior during a heat wave.

Communication Action Plan for creating awareness regarding heat wave is as under;

Radio: Information Department has a network of FM Radio Stations across the province. These stations will broadcast specially produced Public Service Announcements and special programs on the subject.

Digital and Social Media: Projection of awareness material (Info graphics) on social media platforms. (Face book, Instagram and YouTube etc.)

Print Media: Coverage of events, messages in print media, release of press releases and articles containing awareness material and safeguard measures for public consumption. The key messages that will be communicated to the public to reduce the health impacts of heat wave will be in line with the guidelines of Health Department, Khyber Pakhtunkhwa. Some of the key messages developed by PDMA during 2022 are shown on **Annexure VI**.

10.2.10 Halal Food Authority

During the heat wave the conservation and cleanliness of food in the market is a crucial aspect which can be monitored by the Halal Food Authority regularly. Following are the mapping of food testing laboratories of Halal Food Authority, Khyber Pakhtunkhwa.

Regions	No. of Food Testing Laboratories
Northern Khyber Pakhtunkhwa (Malakand & Hazara Divisions)	Malakand Division – 01
	Hazara Division – 01
Central Khyber Pakhtunkhwa (Mardan, Peshawar & Kohat Divisions)	Mardan Division – 01
	Peshawar Division – 01
	Kohat Division – 01
Southern Khyber Pakhtunkhwa (D.I.Khan & Bannu)	D.I.Khan Division – 01
	Bannu Division – 01
Total	07

10.3 Response Measures and Institutional Responsibilities

10.3.1 Short Term Measures

S.No.	Action	Responsible Agencies
1	Union Council level- Heat Wave Response Units	NDMA / PDMA's and Health Authorities
2	Provision/ Distribution of basic amenities in the heat-wave hit area.	NDMA / PDMA's
3	Establishment of national level Control Room for information and coordinated efforts	NDMA/PDMA's
4	Establishment of Heat-Health Warning System (HHWS) targeting the vulnerable segment of the urban centers	Pakistan Meteorological Department (PMD)
5	Raising heat-health awareness campaigns in the country before the onset of a heat waves.	Ministry of Information and Broadcasting / PMD
6	Green roofs are another method of decreasing the urban heat island effect. Green roof is the practice of having vegetation on a roof. The plants that are on the roof increase the albedo and decrease the urban heat island effect.	Provincial Forest Departments
7	The heat island effect can be counteracted slightly by using white or reflective materials to build houses, roofs, pavements, and roads, thus increasing the overall albedo of the city.	Building and Works departments
8	Public should be educated through awareness messages to drink plenty of water while limiting time in direct sunlight in hot/humid weather or in places with high environmental temperatures, avoid becoming dehydrated and to refrain from vigorous physical activities in hot and humid weather.	Education Departments, Authorities; NDMA / PDMA's
9	Public should be made aware of early signs/symptoms of Dehydration and subsequent evolving signs and symptoms of heat/sun stroke such as muscle cramps, nausea, vomiting, light-headedness and even heart palpitations.	Health Authorities / NDMA / PDMA's
10	The person working under the sun should prevent dehydration and heat stroke by taking time out of the sun drinking plenty of water/fluids. The patients should avoid use of caffeine containing soft drinks and /or tea, which may exacerbate dehydration.	Health Authorities / NDMA / PDMA's
11	People should be made aware of early signs/symptoms of dehydration and subsequent evolving signs and symptoms of heat/sun stroke such as muscle cramps, nausea, vomiting, light-headedness and even heart palpitations.	Health Authorities / NDMA / PDMA's
12	Public should be encouraged to wear hats and light colored, light weight and loose clothes during the hot/humid environmental conditions.	Health Authorities / NDMA / PDMA's
13	The health authorities should be directed to arrange first aid points in case of emergency situation at prominent point with sufficient essential medical supplies. Hospitals should be alerted to stock pile enough medical supplies including intravenous fluids during or before anticipated heat wave in the area	Health Authorities / NDMA / PDMA's
14	Farmers are required to manage crop water accordingly and early harvesting of wheat being advised.	Ministry of National Food Security and Research, Ministry of Water Resources, Agriculture Departments and Irrigation Departments.

10.3.2 Medium to Long Term Measures

S.No.	Action	Responsible Agencies
1	Subjects on heat-wave and related climate induced disasters and Responsible Agency their management may be included in the curriculum at school and college levels.	Ministry of Federal Education and Professional Training.
2	Green spaces may be increased by tree plantation of shed trees in the city on emergency basis.	Provincial Forest Department and HUD and Public Health Education Departments
3	Proper town planning rules and regulations may be observed for all on-going and in future townships.	Provincial HUD and Public Health Education Departments
4	"Cool Centers" facilitated with drinking water, fans etc. may be established at public places and along the main avenues, besides protection and development of tree shaded rest areas.	Districts Administration
5	Pakistan to switch from disaster management to managing the risks, and this must be done well in alignment with the new Sendai Framework for Disaster Risk Reduction (SFDRR, 2015-2030) and well in alignment with Hyogo Framework for Action (HFA, 2005-2015).	NDMA / PDMA's
6	Heat - Health Warning System (HHWS) is proposed in line with WMO guidelines (WMO, 2015)	The system will include important national stakeholders i.e. PMD, National Health Emergency Preparedness Response Network (NHEPRN), Global Change Impact Studies Centre (GCISC), NDMA / PDMA's, NGOs, Academia and Vulnerable Communities.

Annexure I: Detail Resource Mapping of Agriculture Extension Department in case of Heat Wave Emergency in Khyber Pakhtunkhwa

Resources of Agriculture Extension Department														
S.No.	District	Human Resources	Volunteers	Vehicles	Tractors	Trolleys	Hand Sprayer	Power Sprayer	Mini Tractor	Drone Sprayer	Chemical (Pesticides & Fertilizer)	Stores	Any Other	
1	Abbottabad	99	6	3	4	1	5	3	5	0	Yes	5	-	
2	Bannu	36	2	2	2	2	15	2	0	0	Yes	2	-	
3	Buner	118	30	2	2	2	30	10	6	0	Nil	5	-	
4	Battagram	9	0	2	4	2	40	1	8	0	Yes	1	-	
5	Charsadda	129	0	2	3	2	60	5	6	0	Nil	3	3 (Front Blades)	
6	Chitral Lower	20	0	1	0	0	0	4	6	0	Yes	1	-	
7	Chitral Upper	8	0	1	2	2	20	2	7	0	Yes	1	-	
8	D.I.Khan													
9	Dir Lower	50	0	2	2	2	65	3	1	0	Nil	2	-	
10	Dir Upper	22	0	2	4	3	65	5	20	0	Nil	1	-	
11	Haripur	0	0	1	2	1	20	4	0	0	Yes	0	-	
12	Hangu	34	0	2	2	2	65	1	2	0	Yes	0	-	
13	Kohat	41	0	2	5	2	80	4	12	0	Yes	3	-	
14	Karak	65	0	3	4	2	5	0	4	0	Yes	3	-	
15	Kohistan	53	0	1	0	0	30	0	0	0	Nil	0	-	

16	Lakki Marwat	62	0	2	8	4	20	6	5	0	Yes	3	-
17	Mardan	155	10	4	12	6	100	3	5	2	Yes	5	-
18	Mansehra	80	0	3	6	2	60	2	6	0	Yes	1	-
19	Malakand	25	0	2	0	0	30	5	0	0	Nil	0	-
20	Nowshera	91	0	2	6	2	97	5	11	0	Nil	3	-
21	Peshawar	40	0	2	5	2	65	1	10	1	Yes	3	-
22	Swat Upper	126	10	2	2	2	20	2	4	0	Yes	2	-
23	Swat Lower	24	0	2	2	2	50	3	2	1	Nil	3	-
24	Swabi	105	0	1	7	3	50	2	0	1	Nil	2	-
25	Shangla	53	0	1	6	1	98	2	4	0	Nil	0	-
26	Tank	75	0	1	0	0	50	3	0	0	Yes	1	-
27	Torghar	10	0	1	4	0	0	0	1	0	Nil	1	-
28	Khyber	127	12	2	8	0	10	3	0	0	Nil	0	-
29	Mohmand	95	0	1	6	1	10	4	0	0	Yes	0	-
30	Bajaur	12	0	1	5	2	0	1	0	0	Nil	0	-
31	Kurram	39	0	1	2	2	5	0	0	0	Nil	2	-
32	Orakzai	96	20	3	3	3	20	2	0	0	Nil	0	-
33	South Waziristan	143	0	3	8	3	10	3	0	0	Yes	0	-
34	North Waziristan	50	15	1	2	1	5	1	4	0	Nil	1	-
Total:		2092	105	61	128	59	1200	92	129	5	-	54	3

Annexure II: Detail Resource Directory of the Rescue 1122 Khyber Pakhtunkhwa

EMERGENCY RESCUE SERVICES (RESCUE-1122), STATIONS LOCATION			
S.No.	District	No. of Stations	Station Location
1	Peshawar	15	11 Station Near Lahore Bus Stand
			22 Station Near Faqeer Abad Police Station
			33 Station Near Kohati
			44 Near City Hospital Kohat Road
			55 Near Railways Station Cantt
			66 Agriculture Uni Peshawar
			77 Hayatabad Phase 04 Near Complex Hospital
			88 Regi Model Town
			99 Darmangi Warsak Road
			10 Shah Alam Pull
			12 Near Old Haji Camp Adda
			13 Industrial Estate Hayatabad
			14 Badaber
			15 Hazar Khwani Tube Well
			FR Peshawar
			Key Point Sectriate
			Key Point Central Jail
2	Mardan	8	11- Near BKMC Mardan
			22- Town Hall Mardan
			33- Baraf Khana By Pass Road
			44- Khan Qilla Swabi Road
			55- Tehsil Takht Bhai
			66- Tehsil Katlang
			77- Type D Hospital Rustam
			88- Irrigation Office Hathian
			Karki Key Point
			Motorway Key Point
3	D.I.Khan	5	Type-D Hospital Darazinda (FR D.I.Khan)
			Station 11 Din Poor Road Near Drabang Chongi D.I.Khan
			Station 22 Army Cantt D.I.Khan Near CMH
			Station 33 Near Bab E Dera Main Bannu Road D.I.Khan
			Station 44 Saigrri Bangla Chashma Road D.I.Khan (Tehsil Pahar Pur)
			Station 55 Type-D Hospital Darazinda (FR D.I.Khan)
			Key Point Near AIU Opp: High Kot D.I.Khan
4	Swat	9	Rescue Station-11, Tehsil Babozai Saidu Sharif Swat
			Rescue Station -11, Tehsil Babozai Saidu Sharif Swat
			Rescue Station -22, Tehsil Matta Swat
			Rescue Station -33, Tehsil Kabal Swat
			Rescue Station-44, Tehsil Barikot Swat
			Rescue Station-55, Tehsil Khwazakhela Swat
			Rescue Station-66, Tehsil Bahrain Swat
			Rescue Station-77, Tehsil Charbagh Swat
			Sub-Rescue Station-88, Kalam Swat
			Kabeen Jabba

HEAT WAVE CONTINGENCY PLAN 2023

5	Abbottabad	7	Station 11 Opposite G.Post Office Abbottabad
			Station 22 AMC Mandiya Abbottabad
			Station 33 Main Bazar Natiya Gali Abbottabad
			Station 44 Degree Gollege for Boys, Hawaliya Abbottabad
			Station 55 Foodball Ground Nawasher Abbottabad
			Station 66 Khanis Pur Ayyubia Abbottabad
			Key Point 77 Khanis Pur Ayyubia Abbottabad
6	Nowshera	7	11 Station Shobra Chowk
			22 Station Pabbi
			33 Akori
			44 Jaloza
			55 Industrial State Bara Banda
			66 Nizam Pur
			77 Khat Kale
7	Kohat	5	11 Near laiqat momoriyat hostpital TMA Office, Kohat
			22 Union Conciel office Gumbat, Kohat
			33 Type D, Hospital Lachi, Kohat
			44 Dara Adam Khel Egal Port, Kohat
			55 Shakardara, Kohat
8	Haripur	3	Station 22 (Khanpur)
			Station 11 (Haripur)
			Station-33
9	Lower Chitral	2	11 Station TMA Office Jughoor Dawashish District Lower Chitral
			22 Station Daroash Vartanaty Hosptipal Daroshd Fort Road Lower Chitral
10	Upper Chitral	2	11 Station TMA Building Boni Upper Chitral
			22 Station Mastuj Location Old TB Blindess and Leprosy Canter Mastuj Upper Chitral
11	Charsadda	2	11 Station Near Judicial Complex Mardan Road, District Charsadda
			22 Tarnab Road Near Land Mark School Peshawar Road Charsadda
			1 Key point Near Islambad Tool Plaza District Charsadda
12	Swabi	3	Tehsil Complex Shahmansoor District Swabi
			Tehsil Complex Razar shewa Adda Swabi
			Tehsil Complex Topi Swabi
13	Karak	3	11 Station KDA Tehsil Karak
			22 Station Tehsil Banda Dawood Shah Karak
			33 Takhte Nasrati, THQ Hospital Karak
			1 Key Point Sabir Abad (Type D Hospita)
			2 Key Point Lataniber (Type D Hospital)
			3 Key Point DHQ Hospital Karak
			4 Key Point Gurgori Banda Daudzai
14	Malakand	2	Station 11 Zafar Park Batkhela, Malakand
			Station 22 Near Army Check Post Dargai Malakand
15	Hangu	2	11 Station Near DHQ Hosptial Bagato Road Hangu
			22 Station Near Tehsil Buliding TIL Hangu
16	Bajaur	2	Station 11 Near Jannah Bus Terminal Shandai Morh Bajaur

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			Station 22 Civil Colony Nawagai Bajaur
			Key Point Near Old Press Club Khar Bazar Bajaur
17	Mensehra	3	Station 11 Kashmir Road, Main Bazar Mansehra City
			Station 22 opposite to City Thana Mansehra
18	Buner	3	11 Old Education Office Daggar
			22 Peer baba, Bunir
			33 Chanarh Swari, Bunir
19	Khyber	2	Station 11 Jamrod Tehsil, Jamroad
			Station 22 Near TMA Bara Main Bazar Barar
20	Kohistan Upper	1	Station 11 DHQ Hospital Daso Kohistan Upper
21	Kohistan Lower	1	Rescue - 1122 Lower Kohistan Pattan Near DC Office
22	Shangla	2	11 Station Near Swat University complex, Lilowai, Shangla
			22 Station Near Chaina Comp Konshi Besham, Shangal
23	Dir Upper	3	11 Station Dir Upper
			22 Station Wari Dir Upper
24	Dir Lower	3	11 Station Balambat Near National Bank Police Line
			22 RHC Khaal
			33 Lal Kilal
25	Bannu	4	11 Station Sports Complex Bannu City
			22- BHO Ghorī Wala, District Bannu
			33 Station FR Gumbati District Bannu
			1 Key Point RAC Domail Bannu, Tehsil Domal, District Bannu
			2 Key Point Central Jail Bannu District Bannu
			3 Key Point Type B, Hospital FR Janikhail Bannu
26	Mohmand	3	11 Station Head Quarter Ghalani Tehsil Haleem Zai District Mohmand
			22 Station Yakagund Digree College Tehsil Yakgund District Mohmand
			33 Station Iakaro BHU Tehsil Safi District Mohmand
27	Lakki Marwat	4	11 Station Town Ship Tajazai Lakki Marwat
			22 Station City Hospital Lakki Marwat
			33 Station Norag Yateemkhana, (Shelter Home) District Lakki
			11 FR Station FR 11 Batani District Lakki
			1 Key Point BHQ Titar Khail District Lakki, Tehsil Gazni Khail
			2 Key Point DHQ Hospital Lakki Marwat
			3 Key Point City Hospital Type C District Lakki
			4 Key Point RHC Landiwah District Lakki
			5 Key Point THQ/CAT-C Hospital Serai Naurang
			6 Key Point Tajori Key Cat-D Hospital
28	Kurram	2	Station 11 Near Grade Station, till Para Chinar Road Upper Kurram
			Station 22 Sadda Contoment Road Near THQ Hospital Lower Kurram
			1 Key Point DHQ Parnachinar Hospital
			2 Key Point THQ Sadda Hospital Lower Kurram
29	Tank	2	11 Station Sectriat D.I.Khan Road
			22 Station Civil Hospital Jandola

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			Key Point DHQ Tank
30	Orakzai	2	11 Station Kalaya Head Quarter Lower Orakzai
			22 Station Type D, Ghaljo Hospital, Upper Orakzai
31	Battagram	1	11 Battagram Old TMA Office
32	South Waziristan	2	11 Station Agree Park Wana South Waziristan
			22 Station Sub Division Ladha, South Waziristan
33	North Waziristan	1	11 Station Miranshah Tehsil, North Waziristan
34	Tor Ghar	1	Staion 11 Near Police Line, Main Bazar Tor Ghar
Total			117

RESCUE 1122 STAFF MAPPING					Date 03-10-2022		
S.No.	District	Actual Staff	Covid-19 Staff	Total Staff	Health Drivers	Station	Key Point
1	Peshawar	641	90	731	34	15	2
2	Mardan	560	58	618	14	8	2
3	D.I.Khan	148	23	171	14	5	1
4	Swat	263	57	320	23	9	0
5	Abbottabad	127	16	143	16	7	0
6	Nowshera	263	30	293	22	7	0
7	Kohat	113	17	130	10	5	0
8	Haripur	70	10	80	11	3	1
9	Upper Chitral	32	7	39	4	2	0
10	Lower Chitral	65	21	86	7	2	0
11	Charsadda	171	44	215	17	2	1
12	Swabi	183	39	222	18	3	2
13	Karak	118	26	144	16	3	4
14	Malakand	172	22	194	9	2	0
15	Hangu	85	11	96	3	2	0
16	Bajaur	165	10	175	7	2	1
17	Mansehra	72	21	93	15	3	0
18	Buner	171	15	186	10	3	0
19	Khyber	183	19	202	6	2	0
20	Kohistan Upper	23	5	28	0	1	0
21	Kohistan Lower	60	1	61	3	1	0
22	Shangla	144	15	159	9	2	0
23	Dir Upper	122	18	140	16	3	1
24	Dir Lower	95	23	118	18	3	0
25	Bannu	167	17	184	3	4	2
26	Mohmand	127	26	153	6	3	3
27	Lakki Marwat	235	9	244	15	4	6
28	Kurram	76	3	79	4	2	2
29	Tank	72	0	72	9	2	2
30	Orakzai	77	1	78	8	2	0
31	Battagram	46	7	53	8	1	0
32	South Waziristan	66	0	66	8	2	0
33	North Waziristan	99	0	99	10	1	0
34	Tor Ghar	35	0	35	0	1	0
Total		5,046	661	5,707	373	117	30

HEAT WAVE CONTINGENCY PLAN 2023

CONTINGENCY PLAN 2022 (DETAIL OF RESCUE STATIONS, STAFF, OPERATIONAL MACHINERY AND VEHICLES, ERS RESCUE-1122)	Total	19	25	33	40	32	44	380
	Torghar						1 1	4
	Orakzai	1	1	1	1	0	1 1	7
	Tank	1	1	2	1	1	1 1	2
	Kurram	1	1	1	0	1	1 1	7
	Battagram	0	1	3	0	0	1 1	5
	North Waziristan	1	1	1	1	0	1 1	4
	South Waziristan	1	1	1	1	0	1 1	4
	Bannu	0	1		0	1	3	2
	Lakki Marwat	0	1	1	1	0	0	6
	Shangla	1		1	2	0	2 2	5
	Lower Dir				1		2	11
	Upper Dir	1	1	1	1	0	0	9
	Mohmand				1		1	12
	Mansehra				2		1	5
	Buner	0	1	1	1	0	2	7
	Kohistan Upper	0	1	1	0	0	1	5
	Kohistan Lower	1	1	2	0	0	1	7
	Malakand	1	2	2	0	0	0	17
	Bajaur	1	1	1	1	2	2	8
	Khyber	1	1	1	0	0		2
	Chitral Upper				1	1	1	10
	Chitral Lower				2	1	1	10
	Haripur	0	1	2	3	2	1	6
	Charsadda	1	1	1	2	2	3	18
	Kohat	1	1	2	1	2	0	9
	Nowshera				2	3	2	25
	Karak	1	1	1	1	2	1	0
	Hangu	1	1	1	1	2	1	0
	Swabi	1	1	1	1	0	0	8
	D.I.Khan	1	1	2	2	2	1	28
	Abbottabad	1	1	2	3	3	0	4
	Swat	1	1	1	3	2	1	58
	Mardan					1	4	20
	Peshawar				4	4	6	55
	Rescue Equipment's	Mass Tower/ Light	Concert Cutter (K-12)	Chain Saw	Dewatering Pump (Portable)	Dewatering Pump (Heavy Duty)	SCUBA Set (Complete Set)	Life Jacket
	S.#	1	2	3	5	6	7	8

9	Life Line (Life buoy)	25	4	5	2	5	1	0	0	15	2	8	3	5	4	2	5	2	2	1	2	2	2	2	5	2	2	1	1	2	2	4	2	2	124	
10	OBM Machine	10	2	1	1	10	1	3	3	7	1	5	9	4	2	1	2	1	1	1	1	2	2	4	3	1	2	1	1	1	1	1	1	88		
11	Fiber Glass Boat	5	5	0	0	5	0	0	0	5	0	4	6	1	1	0	1	0	0	0	1	0	1	1	0	1	0	0	0	0	0	0	0	37		
12	Inflatable Boat	9	4	0	1	5	1	3	3	2	1	2	3	2	1	0	2	1	1	1	1	2	2	3	3	1	0	1	1	1	1	1	1	62		
13	Life Jacket (Inflatable)	15	5	0	0	28	0	0	0	5	0	5	7	3	2	0	4	0	0	3	2	0	0	0	3	0	4	0	0	0	0	0	0	86		
14	Wet Suit	6	3	0	0	3	1	1	1	4	0	1	1	3	2	0	4	0	1	1	2	1	1	2	3	0	1	1	1	0	1	1	1	47		
15	Repelling Rope	3	2	0	0	3	2	0	0	2	1	2	6	1	1	2	6	2	2	8	1	5	0	3	2	3	2	2	1	1	2	8	2	0	74	
16	Static Rope	4	2	2	2	1	3	0	0	3	1	0	4	1	1	4	2	0	1	8	1	16	1	3	3	3	1	1	4	5	1	2	1	81		
17	Rain coat	6	7	50	3	95	3	0	0	8	7	35	15	5	3	0	4	0	9	4	3	10	5	5	0	2	2	20	50	4	4	0	50	409		
Total Rescue Equipment's		152	59	125	23	192	24	14	14	83	29	90	69	39	30	14	46	28	29	11	40	22	52	26	40	28	21	23	35	66	24	29	23	19	62	1581

Annexure III: Coordination Plan of Civil Defense Chief Wardens (Volunteer Heads of Districts) in Khyber Pakhtunkhwa

LIST SHOWING NAMES OF DISTRICT CHIEF WARDENS IN KHYBER PAKHTUNKHWA

S.No.	District	Name of Chief Warden	Mobile No.
1.	Peshawar	Syed Fayyaz Ali Shah	0300-8589700
2.	Charsadda	Mr. Fahad Azam	0300-9393896
3.	Mardan	Mr. Inayat Bacha	0310-5042377
4.	Abbottabad	Mr. Mushtaq Ahmad Ghani	0300-8110010
5.	Kohat	Mr. Saleem Qureshi	0333-9614882
6.	Swat	Engr. Umar Farooq	0333-9241667
7.	Malakand	Mr. Momin Khan	0333-3323394
8.	Dir Upper	Mr. Muhammad Israr	0345-9426233 / 0323-7663303
9.	Dir Lower	Mr. Javed Iqbal	0342-9090914
10.	Battagram	Mr. Saif ur Rehman Dishani	0300-3524145
11.	Nowshera	Mr. Hamid Kattak	0342-6224278 / 0300-9857700
12.	Bannu	-	-
13.	Chitral Lower	Mr. Muhammad Farooq	0332-9991555
14.	Swabi	Mr. Murad Ali Khan	0345-8328428
15.	Kohistan Lower	Mr. Abdul Qayum	0346-8033350
16.	Kohistan Upper	Mr. Ihsan Ul Haq	0346-8480800
17.	Torghar	-	-
18.	Hangu (Thall)	Mr. Rafiq Badshah	0300-5652557
19.	Mansehra	Mr. Awais Sultan	0333-5026620
20.	Haripur	Mr. Mazhar Bukhari	0312-5208865
21.	Buner	Mr. Taj Muhammad	0333-9691191
22.	Shangla	Mr. Syed Sajid Shah	0349-2299009
23.	Karak	Mr. Ijaz Qamar	0314-9079795
24.	Lakki Marwat	-	-
25.	Tank	Mr. Gulfam Haider	0341-9392248
26.	Bajaur (Khar)	Nawabzada Naeem Uddin Khan	0300-5832390
27.	Khyber (Landikotal)	Malik Abdul Qayyum	0333-5554216
28.	Kurram (Parachinar)	Malik Ali Hussain	0300-9774558
29.	North Waziristan (Miranshah)	Mr. Akbar Ali Khan	0333-9444470
30.	South Waziristan	Mr. Taj Muhammad Wazir	0300-5891894
31.	Mohmand (Ghalanai)	Mr. Fazli Hadi (Additional Chief Warden)	0345-6272840
32.	Orakzai (Kalaya)	Mr. Zafar Habib	0332-8383963
33.	Chitral Upper	Mr. Ahsan-ul-Haq	0344-9596567
34.	Kolai Palas	Mr. Imran (Dy: Chief Warden)	0323-9909731
35.	D.I.Khan	Mr. Mushtaq Ahmad	0333-9969638

Annexure IV: Resource Gape of the Traffic Police of the Government of Khyber Pakhtunkhwa

OFFICE OF THE
DEPUTY SUPERINTENDENT OF POLICE
EMAIL: DSPTRAFFIC464@GMAIL.COM

NO ⁻⁹⁰88/R DATED PESHAWAR 30/03/2023

The Director General,
PDMA ,Peshawar.

Subject: **HEAT WAVE CONDITIONS PREDICTION IN KHYBER PAKHTUNKHWA DURING COMING SEASON**

Memo: Kindly refer to your Dy.No PDMA/AD/(DRM)/HW/I-153/2023 subject cited above.

Respected sir,


It is submitted that city traffic Police is one of the well organized branch of Police department. They perform their duties on roads for the smooth flow of traffic and to avoid public from traffic jamming. As you know, the season is changing and the weather is getting warmer day by day. Due to high temperature sometimes it is very difficult for us to perform our duty.

Therefore it is requested to provide the following requirements for upcoming heat wave.

1.5000 face masks
2.60 water coolers
3.100 umbrellas for duty Points.

Thanks in anticipation,

Copy for Information.
1. Chief Traffic Officer, Peshawar.
2. SP cantt, City Traffic Police, Peshawar.


(Zaka Ullah)
Dsp Hayatabad
City Traffic Police, Peshawar

Annexure V: Medical Units of the Labor Department in Khyber Pakhtunkhwa

A. MEDICAL UNITS IN NOWSHERA ZONE

1. Hospital (25 beds) Industrial Estate, Gadoon Amazai.

Medicare Centers:

1. Labour Colony Amangarh, Nowshera.
2. Labour Colony, Mardan
3. Labour Colony, Takht Bhai.
4. Shaidu Sharif Mingora Swat.
5. Industrial Estate, Risal Pur, Distt: Nowshera.
6. G.T.Road, Shaidu Jehangira.
7. Ismaila, Distt.Swabi
8. Dagar Chowk, Gokan Road, District Bunir
9. Dargai Sakhakot, District Malakand

Medical Posts:

1. Pabbi, Distt. Nowshera.
2. Chota Lahore, District Swabi.

B. MEDICAL UNITS IN D.I.KHAN ZONE

Medicare Centers:

1. Tank Road, D.I.Khan.
2. Kotka Khan Sherin Ghoriwala, Bannu.
3. Miran Sugar Mills, D.I.Khan.
4. Al-Moiz Sugar Mills, D.I.Khan.
5. Chashma-I, Sugar Mills, D.I.Khan

Medical Posts:

1. Niazi Bus Stand, Opp: Bannu Ada, D.I.Khan City.
2. Chashma-II, Sugar Mills, D.I.Khan.
3. Sarai Naurang Bannu.
4. Bannu Woolen Mills, Bannu.

C. MEDICAL UNITS IN HARIPUR ZONE

Medicare Centers:

1. Khalabat Township, Haripur.
2. Industrial Estate, Hattaar Phase-1, Haripur.
3. Industrial Estate, Hattaar Phase-4, Haripur.
4. Industrial Estate, Hattaar Phase-5, Haripur.
5. Telephone Industries of Pakistan, Haripur.
6. Pakwal Chowk, Near Grid Station, Mansehra
7. Ibal Road Supply, Abbottabad

Medical Posts:

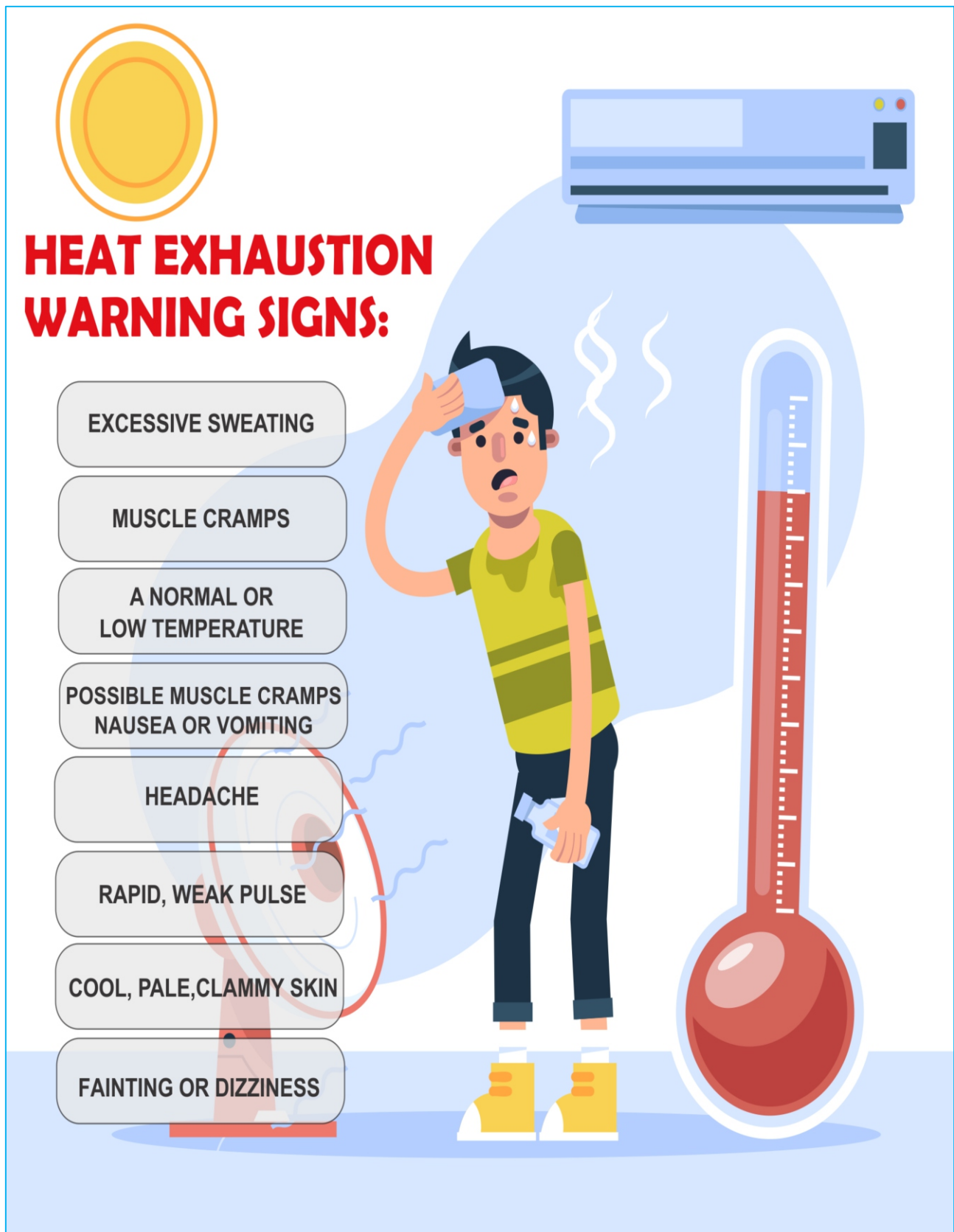
1. Sarai Saleh, Haripur.
2. Havelian, Haripur.

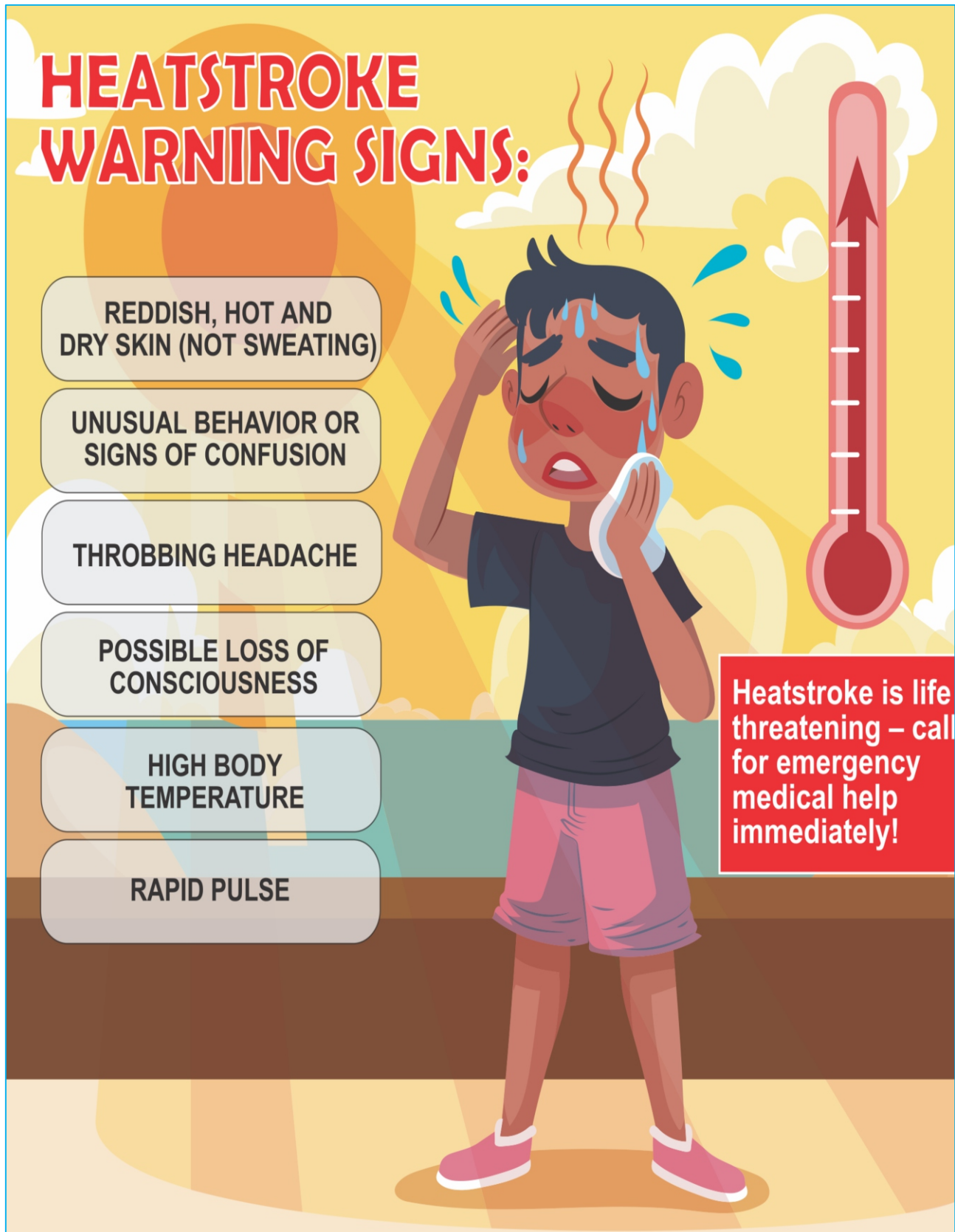
D. MEDICAL UNITS IN PESHAWAR ZONE

1. Polyclinic: (24 beds) Small Industries Estate, Kohat Road, Peshawar
2. Dental Care Unit: MCC, Kohat Road, Peshawar.

Medicare Centers:

1. Small Industries Estate, Kohat Road, Peshawar.
2. Industrial Estate Hayatabad, Peshawar.
3. Labour Colony, Charsadda.
4. Near Kohat Texil Mills, Kohat.
5. Khanzana Sugar Mills, Distt: Peshawar.





HEATSTROKE WARNING SIGNS:

REDDISH, HOT AND
DRY SKIN (NOT SWEATING)

UNUSUAL BEHAVIOR OR
SIGNS OF CONFUSION

THROBBING HEADACHE


POSSIBLE LOSS OF
CONSCIOUSNESS

HIGH BODY
TEMPERATURE


RAPID PULSE

Heatstroke is life
threatening – call
for emergency
medical help
immediately!


FIRST AID FOR HEAT EXHAUSTION




PLACE THE PERSON IN A COOL, AIR-CONDITIONED, SHELTERED PLACE, IF POSSIBLE.



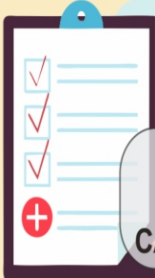
A CHILD CAN BE GIVEN A COOL BATH.



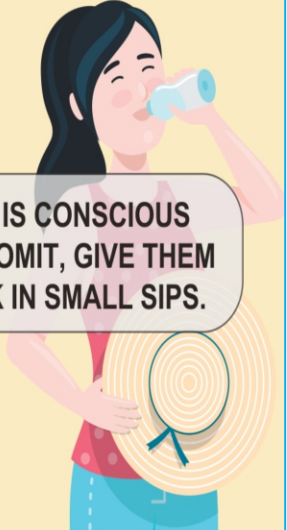
PUT THE PERSON IN A COMFORTABLE POSITION TO REST




CAREFULLY MONITOR THE PERSON FOR HEART-RELATED DISTRESS AND COMFORT THE PERSON UNTIL HELP ARRIVES.



CARRY OUT A COMPLETE CHECK-UP OF THE PERSON, TAKE THEIR TEMPERATURE AND CARRY OUT THE NECESSARY RESCUE MEASURES.



IF THE PERSON IS CONSCIOUS AND DOES NOT VOMIT, GIVE THEM WATER TO DRINK IN SMALL SIPS.



SEEK MEDICAL ADVICE AND RESPECT THE ADVICE GIVEN

Annexure VI: Awareness Messages by PDMA

Heat Stroke



Who is at Risk?

Seniors, Children, Sportsman, Labour

Preventive Measures

Avoid Direct Heat Exposure, Drink Plenty of Water & Juices, Take Cold Water's Showers, Avoid Hot Beverages, Consult Doctor in Emergency

Plan Trees, Protect Environment

Signs & Symptoms

No Sweating, Hot, Red & Dry Skin, Nausea & Vomiting, Extreme Thirst, Dizziness, Unconsciousness

091-9213959, 091-9213845, 1700

پراونشل ڈیزاسٹر مینجمنٹ اتھارٹی خیبر پختونخوا



پی ڈی ایم اے اپڈٹس

خیبر پختونخوا میں آئندہ 4 سے 5 دنوں کے دوران درجہ حرارت معمول سے 5-07 سنی گریڈ بڑھنے کا امکان۔ محکمہ موسمیات اپر اور لوئر چترال، کوہستان، اپر کے برفانی علاقوں میں گرمی کی لہر کی صورت حال پیدا ہونے کا امکان۔

گرمی کی لہر سے برف کے پگھلنے کی شرح بڑھنے سے گلاف ایونٹ / فلت فلڈ کا خدشہ۔ محکمہ موسمیات

پراونشل ڈیزاسٹر مینجمنٹ اتھارٹی خیبر پختونخوا

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تحفظ ماحولیات، جنگلات و جنگلی حیات

جنگلات ماحول کو صاف ستھرا رکھنے میں اہمیت کی حامل ہیں۔ جنگلات کے بے شمار ماحولیاتی اور معاشی فوائد کے پیش نظر ان کی اہمیت مسلمہ ہے۔ جنگلات کی کثرت سے ماحولیاتی آلودگی، زمینی کٹاؤ اور سیلابوں سے ہونے والے نقصانات کا تدارک بھی ہوگا۔ شجرکاری کی اہمیت، افادیت کو معاشرے کے ہر فرد بڑے، بچوں، خواتین اور جوانوں میں اس حوالے سے شعور جاگر کرنے کی سخت ضرورت ہے۔ جنگل و جنگلی حیات قدرت کا ایک انمول شاہکار ہے جو کہ دنیا کے بہت سے علاقوں میں پائے جاتے ہیں۔

ضروری ہدایات پر عمل کریں۔

- * زیادہ سے زیادہ درخت لگائیں تاکہ ماحولیاتی آلودگی میں کمی لائی جاسکے۔
- * ہر سال شجرکاری مہم کے دوران جنگلوں میں نئے درخت لگا کر اپنے اور اپنے آنے والے نسلوں کی بقاء و سلامتی یقینی بنائیں۔
- * جنگلی حیات کے لیے رضا کارانہ طور پر پانی کا بندوبست کریں۔
- * جنگلوں میں آگ نہیں جلانے کی غرض سے جاتے ہوئے اپنے ساتھ کھانے پینے کی تیار اشیاء ساتھ لے جائے۔
- * استعمال کی چیزیں (پلاسٹک کے تھیلے، جوس کے ڈبے وغیرہ) جنگل میں نہ پھینکا کریں تاکہ جنگلی ماحول خراب نہ ہو۔
- * باشعور عوامی طبقے اپنے ذمہ داریوں کا تعین کر کے لوگوں میں شعور جاگر کرنے کی کوشش کریں تاکہ رضا کارانہ طور پر لوگ اپنے ذمہ داریوں اور قومی اثاثوں کے خیال رکھا کریں۔



عوام سورج کی روشنی میں باہر نکلتے ہوئے احتیاطی تدابیر اختیار کریں۔

- بلا ضرورت سفر سے اجتناب کریں۔
- دھوپ سے بچیں اور سایہ دار جگہ پر روکیں۔
- پانی کا استعمال زیادہ کریں۔
- کسان فصلوں کے لیے پانی کا مناسب انتظام کریں۔
- سرکودھانچے اور نرم و ہلکے کپڑے پہنیں۔

پرائنشل ڈیزاسٹر مینجمنٹ اتھارٹی
حکومت خیبر پختونخوا

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عوام سورج کی روشنی میں باہر نکلتے ہوئے احتیاطی تدابیر اختیار کریں۔

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- پانی کا استعمال زیادہ کریں
- سرکودھانچے اور نرم و ہلکے کپڑے پہنیں
- کسان فصلوں کے لیے پانی کا مناسب انتظام کریں
- طبیعت بگڑنے کی صورت میں قریبی ڈاکٹر یا ہسپتال سے رجوع کریں
- یاد رکھیں شدید گرم موسم میں بچوں اور بالخصوص بزرگوں کو زیادہ احتیاط کی ضرورت ہے

پرائنشل ڈیزاسٹر مینجمنٹ اتھارٹی
حکومت خیبر پختونخوا

Contact Directory for Heat Wave (2023)

PDMA KHYBER PAKHTUNKHWA				
S.No.	Name / Designation	Office	Mobile	Fax
1	Mr. Jannat Gul Afridi, Director General	091-9213855	0310-5880999	091-9219637
2	Mr. Muhammad Rehman, Director Relief	091-9213890	0345-9355002	
3	Mr. Sajid Imran, Director Rehabilitation	091-9216221	0300-8582395	
4	Mr. Muhammad Amin, Director (DRM)	091-9219628	0333-9278363	
5	Mr. Muhammad Iqbal, Director (HR & Admin)	091-9211805	0333-9841187	
6	Mr. Zia Ur Rehman, Director (CEW)	091-9216532, 9216403	0348-8988551	091-9216520
7	Mr. Yasir Nisar (AD Procurement)	091-9219635, 9219636	0321-5778404	091-9219637
8	Mr. Abdul Rehman Shah, AD (Warehouse)		0333-9733456	
9	Mr. Taimur Ali, AD (Focal Person Media)		0346-4081890	
10	Mr. Fahad Tahir, Incharge PEOC		0311-9281272	
11	Mr. Imran, AD (Admn)		0345-9456782	
12	PEOC, (Control Room)	091-9219635/36		
13	Mr. Sahibzada Saleem, Deputy Director (DRM)	091-9219628	0333-9419622	091-9219637
14	Mr. Hammad Afridi, AD DRM (R&HA)		0332-9575544	
15	Mr. Ismail Khan, DRR Specialist		0313-9297005	
16	Mr. Sajid Ali, Coordinator DRM		0345-9290907	
17	Mr. Waqar Ali Shah, MIS Officer		0346-4619665	

DIVISIONAL REPORTING OFFICERS OF PDMA KHYBER PAKHTUNKHWA				
S.No.	Name	Designation	Divisions	Contact No.
1	Muhammad Umar Khan	Reporting Officers	Mardan	0345-9373099
2	Salman Mulk		Malakand	0334-9023995
3	Maqsood Anwar		Kohat	0345-9052824
4	Ibrahim		Hazara	0333-9055254

DISTRICT COORDINATORS COMPLEX EMERGENCIES WING (CEW), PDMA, KHYBER PAKHTUNKHWA			
S.No.	Name	District	Contact No.
1	Mr. Zia Rehman Afridi	Khyber	0300-5969632
2	Mr. Khalid Salim	North Waziristan	0336-9262630
3	Mr. Said Umar	South Waziristan	0345-9898203
4	Mr. Sheraz Bacha	Kurram	0300-9333262 / 0333-9333262
5	Mr. Adnan	Bajaur	0346-9863780 / 0308-9161207
6	Mr. Shah Daraz	Orakzai	0346-9445333
7	Mr. Sajid	Mohmand	0333-2217680

HEAT WAVE CONTINGENCY PLAN 2023

COMMISSIONERS KHYBER PAKHTUNKHWA

S.No.	Name	Division	Office	Fax	Mobile
1	Mr. Shahid Ullah Khan	Malakand	0946-9240226, 9240185	0946-9240229-178	0333-9744944
2	Mr. Mutahir Zeb	Hazara	0992-9310111 / 9310444	0992-9310500	0333-9017359 / 0333-5055181
3	Mr. Yousaf Rahim	Mardan	0937-9230572-73	0937-9230578	0300-8581100
4	Mr. Riaz Khan Masud	Peshawar	091- 9211337	091-9214085	0300-8599055
5	Mr. Muhammad Ali Shah	Kohat	0922-9260002 / 9260001	0922-9260105	0333-3002345
6	Mr. Pervaiz Sabat Khel	Bannu	0928-9270044 / 9270220	0928-9270041	0333-9118803
7	Mr. Aamir Afaq	D.I.Khan	0966-9280351	0966-9280352	0346-9072848

DEPUTY COMMISSIONERS KHYBER PAKHTUNKHWA

S.No.	District	Name of Officer	Office	Residence	Fax	Mobile	Whatsapp No.
1	Abbottabad	Mr. Khalid Iqbal	0992-9310200 / 01-24	0992-9310464	0992-9310202	0346-9264401	0346-9264401
2	Bajaur	Mr. Muhammad Anwar Ul Haq	0942-220559	0942-220558	0942-220388	0345-5576888	0345-5576888
3	Bannu	Mr. Manzoor Ahmad	0928-9270032	0928-9270032	0928-9270079	0346-9111123	0346-9111123
4	Battagram	Mr. Tanveer ur Rehman	0997-310030	0997-310136	0997-310051	0333-5705222	0333-5705222
5	Buner	Mr. Arshad Qayyum Barki	0939-510450	0939-510888	0939-510427	0300-5322919	0300-5322919
6	Charsadda	Mr. Adnan Farid	091-9220024	091-9220020	091-9220021	0300-5973761	0300-5973761
7	Chitral Lower	Mr. Muhammad Ali	0943-412055 / 412519 / 412368	0943-412519	0943-412421	0333-9000677	0333-9000677
8	Chitral Upper	Mr. Khalid Zaman	0943-470355		0943-470356	0342-1114816	0342-1114816
9	D.I.Khan	Mr. Mansoor Arshad	0966-9280116	0966-9280022	0966-9280110	0300-8814808	0300-8814808
10	Dir Lower	Mr. Iftikhar Ahmad	0945-9250003 / 09459250031	0945-9250002	0945-9250001	0333-9399925	0333-9399925
11	Dir Upper	Mr. Gohar Zaman	0944-880394	0944-880104	0944-881130	0333-9186123	0333-9186123
12	Hangu	Mr. Fazal Akbar	0925-621175	0925-623968	0925-620050	0345-9003428	0345-9003428
13	Haripur	Mr. Aun Haider Gondal	0995-920200	0995-611149	0995-615412	0321-5771159	0321-5771159
14	Karak	Mr. Ahmad Zaib	0927-210825/828, 0333-9713050	0927-210825	0927-210925	0331-4313131	0331-4313131
15	Khyber	Mr. Abdul Nasir	9211901/4	9211904	9211900	0345-9088004	0345-9088004

HEAT WAVE CONTINGENCY PLAN 2023

16	Kohat	Mr. Azmat Ullah	0922-9260268	0922-9260031	0922-9260032	0333-9302515	0333-9302515
17	Kohistan Lower	Mr. Rafique Khan	0998-405091	0998-405113	0998-405092	0330-7400001	0330-7400001
18	Kohistan Upper	Mr. Irfan Ullah	0998-407002	0998-407193	0998-407001	0342-1114589	0342-1114589
19	Kolai Pallas	M. Hakmat Ullah	PTCL Connection not available			0345-9774280	0345-9774280
20	Kurram	Mr. Saif Ul Islam	0926-310599 / 313532 / 310766	0926-310599	0926-10520/31 1797	0300-0707111	0300-0707111
21	Lakki Marwat	Mr. Abdul Hadi	0969-538330-1	0969-538331	0969-538333	0304-4466565	0304-4466565
22	Malakand	Mr. Shahab M Khan	0932-452080	0932-452043	0932-452105	0300-5933164	0300-5933164
23	Mansehra	Mr. Bilal	0997-920174	0997-920174	0997-305513	0349-5014194 2	0349-50141942
24	Mardan	Cpt (R) Abdur Rehman	0937-9230048	0937-9230048	0937-9230303	0333-8181828	0333-8181828
25	Mohmand	Mr. Ehtisham Ul Haq	0924-290001 (Adc 0924-290189)	0924-290002	0924-290075	0323-5003839	0323-5003839
26	North Waziristan	Mr. Rehan Gul	0928-300798	0928-300798	0928-00642/30 0600	0346-8298525	0346-8298525
27	Nowshera	Mr. Kabir Afridi	0923-9220099	0923-9220098	0923-9220159	0333-8393939	0333-8393939
28	Orakzai	Mr. Muhammad Tayyab Abdullah	0925-690008/3	0925-680003	0925-690007	0333-9103510	0333-9103510
29	Peshawar	Mr. Shah Fahad	091-9212302	091-9211338	091-9211418	0333-9680299	0333-9680299
30	Shangla	Mr. Hasan Abid	0996-850005/850911	0996-850008	0996-850006	0321-5722588	0321-5722588
31	South Waziristan	Mr. Ashfaq Khan	0963-510364/510386	0963-510386	0963-510442, 0965-10296/21 0748	0300-9040564	0300-9040564
32	Swabi	Mr. Furqan Ashraf	0938-920006	0938-221220	0938-221500	0333-6682044	0333-6682044
33	Swat	Mr. Irfan Ullah Khan	0946-9240340/337	0946-9240338	0946-9240329	0333-9734578	0333-9734578
34	Tank	Mr. Shoiab	0963-511326	0963-511326	0963-510300	0337-8623438	0337-8623438
35	Tor Ghar	Mr. Zia Ur Rehman II	(Faisal Latif) 0346-9708912	0340-0562010	0997-580188	0333-9596387	0333-9596387

ADDITIONAL DEPUTY COMMISSIONER (RELIEF) KHYBER PAKHTUNKHWA

S.No.	Name	District	Mobile Phone	Whatsapp
1	Rabia Sajjad (ADC Relief)	Abbotabad	0340-0907019	0340-0907019
2	Mr. Hamid Iqbal (ADC Relief)	Bannu	0345-9563000	0345-9563000
3	Mr. Hammad Haider (ADC Relief)	Battagram	0315-7639996	0315-7639996
4	Mr. Latif ur Rehman (ADC Relief)	Buner	0333-9112385	0333-9112385
5	Mr Usman Jillani (ADC Relief)	Charsadda	0300-9003888	0300-9003888
6	Mr. Ubaid Ullah (ADC Relief)	Chitral Lower	0333-9327929	0333-9327929
7	Mr. Fida Ul Karim (ADC G) Additional Charge	Chitral Upper	0348-4344944	0348-4344944
8	Mr. Ahad Yousaf (ADC Relief)	D.I.Khan	0333-9634842	0333-9634842
9	Mr. Tariq Hussain (ADC Relief)	Dir Lower	0345-9531112	0345-9531112
10	Mr. Amir Liaqat (ADC G) Additional Charge	Dir Upper	0333-8999185	0333-8999185
11	Mr. Faheed Ullah (ADC Relief)	Hangu	0334-8810907	0334-8810907
12	Muhammad Abid (ADC Relief)	Haripur	0333-5056346	0333-5056346
13	Mr. Moeen Ud Din (ADC Relief)	Karak	0343-9316718	0315-9982233
14	Mr. Abdul Rauf (ADC Relief)	Kohat	0333-9156373	0333-9156373
15	Mr. Bilal Nasir (ADC Relief)	Kohistan Lower	0314-9199466	0314-9199466
16	Mr. Imran Zia (ADC Relief)	Kohistan Upper	0306-5615850	0306-5615850
17	Mr. Ishtaiq Ahmed Khan (AC HQ) Look After Charge	Kolai Pallas	0300-9348675	0300-9348675
18	Mr. Habib (ADC Relief)	Lakki Marwat	0333-3000195	0333-3000195
19	Muhammad Umar (ADC Relief)	Malakand	0313-9427627	0313-9427627
20	Mr. Ishtiaq Sultan (ADC Relief)	Mansehra	0342-7865248	0342-7865248
21	Ms. Lubna Shah zaman (ADC Relief)	Mardan	0336-8389830	0336-8389830
22	Mr. Umar Bin Riaz (ADC Relief)	Nowshera	0322-5169626	0322-5169626
23	Mr. Imran Khan (ADC Relief)	Peshawar	0333-0506962	0333-0506962
24	Mr. Muhammad Ali Shah (ADC Relief)	Swabi	0331-5897848	0331-5897848
25	Ms. Muneeba Fatima (AC HQ) Look After Charge	Shangla	0343-4455346	0343-4455346
26	Mr. Ibrar Wazir (ADC Relief)	Swat	0336-5521148	0336-5521148
27	Mr. Naimat Ullah (ADC Relief)	Tank	0345-9849988	0345-9849988

28	Mr. Hasrat Khan (ADC Relief)	Tor Ghar	0302-2223311	0333-9419622
29	Mr. Nouman Ali (ADC Relief)	Khyber	0333-9164728	0333-9164728
30	Mr. Naseer Khan (ADC F&P) Additional charge	Bajaur	0300-5929001	0300-5929001
31	Mr. Muhammad Qamar (ADC Relief)	Mohmand	0345-9336847	0345-9336847
32	Mr. Kamran (ADC Relief)	Kurram	0334-8324975	0334-8324975
33	Mr. Kashmir Khan (ADC Relief)	South Waziristan Lower	0345-9874078	0345-9874078
34	Mr. Naik Muhammad Bangash	South Waziristan Upper	0300-9396779	0300-9396779
35	Mr. Qasir Kundi (ADC Relief)	North Waziristan	0333-9961467	0333-9961467
36	Mr. Zahid Usman Kaka khel (ADC Relief)	Orakzai	0346-5660175	0346-5660175

FOREST DEPARTMENT

Environmental Protection Agency (EPA)

S.No.	Designation	Contact
1	DG EPA	9210263
2	Director	9210966
3	Director (Central)	9211560
4	Director (Admn)	9223498
5	Deputy Director (CC)	9223586
6	Deputy Director (MES)	9223584
7	Deputy Director (EIA)	9212145
8	Deputy Director GIS	9223585

RESCUE 1122 DISTRICT EMERGENCY OFFICERS (DEOs) KHYBER PAKHTUNKHWA

S.No.	DEO Name	DEO Mobile Number	DEO Office Number	District Name	Control Number	Control Back Hand Number
1	Engr Naveed Akhter	0313-9550255	091-9225306	Peshawar	091-9225304	091-9225301,2,3
2	Mr. Imran Khan	0314-9629626	0937-9230770	Mardan	0937-9230771	0937-840609
3	Mr. Muhammad Awais Babar	0312-3148989	0966-9933438	D.I.Khan	0966-715166	0966-933432,35,36
4	Mr. Malik Sher Dil	0344-2379332	0946-9240260	Swat	0946-9240261	0946-9240249,50,51
5	Mr. Arif khattak	0333-9292902	0992-9310519	Abbottabad	0992-9310560	0992-9310157-8-314
6	Mr. Kamal Shah	0333-9365432	0923-9220299	Nowshera	0923-9220312	0923-9220309,10,11
7	Mr. Jawad Khalil	0333-9211455	0922-9260048	Kohat	0922-9260060	0922-9260049,50,51
8	Mr. Shariq Riaz Khattak	0313-7775858	0995-920185	Haripur	0995-920186	0995-627622,3,4
9	Mr. Zaffar Ud Din	0344-5188581	0943-414092	Chitral	0943-414093	0943-414092
10	Mr. Ghayour Mushtaq	0313-5410976	091-9220433	Charsadda	091-9220456	091-9220191,2,3
11	Mr. Rafi Ullah	0333-9987169	0938-280428	Swabi	0938-280423	0938-280427,328,329
12	Mr. Noor Amin	0345-9805740	0927-291364	Karak	0927-210364	0348-9541122
13	Mr. Arshad Iqbal	0333-5958151	0932-411282	Malakand	0932-411282	0932-411283/84/85
14	Mr. Haroon Khan	0333-8876363	0925-621316	Hangu	0925-621305	0925-621310
15	Mr. Muhammad Saad Khan	0333-9055550	0942-220845	Bajaur	0942-220846	0942-220847,8,50

16	Mr. Hafeez Ur Rahman	0321-5266593	0997-920125	Mansehra	0997-920126	0997-920124,31,32
17	Mr. Nasir Khan	0335-9011911	0939-510120	Buner	0939-510129	0939-520126-27-28
18	Mr. Shoaib Mansoor	0331-2111122	091-5820405	Khyber	091-5820404	091-5820406
19	Mr. Khaliq Dad	0349-8889188	Nil	Kohistan Upper	0998-407212	0998-407213,5
20	Mr. Sajid Ali	0345-5486175	0998-405112	Kohistan Lower	0998-405013	0998-405087
21	Mr. Sana Ullah	0300-5744402	0996-850401	Shangla	0996-850403	0996-850400,404
22	Mr. Shah Wali Khan	0302-5742085	0944-880587	Dir Upper	0944-880583	0944-880580-81-82
23	Mr. Ibrar Ahmad	0342-9666204	0945-9250177	Dir Lower	0945-821660	0945-821661,2
24	Mr. Muhammad Fahim	0330-6108687	0928-620739	Bannu	0928-664230	0928-620736,37,38
25	Mr. Iftikhar Khan	0335-5133780	0924-290285	Mohmand	0924-290286	0924-290030,1,2
26	Mr. Faseh Ullah	0334-8825448	0969-538019	Lakki Marwat	0969-538217	0969-538214,5,6
27	Mr. Ghulam Murtaza	0330-5751122	0926-312491	Kurram	0926-312494	0926-312484,93,96
28	Mr. Wiqas Alam	0348-9900060	0963-511521	Tank	0963-211100	0963-511501,2,3
29	Mr. Bilal Afridi	0331-3111122	0925-650037	Orakzai	0925-650038	0925-650034,35,36
30	Mr. Waheed Khan	0333-8100974	097-310180	Batagram	0997-310184	0997-310181,2,3
31	Mr. Tanveer Ahmad	0300-9737728	0965-210028	South Waziristan	0965-210027	0965-210017
32	Mr. Bakhat Ullah	0333-9215963	0928-312746	North Waziristan	0928-312747	0928-312748,9,50
33	Mr. Muhammad Jan	0312-9271163	0997-541073	Torghar	0997-541073	0997-541068,9,89

CHIEF ENGINEER (NORTH) IRRIGATION DEPARTMENT TELEPHONE DIRECTORY (2023)

District	Appointment	Office Cell/Fax No	Resident
Peshawar	Chief Engineer (North)	091-9212123	
Peshawar	Superintending Engineer (H/Q)	091-9212113	
Peshawar	Technical Officer	091-9222719	
Peshawar	Deputy Director Design		
Peshawar	Canal Collector	091-9222819	
Peshawar	Superintendent (SWO)		
Mardan	Superintending Engineer		0937-9230194
Mardan	Execuve Engineer		0937-9230195
Mardan	SDO Mardan		0937-9230235
Malakand	Execuve Engineer		0932-452049
Malakand	SDO W/W		0932-452063
Swat	Superintending Engineer		0946-9240164
Swat	Execuve Engineer		0946-9240165
Swat	SDO Matta		-
Dir	Execuve Engineer		0945-9250068
Dir	SDO Balambat		0945-9250110
Dir	SDO, Dir Chakdara		

SWABI IRRIGATION CIRCLE			
Swabi	Superintending Engineer	0938-224204	
Swabi	Execuve Engineer	0938-530484	
Swabi	SDO Shahbaz Garhi	0937-580590	
Swabi	Executive Engineer	0938-221392	
Swabi	SDO Pehur	0938-221392	
Abbottabad	Executive Engineer	0992-9310247	
Abbottabad	SDO Abbottabad	0992-9310247	
Abbottabad	SDO Haripur	0995-319323	
Abbottabad	SDO Kohistan		
Chitral	Executive Engineer	0943-412641	0945-3412641
Chitral	Sub Division Officer		
Peshawar	Executive Engineer Mechanical	091-9212120	0943-412641

CHIEF ENGINEER (SOUTH) IRRIGATION DEPARTMENT TELEPHONE DIRECTORY (2023)

District	Designation	Office Cell	E-Mail
Peshawar	Chief Engineer (South)	9212116	chiefoffice@yahoo.com
-do-	Superintending Engineer, South (H/Q)	9212174	
-do-	Technical Officer	9212122	
-do-	Deputy Director (Planning)	9112119	
-do-	Deputy Director (Design)	9212119	
-do-	Canal Collector	9210659	
-do-	Administrative Officer	9212118	
Executive Engineer, Hydrology Irrigation Division Peshawar			
Peshawar	Executive Engineer	9212114	
-do-	SDO Irrigation Sub Division Peshawar	9111907	
Abbottabad	SDO Abbottabad	0922-9310354	
Bannu	SDO Bannu	0928-9271997	09289270061
Peshawar	Project Director	9222774	
-do-	Project Manager	9222775	
Peshawar	Project Director		922617055
Peshawar	Deputy Director		-do-
Peshawar	Assistant Engineer		-do-
Peshawar	Assistant Engineer		-do-
Peshawar	Assistant Engineer		-do-
S.E Peshawar Irrigation Circle Peshawar			0919212115
Peshawar Canals Division Peshawar			
Peshawar	Executive Engineer		9210102
-do-	SDO KRC		9210113
-do-	SDO Civil Canal		9210102
-do-	SDO Drainage		-
-do-	Deputy		9212123
Warsak Canal Division Peshawar			
Peshawar	Executive Engineer		9212502
-do-	SDO		9212502
-do-	SDO		9212502
-do-	SDO		9212502
Tube Wells Irrigation Division Peshawar			
Peshawar	Executive Engineer		9222731
-do-	SDO T/W Sub Division Peshawar		9222731
-do-	SDO T/W Pabbi		9222731

Charsadda	XEN		6514641
-do-	SDO Charsadda		No PTCL
-do-	SDO Shabqadar		628144
-do-	SDO Tangi		6181144
SE Bannu Irrigation Circle Bannu			
Bannu	SE Bannu		0928-9270061
-do-	XEN: Marwat Canal		0928-9270063
-do-	SDO Civil Canal		0928-9270063
-do-	SDO Sarai Nourang		0928-9270063
Bannu	XEN: Bannu Canal		0928-9270056
-do-	SDO Head Work		0928-9270056
-do-	SDO Jani Khel		0928-9270056
-do-	SDO Tajori		0928-9270056
Kohat	XEN: Kohat		0922-9260173
-do-	SDO Tanda Dam		0922-9260173
-do-	SDO Project		0922-9260173
-do-	SDO Irr:S/Divn:		0922-9260173
CRBC XEN CRBC			
CRBC	XEN CRBC		0966-9280237
CRBC	SDO		0966-9280113
CRBC	SDO		0966-720074
D.I.Khan XEN Flood Irrigation Division D.I.Khan			
D.I. Khan	XEN: Flood		0966-713303
D.I. Khan	SDO		0966-713303
D.I. Khan	SDO		0966-713303
D.I. Khan	SDO		0966-713303
D.I.Khan XEN Gomal Zam Irrigation D.I.Khan			
D.I. Khan	XEN: Gomal Zam		0966-9280336
D.I. Khan	SDO		0966-9280336
D.I. Khan	SDO		09669280024
D.I. Khan	SDO		0966-9280024
TELEPHONE DIRECTORY FLOOD SEASON 2022			
Peshawar	Chief Engineer (South) Irrigation Dept		0919212116
Peshawar	Superintending Engineer (Head Quarter) South		0919212174
Peshawar	Irrigation Circle Peshawar		0919212115
D.I.Khan	Irrigation Circle D.I.Khan		09669280238
D.I.Khan	Flood Irrigation Division		0966713307
Peshawar	CE (S) Irrigation Peshawar		0919212119

ADMINISTRATIVE SECRETARIES OF PROVINCIAL DEPARTMENTS KHYBER PAKHTUNKHWA

	Name	Designation	Telephone	Mobile/ WhatsApp No.
Relief, Rehabilitation & Settlement Department	Mr. Abdul Basit	Secretary	9212058	0300-5732224
	Muhammad Nawaz	Additional Secretary	9213250	0303-5077773

S.No.	Department	Telephone	Fax	Email
1	Food Department	9225373	9225374	fooddirectoratpkp@gmail.com
2	Health Department	9210342	9210419	secretaryhealthkp@gmail.com
3	Higher Education Department	9210337	9210368	secyhed@yahoo.com
4	Home & Tribal Affairs Department	9211121	9210201	htanwfp@gmail.com
5	Information & Public Relations Department	9210365	9210387	infdeptt@gmail.com
6	Irrigation Department	9210845	9210874	irrigaonpsh@gmail.com
7	Local Government, Election & Rural Development Department	9211450	9210323	secylgkp2013@gmail.com
8	Planning & Development Department	9210516	9211369	secretary.kpkpnd@gmail.com
9	Population Welfare Department	9211535	9213466	secretarypwdkp@gmail.com
10	Tourism Department	9212086	9212535	secretarytourismkp@gmail.com
11	Zakat, Usher, Social Welfare & Women Empowerment Department	9211931	9213238	secretaryzuswd@gmail.com
12	C&W Department	9210859	9223454	cwd.gkp@gmail.com
13	Industry Department	9210924	9210896	secyind@yahoo.com
14	Climate Change, Forestry, Environment & Wildlife Department	9210333	9223493	secretaryforestkp@gmail.com
15	Agriculture Department	9210025	9210033	secretaryagri@kp.gov.pk
16	Labour Department	9223694	9223697	labourdepartmentkp@gmail.com



Provincial Disaster Management Authority

Government of Khyber Pakhtunkhwa

**Headquarter: 46-A, B-2, Phase-V, Hayatabad, Peshawar,
Khyber Pakhtunkhwa, Pakistan.**

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