

**REPORT  
ON TORRENTIAL RAINS AND MINI CYCLONE  
IN PESHAWAR DIVISION  
(APRIL 26, 2015)**



**PROVINCIAL DISASTER MANAGEMENT AUTHORITY  
RELIEF, REHABILITATION & SETTLEMENT DEPARTMENT  
Government of Khyber Pakhtunkhwa**

Phone: (091) 9213855 & 9213959, Fax: (091)9212059

## Contents

Executive Summary.....	3
Overview .....	5
The Incident .....	5
Weather Forecast .....	5
Level of Preparedness.....	6
Summary of Human losses .....	6
PDMA (PEOC) Swift Response and Rescue 1122 Services .....	6
Relief Activities.....	8
Establishment of PDMA Relief Camps .....	9
Revision of Compensation Policy .....	10
Lessons Learnt.....	11

## **Executive Summary**

Over the last decade (2005-2015) climate change phenomenon has produced uncommon weather patterns in Pakistan. Khyber Pakhtunkhwa province which traditionally had a low risk natural hazards profile has started getting the brunt of these unusual weather conditions. Dust storms, gusty winds, cloud bursts, flash flooding etc. have played havoc with human life and property in our resource constrained province. It is also observed that a 100km west-ward change has emerged in the monsoon pattern in Pakistan as a result of climate change. The occurrence of mini-cyclone or tornado which hit Peshawar Division on April 26, 2015 around 7:00 pm and which within no time claimed 49 lives with hundreds of people injured and heavy property losses was an erratic weather phenomena. Pakistan Meteorological Department (PMD) declared it third of its kind in the history of Pakistan and first ever in the history of Khyber Pakhtunkhwa. The challenges posed by climate change require putting in place a robust, efficient, reliable and integrated Disaster Management System in the province so as to mitigate disaster risks. There is a dire need of analyzing the whole situation viz-a-viz the Disaster Management System which we have in our province so as to clarify a few popular myths and put the stream of thoughts and expectations of various stakeholders on the right track.

One such popular myth is that disaster management mechanism can be established at its optimum level as a solitary system. Reality demands that we should look at it, working efficiently or otherwise, as an integrated system and approach. There are many challenges in an integrated system for instance building codes are often not followed especially in the rural areas. This alone has far reaching consequences in cases of natural disasters. Similarly, lack of interest and ownership among the government and non-government entities to maintain a desired disaster preparedness level has a direct impact on the overall efficiency and effectiveness of Disaster Management System. Another misconception is about the accuracy of weather forecasting systems where the reality is quite lopsided. The archaic weather installations in the province need serious efforts for regular up-gradations and modernization. This is the only viable mechanism to cope with the unpredictable challenges of climate change phenomenon. However, in this aspect our province needs support of the federal government as

meteorological department is funded and controlled by it. Most importantly Provincial Disaster Management Authority (PDMA) is looked at as a **Force in Field** for handling emergencies and being part of the search and rescue operations during the disasters. This is purely the mandate of Rescue 1122 whose staff are trained to handle medical or any kind of complex emergencies. Where this source is not available, the district administration serves as the first responder reaching out to the citizens. Under the provisions of National Disaster Management Act 2010, PDMA is mandated to coordinate disaster response, in case of natural calamities, of all government and non-government agencies including media. In case of other provinces PDMAs primarily have no role in handling the emergencies as they are focused more towards relief and rehabilitation measures in the aftermath of any disaster.

The fundamental objective of this report is to clarify the above and other such myths and initiate a thinking process where all agencies responsible for their specific roles and actions in disaster response realize the sensitivity of disaster management. The best approach is to see the reality beyond the frontiers set by media reports of high commercial value but little logical substance. Another objective of this report is to restore the trust of citizens in state institutions as uninvestigated and biased media reporting created unnecessary confusions and dissonance. None other than the Prime Minister of Pakistan lauded the response and relief efforts of the provincial government. In order to further improve the response of the provincial government the Chief Secretary has already issued instructions to PDMA to come up with a more robust and integrated disaster response mechanism.

## **Overview**

### **The Incident**

On April 26, 2015 at around 1900hrs, District Peshawar, Charsadda and Nowshera were struck by an unusual and unprecedented mini-cyclone. The cyclone was accompanied by torrential rains, hail storm and whirling winds at a speed of 110km/hr. Pakistan Meteorological Department (PMD) declared it third of its kind in the history of Pakistan and first ever in Khyber Pakhtunkhwa. Apparently, it was caused by the confluence of eastern and western weather disturbances. PMD also explained that in the months of April and May when the days are relatively warmer and nights are colder, sudden rise and fall in terrestrial temperatures causes low air pressures, bringing whirling winds. However, the intensity was so severe that some weather experts called it a twister or tornado which played havoc with human life and property across Peshawar division.

### **Weather Forecast**

PMD in its press release issued on the next day openly accepted their inability to forecast such weather patterns. They further explained that these kinds of systems cannot be predicted well before time even in developed countries where weather forecasting technologies are much more advance. To what extent this argument of PMD is correct can only be ascertained objectively by weather and upper atmosphere researchers and scientists. Nonetheless, it is an open fact that our province seriously lacks weather forecasting capabilities. Presently, there is no operational weather radars installed throughout Khyber Pakhtunkhwa (KP) and even some districts have no weather observatories. The study of upper atmospheric temperature variations has a close link with weather patterns. However, regional office of PMD at Peshawar has no such capability of monitoring temperature variations at the upper layers so as to forecast local weather events in time. Our province is out of range for weather radar installed at Islamabad and the weather radar installed at Dera Ismail Khan is not operational since long.

## Level of Preparedness

Although there was no forecast for the weather system that was developed on April 26, 2015 however the following factors further complicated the situation:

- Building infrastructure in severely hit rural areas of Peshawar Division grossly violates safety protocols and is extremely vulnerable to moderate winds. Whirling winds at a speed of 110Km/hr played havoc with mud houses, boundary walls and uprooted trees and electric poles in several areas. Most of the deaths, injuries and property losses were observed in rural areas where the resilience level to such winds was very low.
- Tornadoes and cyclones have never been experienced by the residents of Peshawar Division in the past; hence, they lacked awareness about precautionary measures required to be taken during such incidents. For instance, during the onset of tornadoes, people are usually advised to keep the doors and windows of their houses open so as to relieve the huge pressure exerted by strong whirling winds over the structures. This often prevents the structures from collapsing and hence life losses and injuries can be avoided.

## Summary of Human losses

S#	District	Deaths		Total	Injured			Total
		Male	Female		Children	Male	Female	
1	Peshawar	12	19	31	69	78	56	203
2	Charsadda	6	5	11		12	9	21
3	Nowshera	4	3	7		20	23	43
<b>Grand Total</b>		<b>22</b>	<b>27</b>	<b>49</b>	<b>69</b>	<b>110</b>	<b>88</b>	<b>267</b>

Table 1

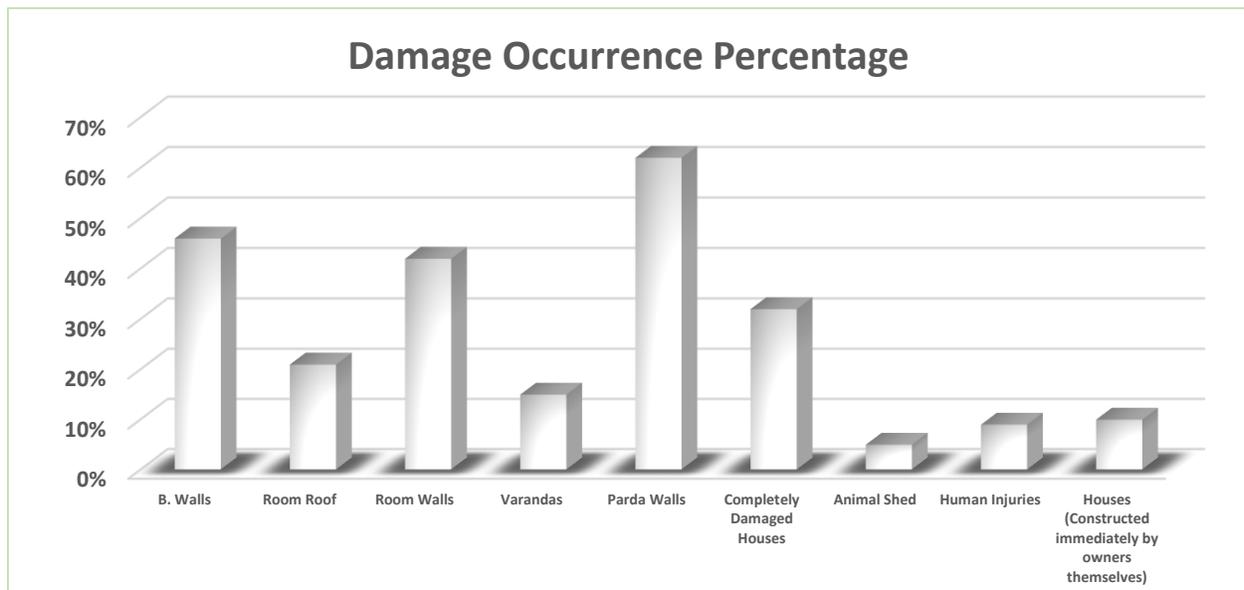
## PDMA (PEOC) Swift Response and Rescue 1122 Services

Director General PDMA responding to the situation activated code RED of the Provincial Emergency Operation Centre (PEOC) and called all officers and officials to report to PDMA office immediately. All concerned district administrations were alerted and Secretary Relief, Rehabilitation & Settlement Department, DG PDMA and DG Rescue 1122 along with the Officers/ Officials responded to the calls received in PEOC. Through subsequent SMS and calls

all the stakeholders like, PMD, Local Government Department, Irrigation Department, District Administration, and District Disaster Management Units (DDMUs) of the concerned districts were taken on board and an active coordination was established to respond to the situation. Pakistan Army also contributed towards relief efforts with PDMA and Rescue teams.

On the other hand 16 ambulances of Rescue 1122 along with trained paramedical staff were also engaged in the rescue operations. During the massive rescue operation some 44 emergencies were attended and 70 patients along with several dead bodies were shifted to the hospitals. Due to severe disruption in road communication rescue 1122 ambulances were stationed at various vulnerable points in and around Peshawar and through their trained medical technicians provided on the spot medical aid to some 20 patients.

PDMA’s Operation Centre (PEOC) was fully functional and information was collected and disseminated to and from stakeholders for quick and timely response. PDMA staff performed their duties even on weekends. Moreover, teams were constituted to visit the affected areas for data collection and monitoring of the relief activities. In order to provide financial assistance to the affectees PDMA facilitated the district administrations in conducting door to door damages needs assessment (DNA) surveys. PDMA provided 47 volunteers to District Administrations; Peshawar (30), Charsadda (10) and Nowshera (7) for detailed DNAs. Volunteers along with revenue staff were sent door to door and photographic images were taken to assess and verify the damages being reported. PDMA also conducted its own rapid DNAs and the findings are given below:



It was observed that majority of the damages were of pardah (Boundary) walls which is a classic example of violation of building codes. Another striking drawback of these pardah (Boundary) walls was kind of a triggering effect. The walls collapsed over the roofs and hence more damage was done to the infrastructure. One of the striking features of the DNA was that the calamity impact was severe in poor communities. Most of the houses were poorly constructed with low quality building material. Fewer households did not wait for the government compensation and started rebuilding their homes.

### **Relief Activities**

Relief activities were immediately started by PDMA and District Administrations in the affected districts. The following items were distributed on the very next day of the calamity:

<b>S#</b>	<b>Relief Activities</b>	<b>Action Taken By</b>	<b>Table 2</b>
01	Distribution of 880 Tents, 100 Blankets, 100 Hygiene Kits & 100 Mosquito Nets	PDMA through DDMU Peshawar	
02	Distribution of 150 Degs at Peshawar	DDMU Peshawar	
03	Distribution of 350 Food Packages at Peshawar	DDMU Peshawar	
04	Distribution of 21 Degs at Charsadda	DDMU Charsadda	
05	Tents & Food Packages Distribution	-do-	
06	Distribution of 30 Degs at Nowshera	DDMU Nowshera	
07	Distribution of Tents & Food Packages	-do-	

Provincial Government paid an amount of Rs.12.300 million as compensation to the legal heirs of the deceased. Details of the death compensation are as under:-

<b>S#</b>	<b>District</b>	<b>No. of Cheques Issued</b>	<b>Amount per Cheque</b>	<b>Total amount Disbursed (PKR)</b>	<b>Table 3</b>
1.	Peshawar	28	300,000	8,400,000	
2.	Nowshera	07	300,000	2,100,000	
3.	Charsadda	06 *	300,000	1,800,000	
<b>Grand Total</b>				<b>12,300,000</b>	

\* 08 dead were reportedly Afghan nationals not eligible for compensation. Federal government paid an additional Rs. 500,000/- per death.

Similarly, additional funds to the tune of Rs.36.5 million were released to the district administrations as per the following details:

S#	Name of District	Funds released (M)	Table 4
1.	Deputy Commissioner, Peshawar	Rs.25.5	
2.	Deputy Commissioner, Nowshera	Rs.6.4	
3.	Deputy Commissioner, Charsadda	Rs.4.6	
<b>GRAND TOTAL</b>		Rs. 36.5	

### **Establishment of PDMA Relief Camps**

PDMA with the assistance of humanitarian partners established six relief camps in severely affected areas. Survey teams conducted door to door assessments and distributed vouchers/tokens among the affected households. The households were then informed about food distribution points and the collection process. A total of 2008 food packages were distributed through these six camps. PDMA warehouse was actively engaged in dispatching relief items to these camps. The details of these distributions are:

<b>Distribution of Food and Non-Food Items</b>					Table 5
S#	Activity	Camp/ Mauza/ Area	Dated	Caseload	
01	Distribution of 89 Food Packages / mixed food	Yaseenabad, Peshawar	01.05.2015	89	
02	Distribution of non-food items i.e. 89 plastic mats				
03	Distribution of Food Packages / mixed food and 150	Pakha Ghulam, Peshawar		150	
04	Distribution of non-food items i.e. 150 plastic mats				
05	Distribution of 260 food packages	Wahid Ghari, Peshawar	02.05.2015	260	
06	Distribution of 260 mosquito nets				
07	Distribution of 115 food package / mixed food	Taru Jabba, Nowshera		115	
08	Distribution of non-food items including 115 mosquito nets and 115 plastic mates				
09	Distribution of 255 food packages / mixed food	Wadpaga,		255	

*Continued on next page...*

10	Distribution of 255 mosquito nets	Peshawar				
11	Distribution of 164 food packages / mixed food	GGPS Tarkha Shabqadar, Charsadda	03.05.2015	164		
12	Distribution of 164 mosquito nets					
13	Distribution of 432 food packages / mixed food	Khushmaqam Choki	07.05.2015	432		
14	Distribution of 432 mosquito nets	Mamraiz, Nowshera				
15	Distribution of 155 food packages / mixed food	Neeko Khan Kalley, Dalazak Road, Peshawar				
16	Distribution of 164 mosquito nets			155		
17	Distribution of 160 food packages / mixed food	GHS Gharibabad Shabqadar, Charsadda	08.05.2015	160		
18	Distribution of 160 mosquito nets					
19	Distribution of 188 food packages / mixed food	Urmar Payan, Peshawar	08.05.2015	188		
20	Distribution of 188 mosquito nets					
21	Distribution of 40 food & non-food items & mosquito nets	Hindko Daman, Peshawar	15.05.2015	40		
<b>GRAND TOTAL</b>				<b>2008</b>		

### **Revision of Compensation Policy**

On the directives of the Chief Minister Khyber Pakhtunkhwa, PDMA moved a summary and the provincial compensation policy was revised with effect from April 26, 2014 with the following revised rates:

<b>S#</b>	<b>Category</b>	<b>Special Compensation Rate (PKR)</b>	<b>Table 6</b>
1	Dead	300,000	
2.	Fully damaged House of two rooms and above	100,000	
3.	Fully damaged (one room and boundary wall)	80,000	
4.	Fully damaged (one room only)	50,000	
5.	Boundary wall only	30,000	

## **Lessons Learnt**

The incident of April 26, 2015 has left behind many questions and important lessons. A comprehensive and integrated strategy is required to be adopted at all levels of the government so as to minimize losses due to such incidents in future. In addition to the improvements in the response strategy certain disaster risk reduction measures can also help us in mitigating the damages. Following is a list of all those lessons which were learnt during the incident:

### **Inadequate Weather Forecasting Installations**

During the incident, it was strongly felt that the weather forecasting installations currently installed in the province under the PMD are not only inadequate but outdated and needs up-gradation so as to better cope with the challenges of climate change. Federal Government must take immediate steps to equip PMD Regional Office at Peshawar with modern weather forecasting equipment enabling them to generate accurate and precise weather forecasts. Following are suggested actions on the part of the federal government:

- Installation of Doppler's Weather Radars at Cherat and Chitral. The case which was initiated in 2007 may be taken up with the Federal government for reconsideration.
- Completion of a PSDP Scheme i.e. Installation of rain gauge at Kalpani Nullah needs to be expedited.
- Replication of rain gauges being installed on Kalpani to other such Nullahs like Budhni Nullah and others which have the potential of causing urban floods in densely populated urban centers.

### **Non- Observance of Building Codes**

It was observed that mostly all the buildings collapsed due to faulty structures, and they could not withstand even the moderate speed winds. Constructions of houses in the outskirts of Peshawar are done without proper town planning and plan approvals. Nevertheless, enforcing building codes are a big challenge in rural areas yet some sort of legislation, enforcement or extension of existing building codes to rural areas can prevent future losses.

### **Improper Drainage system**

Importance of a proper drainage system especially in urban centers cannot be undervalued. During such incidents, one could feel the pinch of non-availability of proper drainage system for rain water. On April 26, 2015, it was observed that standing rain water on roads blocked movement of vehicular traffic especially those for emergency and rescue purposes. Local Government Department and the respective municipal service providers need to seriously ponder over the issue and take short term and long term measures for developing drainage system especially in the urban centers.

### **Unplanned Urbanization**

It was noted that in most of the affected areas, houses were built in narrow streets where collapse of a boundary wall or roof resulted in the collapse of adjacent houses or boundary walls, thus creating a chain reaction of infrastructure collapse. Regulatory mechanisms for the concerned authorities need to be chalked out and effectively implemented so as to safeguard against such happenings in future.

### **Unchecked cabling and wiring**

Unplanned and unchecked electric wiring proved to be a great hazard for the community during such incidents. Wires and poles falling on people and houses can cause huge damages to life and property. WAPDA need to strictly implement security protocols with regard to transmission lines. Other than being a potential hazard unchecked cabling can also obstruct rescue activities during emergencies.

### **Damage & Needs Assessment Mechanism**

Damages & Needs Assessments (DNA) after such incidents need to be undertaken on scientific grounds through technical staff including engineers as the process entails huge financial implications for the government. The present mechanism of DNA by the revenue staff has a number of issues. Hence, there is a strong need for adoption of a new mechanism for DNA. Moreover, crops damages are usually not compensated by the government which is injustice to

the poor farmers. A judicious and precise system for crops damage assessment and subsequent grant of compensation needs to be devised and implemented.

### **Need of Responsible Disaster Reporting by Media**

Media reporting during an emergency situation is based on providing first hand news of destruction; it sometimes leads to sensationalism in reporting. Media should avoid sensationalism and negative reporting during an emergency situation. As a fourth pillar of the state, media must ensure responsible reporting in order to update general public and coordinate with state authorities. Media also access the affected areas, so a coordinated effort between PDMA, media, Rescue 1122, district administration and local police can lead to better results in saving lives and reaching out to the people in need.

### **Civil Defense / Volunteers**

The data of civil defense volunteers needs to be updated. These volunteers from local community are the primary source of rescue and relief. Civil Defense volunteers need to be further trained in emergency handling, rescue operation and provision of essential relief as the case may be in order to fill the existing void in human resource both at the district and community levels.

### **Need for Integrated Response during Disasters**

An integrated response is required for better coordination during emergencies. All procedures and SOPs need to be defined in a systematic way utilizing the available resources for obtaining optimal results. Districts being the first responder to emergencies need strengthening and support in terms of human and financial resources to cope with disasters effectively and efficiently.

### **Extension of Rescue 1122 to other Districts**

Rescue 1122 is a specialized force to handle medical emergencies, traffic accidents, fire-fighting search and rescue operations etc. In order to handle the complex emergencies professionally services of 1122 may be extended to other districts.