



District Swat Disaster Response Plan





District Disaster Management Unit Swat

Gulkada Mingora, Swat, Khyber Pakhtunkhwa

Phone: + 92 946 9240337, + 92 946 920004, Fax: +92 9469240329



Message from the Chairperson Disaster Management Unit, District Swat

During the last couple of decades, the world has witnessed a sharp increase both in natural disaster and humanitarian crisis. Climate change phenomenon has further compounded the situation and it is considerate opinion of experts that over the coming years the world will be exposed to greater risk emanating from a host of natural and human-induced hazards. Pakistan is no exception given its location, topography and the overall environment. The country is confronted with almost all kinds of natural hazards such as floods, earthquake, drought, glacial lake outburst flood (GLOF) and landslides etc. Rising trends in population growth, migration to urban centers, issue of land use planning and unchecked development both by public and private sectors are some of the serious problems that have played a part in multiplying people's vulnerabilities.

Risk profile of District Swat, Khyber Pakhtunkhwa Province is quite alarming in view of both natural disasters and the humanitarian crisis that have affected the entire district. In the recent past, the devastating floods in 2010 have eroded the development gains to a great extent apart from loss of precious human lives. Similarly, the humanitarian crises in wake spate of terrorism coupled with internally displaced persons (IDPs) posed serious challenge for the district government. Resources had to be diverted to emergency response, recovery, rehabilitation and reconstruction and as a result, the regular development process got affected.

While disasters are beyond our control, comprehensive response plans with clear roles and responsibilities of responders can minimize risks, prevent losses and improve our response capacity significantly. The Plan, aimed at enhancing the capacity of the district government to prepare for and respond to disasters by defining the measures to be considered necessary for disaster management and risk reduction in line with the provision of the National and Provincial policies/plans

The District Disaster Response Plan (DDRP) has been developed after extensive consultation. DDRP seeks to upgrade the district's ability to cope with all disasters. To achieve this purpose, complete range of disaster management activities from preparedness to response has been addressed. The plan outlines a framework for emergency response; identifies roles and responsibilities of various stakeholders and lay down coordination mechanism for activities involving all responders to harness the full potential for efficient disaster management. The efficacy of any response being dependent on its currency, the District Disaster Response Plan needs to be kept relevant through updation. Towards this District Disaster Management Unit (DDMU) will welcome suggestions for improvement.

I wish success to all engaged in disaster response initiative.

Mr. Junaid Khan
Deputy Commissioner
District Swat

Acknowledgment

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Acronyms

AC	Assistant Commissioner
ADC	Additional Deputy Commissioner
ADPC	Asian Disaster Preparedness Center
APP	Asian Preparedness Partnership
BHU	Basic Health Unit
CBDRM	Community Based Disaster Risk Management
CBO	Community Based Organizations
CCB	Citizen community board
CHW	Community Health Worker
COVID	Coronavirus Disease
CSO	Civil Society Organizations
DC	Deputy Commissioner
DDMA	District Disaster Management Authority
DDMO	District Disaster Management Officer
DDMU	District Disaster Management Unit
DDRP	District Disaster Response Plan
DEOC	District Emergency Operation Centre
DHQ	District Headquarter
DM	Disaster Management
DMC	Disaster Management Committee
DNA	Damage and Needs Assessment
DRM	Disaster Risk Management
DRR	Disaster Risk Reduction
ERC	Emergency Relief Cell
ERRA	Earthquake Reconstruction and Rehabilitation Authority
EWS	Early Warning System
FGD	Focus Group Discussion
GLOF	Glacial Lake Outburst Flood
HCF	Health Care Facility
HFA	Hyogo Framework for Action
IDP	Internally Displace Person
INGO	International Non-governmental Organization
IPC	Infection Prevention Control
KII	Key Informer Interview
KP	Khyber Pakhtunkhwa
LHW	Lady Health Worker
MBT	Main Boundary Thrust
MC	Municipal Committee

MHVRA	Multi Hazard Vulnerability and Risk Assessment
MIRA	Multi Sector Initial Rapid Assessment
MMT	Main Mental Thrust
NDMA	National Disaster Management Authority
NDMC	National Disaster Management Commission
NDMO	National Disaster Management Ordinance
NDMP	National Disaster Management Plan
NDRF	National Disaster Response Force
NEOC	National Emergency Operation Centre
NGO	Non-Government Organization
NIDM	National Institute of Disaster Management
NIH	National Institute of Health
OCHA	United Nations Office for the Coordination of Humanitarian Affairs
PDMA	Provincial Disaster Management Authority
PDMC	Provincial Disaster Management Commission
PEER	Program for Enhancement of Emergency Response
PEOC	Provincial Emergency Operation Centre
PHED	Public Health Engineering Department
PMD	Pakistan Meteorological Department
PRCS	Pakistan Red Crescent Society
PRP	Pakistan Resilience Partnership
PWD	Persons with Disabilities
RHC	Rural Health Center
RNA	Recovery Need Assessment
SFDRR	Sendai Framework for Disaster Risk Reduction
SITREP	Situation Report
SOP	Standard Operating Procedure
SSP	Senior Superintendent Police
TDMC	Tehsil Disaster Management Committee
TDMP	Tehsil Disaster Management Plan
THQ	Tehsil Headquarter
TMA	Tehsil Municipal Administration
TMO	Tehsil Municipal Officer
UC	Union Council
UCDMC	Union Council Disaster Management Committee
UN	United Nations
VDMC	Village Disaster Management Committee
WASH	Water, Sanitation and Hygiene
WHO	World Health Organization

Terminologies Used

Acceptable Risk. The level of potential losses that a society or community considers acceptable given existing social, economic, political, cultural, technical and environmental conditions.

Building Code. A set of ordinances or regulations and associated standards intended to control aspects of the design, construction, materials, alteration and occupancy of structures that are necessary to ensure human safety and welfare, including resistance to collapse and damage.

Capacity. The combination of all the strengths, attributes and resources available within a community, society or organization that can be used to achieve agreed goals.

Capacity Building. Efforts aimed to develop human skills or societal infrastructure within a community or organization needed to reduce the level of risk. In extended understanding, capacity building also includes development of institutional, financial, political and other resources, at different levels of the society.

Climate Change. A change in the state of the climate that can be identified (e.g., by using statistical tests) by changes in the mean and/or the variability of its properties, and that persists for an extended period, typically decades or longer. Climate change may be due to natural internal processes or external forcing, or to persistent anthropogenic changes in the composition of the atmosphere or in land use.

Contingency Planning. A management process that analyses specific potential events or emerging situations that might threaten society or the environment and establishes arrangements in advance to enable timely, effective and appropriate responses to such events and situations.

Disaster. A serious disruption of the functioning of a community or a society involving widespread human, material, economic or environmental losses and impacts, which exceeds the ability of the affected community or society to cope using its own resources.

Disaster Risk Management. The systematic process of using administrative directives, organizations, and operational skills and capacities to implement strategies, policies and improved coping capacities in order to lessen the adverse impacts of hazards and the possibility of disaster.

Disaster Risk Reduction. The concept and practice of reducing disaster risks through systematic efforts to analyse and manage the causal factors of disasters, including through reduced exposure to hazards, lessened vulnerability of people and property, wise management of land and the environment, and improved preparedness for adverse events.

Early Warning System. The set of capacities needed to generate and disseminate timely and meaningful warning information to enable individuals, communities and organizations threatened by a hazard to prepare and to act appropriately and in sufficient time to reduce the possibility of harm or loss.

Emergency Management. The organization and management of resources and responsibilities for addressing all aspects of emergencies, in particular preparedness, response and initial recovery steps.

Exposure. People, property, systems, or other elements present in hazard zones that are thereby subject to potential losses.

Hazard. A dangerous phenomenon, substance, human activity or condition that may cause loss of life, injury or other health impacts, property damage, loss of livelihoods and services, social and economic disruption, or environmental damage.

Mitigation. The lessening or limitation of the adverse impacts of hazards and related disasters.

Natural Hazard. Natural process or phenomenon that may cause loss of life, injury or other health impacts, property damage, loss of livelihoods and services, social and economic disruption, or environmental damage.

Preparedness. The knowledge and capacities developed by governments, professional response and recovery organizations, communities and individuals to effectively anticipate, respond to, and recover from, the impacts of likely, imminent or current hazard events or conditions.

Prevention. The outright avoidance of adverse impacts of hazards and related disasters.

Public Awareness. The extent of common knowledge about disaster risks, the factors that lead to disasters and the actions that can be taken individually and collectively to reduce exposure and vulnerability to hazards.

Recovery. The restoration, and improvement where appropriate, of facilities, livelihoods and living conditions of disaster-affected communities, including efforts to reduce disaster risk factors.

Resilience. The ability of a system, community or society exposed to hazards to resist, absorb, accommodate to and recover from the effects of a hazard in a timely and efficient manner, including through the preservation and restoration of its essential basic structures and functions.

Response. The provision of emergency services and public assistance during or immediately after a disaster in order to save lives, reduce health impacts, ensure public safety and meet the basic subsistence needs of the people affected.

Risk. The combination of the probability of an event and its negative consequences.

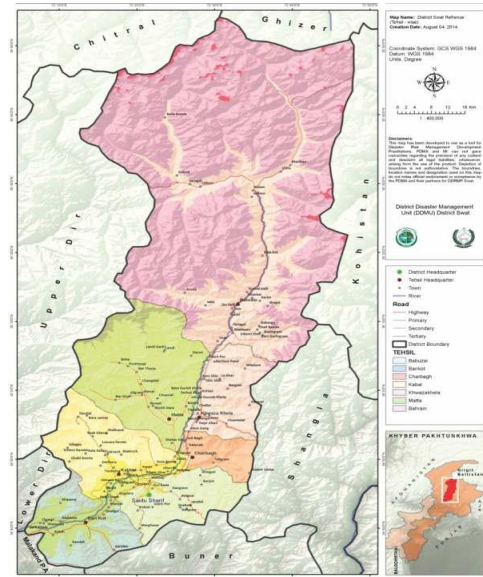
Risk Assessment. A methodology to determine the nature and extent of risk by analysing potential hazards and evaluating existing conditions of vulnerability that together could potentially harm exposed people, property, services, livelihoods and the environment on which they depend.

Vulnerability. The characteristics and circumstances of a community, system or asset that make it susceptible to the damaging effects of a hazard.

Chapter 1: Profile of District Swat

District Swat at a Glance

Swat valley is situated in the north of Khyber Pakhtunkhwa province at 35° North Latitude and 72° and 30° East Longitude. The district is enclosed by the sky-high mountains. Chitral and Gilgit are situated in the North, Dir in the West, and District Mardan in the South, while Indus separates it from Hazara in the East. The District Headquarter is Saidu Sharif, but the main town in the district is Mingora. Saidu Sharif is located at a distance of 131 Kilometer (km.) towards the northeast from Peshawar, the provincial capital. The total area of the District is 5337 Square Kilometer (sq. km), divided into two tehsils, namely Matta (683 sq. km) and Swat (4654 sq. km). The total forest cover in Swat is 497,969 acres which consists of varieties of Pine trees.



District Details

District Headquarter	Saidu Sharif	
Administrative Profile		
Sub Division	7	Babuzai, Barikot, Kabal, Matta, Khwazakhlea, Bahrain, Charbagh
Tehsil	7	Babuzai, Barikot, Kabal, Matta, Khwazakhlea, Bahrain, Charbagh
Union Councils	65	Babuzai (17), Barikot (4), Kabal (12), Matta (13), Khwazakhlea (7), Bahrain (8), Charbagh (4)
Village Councils	214	Babuzai (49), Barikot (17), Kabal (39), Matta (46), Khwazakhlea (30), Bahrain (22), Charbagh (11)
Area	5337 Sq Km	
Climate	The winter season is long and extends from November to March, rain and snowfall occurs during this season. The hottest month is June with mean maximum and minimum temperature of 33°C and 16°C respectively.	
Average Maximum Temperature	Based on weather reports collected during 2005-2015. Hottest Month - July (28 °C average) Coldest Month - January (8 °C average) Wettest Month - August (100.5 mm average) Windiest Month - May (2 km/h average) Annual Precip - 730.3 mm per year ¹	
Major Ethnic Groups	Pakhtuns (mainly of the Yusufzai clan), <i>Kohistan</i> (of Dardic descent) and <i>Gujjars</i> .	
Language	The people of Swat are mainly Pakhtuns (mainly of the Yusufzai clan), Kohistan (of Dardic descent) and Gujjars. Gujjar or Gurjjar, which is the main tribe of the district, has its people divided in different clans like	

¹ <https://www.timeanddate.com/weather/pakistan/mingora/climate>

	Khatana, Bajarh, Chichi, Ahir, Chuhan, Pamra, Gangal etc. The Dardic people of the Kalam region in northern Swat are known as Kohistanis. Pashtu is predominantly spoken in Swat, and is understood and used by roughly 93 percent of the population as their mother tongue. A variety of other languages are also used in the area, like Torwali, Kalami and Khwar, spoken by the Kalam and Kohistani people in the Northern part of Swat; Gujro, a mix of Pashto and Punjabi, spoken by the Ajar and Gujjar people.
Demography	
Population	2,309,570
Population Density	412 persons / km ²
Growth Rate	4 % (One of the highest in Pakistan)
Rural Population	88%
Male Population	51.53%
Female Population	49%
Sex Ratio (males per 100 females)	101%
Children (0-5 years)	17%
Active Population (15-64 years)	53%
Dependency Ratio	88%
Household Size	8%
Livelihood Sources	
Total Cropped Area	180,586 Hectares
Total Irrigated Area	84,918 Hectares
Major Crops	Maize, Wheat, Fruits, Vegetables
Livestock Head Per thousand Population	2,998
Major Minerals	Limestone, Marble
Forest	497,969 acres - 10.71 as percent of the province.
Fish Production	1133 tons - 20.36 as percent of the province.
Industry	
Manufacturing	Overall 5.12% (6.18% Urban & 4.95% Rural)
Construction	Overall 11.63% (10.60% Urban & 11.80% Rural)
Trade	Overall 15.68% (29.76% Urban & 13.40% Rural)
Other Service Sectors	Overall 31.92% (51.79% Urban & 28.70% Rural) ²
Head of Household Work Status	
Wage Employed	39%
Self Employed	25%
Employer	2%
Agriculture	32%
Livestock	2%
Education	
Percentage of Population that Ever Attended School	57%

² Estimated from Household Level Data of PSLM, 2012-13

Primary Enrolment Rate (Gross)	95%
Middle Enrolment Rate (Gross)	59%
Matric Enrolment Rate (Gross)	48%
Percentage of Literate Persons (10 years and above)	51%
Percentage of Literate Persons (15 years and above)	49%
Health	
Health Institution	Number
Hospitals	10
Dispensary	18
Rural Health Centre	03
Basic Health Centre	41
Health Staff per One Hundred Thousand Population	
Doctors	30
Nurses	10
Paramedics	40
Housing	
Housing Units	142,311
Inadequate Roof Structure (Wood, Bamboo)	43%
Pacca Housing Units	75.31%
Un-electrified Households	02%
Electricity Connection Houses	67.84%
Households with no-toilet	11%
Inadequate fuel for cooking	89%
Gas use for Cooking	3.40%
Inadequate Source of Drinking Water	36
Pipe Water Connection Houses	24.53% ³

³ Source: Development Statistics of Khyber Pakhtunkhwa, 2014, Bureau of Statistics, Government of KPK, Important District-Wise Socio-Economic Indicators of Khyber Pakhtunkhwa, 2014, Pakistan Social and Living Standard Measurement Survey, 2012-13, PBS, Government of Pakistan and District Census Report, 1998

Chapter 2: District Risk Profile

Situation Analysis

Swat lies in the Hindukush Himalaya region where the impacts of climate change such as retreating glaciers, changing hydrological processes, extreme floods and snow cover changes are most prominent. Climate change is most noticeable in the mountainous communities and has a direct effect on the livelihoods of people living there. Increased climate variability and change can cause frequent and high intensity climate induced hazards, thus pushing the communities to adapt to these changes or force to migrate from their areas. Swat suffered mostly from a number of extreme events (disasters) within the earth's system like floods, complex emergencies, hail storms in combination with wind storm, heavy snow fall, landslides, earthquake, epidemics and endemics like dengue etc. Risk can present itself in many shapes and forms and exists for all physical systems. A combination of risks come into effect when physical systems are exposed to hazards. The vulnerability of a system to a particular hazard or set of hazards also determines the nature and extent of exposed risks. Swat risk assessment can be derived from three factors: its exposure to a number of hazards, vulnerability to these hazards, and capacity to endure them. Each of the three factors is presents a holistic view of the district's risk profile. Swat is a highly disaster-prone region in KP not only due to an active hazard profile but also because of its fragile socioeconomic situation, weak institutions and limited financial and human resource capacity. For any planning it is essential for the planner to know these factors in detail.

Hazard Profile

The multi-hazard vulnerability and risk assessment approach for DRM planning is can be utilized with accurate standards and validity in the district on the frequency, severity and geographical impact of hazards. Flood is observed as the most frequent and damaging natural hazard, in addition, complex emergency, hailstorms in combination with windstorm, heavy snowfall, glacial avalanches, landslides, earthquakes and dengue are also reported as common hazards in district Swat. A multi hazard zonation map of District Swat shows the union councils (UCs) under potential threat.

Major Hazards

- **Floods.** Rainfall in the district generally occurs during two different seasons: winters rainfall continues during December to March while summers rainfall which falls during June to September. Normally monsoon arrives in first or second week of June but major floods occur in late summer i.e. July to September. During recent years, it has been commonly observed that the distribution of rainfall is disturbed due to climatic changes and the district receives heavy rainfall in the form of erratic and cloud burst normally occurs especially during the monsoon season. These types of rainfall generate flash floods and witnesses of loss of life and property in District Swat.

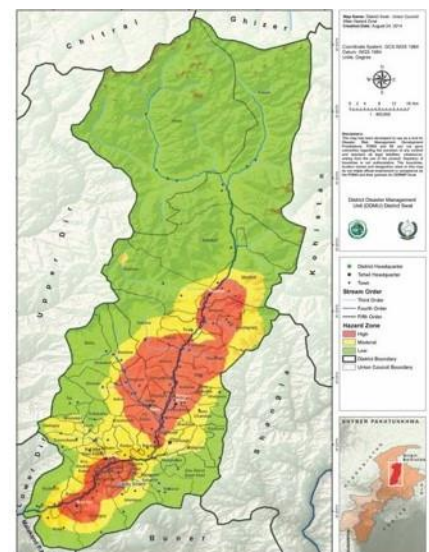


Figure 1 Union Council wise Hazard Zone

During July 2010, the Swat valley was badly affected by the devastating floods that caused enormous losses to human life, collapse of social infrastructure, tourism and agriculture. Standing crops were washed away, while new crops couldn't be grown up due to sediment deposits in the field, tourism industry badly affected as most of the hotels and restaurants washed away, while all the trade activities came to a standstill. Thus the local economy badly shattered while food insecurity in the region was threatened seriously. The unprecedented rainfall led to create secondary disaster such as landslides, mudslides, riverine floods and flash flood in the upper reaches of river Swat and its tributaries. Due to mountainous terrain as river flows in narrow "V" shape valleys the flood affected area is less but on another hand, due to heavy speed of the flood water causes heavy damages to properties and infrastructure.

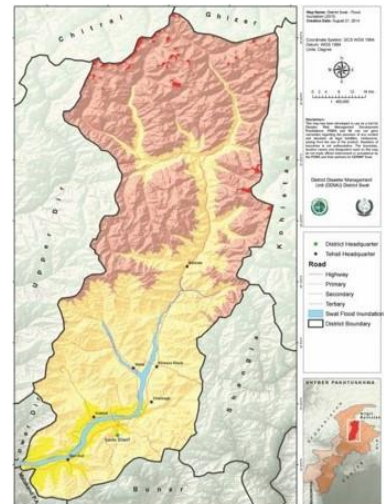


Figure 2 Flood Induction 2010

Hailstorm. Swat produces large number of fruits and vegetables because of the favourable climatic conditions. It produces both seasonal and off-season fruits and vegetables. It accounts 45% of fruits and 1/3rd of province-wide vegetable yield. 3/4th of the total onion production in the province is contributed by Swat. July is the peak season for various fruits and vegetables in Swat. Hailstorm also follow similar time pattern and badly affect quantity and quality of fruits and vegetable in almost all parts of the district though consider medium in terms of physical and livelihood loss. Nominal disaster of jointly hailstorm and windstorm occurred back in 2007 in Mingora city which resulted into death of 07 people, mainly because of tree falling, roof falling and traffic accidents. Hailstorm accompanied with thunderstorm and heavy rains are common in the months of June, July and August. Its effect is severe on fruits in comparison to noticeable impacts on vegetables. In some cases, dry wheat crops and vegetables in thousands of acres of land have considerably suffered during the hail storms. The intensity of hailstorms is mostly so severe that it knocked down fruits from the trees. The strong winds uprooted many trees and flattened wheat crop.

- **Snowfall.** During winters the district received snowfall in most parts. The North, North-East and West received a tremendous amount of snow accumulation. It usually occurs in the winter season mainly affecting the Kalam, Utror, Balakot, Mankiyal, Behrain and Beshigram UCs. These UCs are not only affected by heavy snowfall but the increasing deforestation and environmental degradation activities provide the ideal gullies for snow avalanches which is an increasing threat to the down gullies inhabitants. In the recent years the frequent glacial avalanches phenomenon in the said union councils reportedly claimed lives, livestock losses and infrastructure damages. In case of heavy snowfall, also the burden on families' increases for protecting their houses and removing excessive snow from the roof tops. The food and feed stocks that may be sufficient till the end of February/ March could result into scarcity if not properly managed.
- **Earthquake.** The district associated with a geological set up can transmit earthquake hence some areas of the district are reported prone to earthquake. The major faults that may affect the district are Main Mental Thrust (MMT), Main Boundary Thrust (MBT), Oghi Share Zone and other small scale faults. There is no recorded historical data available of the damages in the district due to previous earthquakes prior to 2005. However, October 2005 earthquake caused some damages specifically in UCs; Madyan, Bahrain, Kalam, Khawazakhela, Jano Chamtali and Matta

Kharerai of district Swat. The history, quantum of damages and placement of Swat in Zone III in seismic according to earthquake zone map and therefore ranked as high which indicates that earthquake is a potential hazard in the district based on the available faults and epicenter data of the region⁴.

- **Landslides.** The mountain and hillsides areas around the district are particularly vulnerable to landslide hazards. Aside from the young geology and fragile soil type of mountain ranges especially in the upper reaches of the district, accelerated deforestation and degradation of the natural slopes are major causes behind increase incidents of landslides. Small isolated landslides occur frequently in the areas with no tremendous impact on the built system while the slides generated by floods, earthquakes and heavy snow burden (glacial avalanches) brings consequences to the lives, property and critical facilities. In the district the noticeable landslides occur in the months of March and April due to continues rainfall and snow melts which soften rocks and earth surface especially in the mountainous areas.

Several link roads become temporary blocked and causing mobility issues for the inhabitants of the out reaches. The consequences bring upon are houses, buildings and infrastructure collapse, road pavement cracks, depression made and mass wasting problems. The vulnerability of the local populates multiply with the settlements in the landslides prone areas due to population expansion, lack of awareness, poverty and lack of resources.

- **Complex Emergencies.** Pakistan has been vulnerable to both human-induced and natural disasters. The insurgency in the boarder sharing neighbour country Afghanistan is contributed to the underlying causes of complex emergencies in the country as a whole while the province of Khyber Pakhtunkhwa in particular. There have been internal armed conflicts and disturbances for many years. For the last decade, Pakistan has faced severe internal conflict in the form of terrorism in Khyber- Pakhtunkhwa and the formal Federally Administered Tribal Areas. This conflict caused severe human and economic losses. This is clear from the fact that 5,000 people lost their lives and 10,000 were injured during 2007 and 2008⁵.

Swat is one of the areas which also have been affected by armed conflict which reaches its peak during 2009. The armed conflict caused displacement of 2 million people from Swat. The majority of these displaced families took refuge in host communities and Internally Displaced Persons (IDPs) camps in Mardan and Swabi district⁶. The government of Pakistan initially attempted to contain the militants through dialogue and negotiations. After these attempts failed, a military operation was launched in early 2009 with consensus of the political, administrative and military leadership. This operation caused an internal migration of colossal proportion from embattled areas, with an estimated 2 million people becoming internally displaced as a result of crisis. While the operation is seen as well-intentioned, it has imposed an immense cost on the local economy as large number of people has been forced to leave their homes and livelihoods and considerable damage has been caused to physical social infrastructure.

Dengue (Epidemic). The dengue has emerged as a threat during the past few years. According to the district authorities, 44 UCs have been marked as high-risk areas based on information obtained by WHO.

⁴ Shangla District Disaster Management Plan, NDMA Pakistan

⁵ Islamabad Policy Research Institute, Working Paper 2008

⁶ Damage Assessment and Displacement Impact in Districts Dir, Buner and Swat 2010, CPPR, Peshawar

Vulnerability Profile

People, property, systems, or other elements present in hazard zones are subject to potential losses. Measures of exposure can include the number of people or types of assets in an area. These can be combined with the specific vulnerability of the exposed elements to a particular hazard to estimate the quantitative risks associated with that hazard in the area of interest⁷.

Exposure and vulnerability assessment is an intermediate stage of risk assessment, which links hazard assessment with human and physical. This helps to identify what and how much of various elements in district Swat are at risk of the hazards. A vulnerability ranking for Swat has been developed using information gathered from field visits, key informer interviews (KIIs) and group discussions, as well as the available secondary literature. The elements at risk are considered in four dimensions:

- a. Population (Human)
 - b. Buildings (Infrastructure)
 - c. Agriculture (Livelihoods)
 - d. Essential facilities
- **Population.** There is considerable variation among the 'social/ age groups' in the range and severity of hazards. Within the household different age groups exposed to the hazard also play a role in its effect. Unlike other dimensions of social pattern, the consideration of different age groups getting more importance in the country after the lesson learned from 2005 earthquake disaster. It is observed that gender and age perspective made difference in the death toll and injuries, as children, women and old age people affected the more. In assessing the population vulnerability for the natural hazards in the district considering different parameters like gender, wealth, education influence in general while the other important parameters particularly, Age; children, elderly people and PWDs tend to be more vulnerable. They have less physical strength to survive in disasters and are often declining vision and hearing. Children are frequently dependent on others for survival decisions. Below matrix shows the age and ability versus hazards impact.

Population Group	Impact of Hazards						
	Flood	Earthquake	Landslides	Avalanches	Conflicts	Hill Storms	Dengue
Under 05 years	High	High	High	High	High	High	High
Between 6-10 years	High	High	Medium	Medium	High	Medium	High
Between 11-20 years	Medium	High	Medium	Medium	High	Medium	High
Between 21-40 years	Medium	High	Medium	Low	High	Medium	High
Between 41-60 years	High	High	Medium	Medium	High	Medium	High
Above than 60+ years	High	High	Medium	High	Medium	High	Medium
Children with disability	High	High	High	High	High	High	High
Aged with disability	High	High	High	High	High	High	High
Women with disability	High	High	High	High	High	High	High
People with physical impairment	High	High	High	High	High	High	High
People with mental disability	High	High	High	High	High	High	High
People with hearing impairment	Medium	Medium	Low	Low	Medium	Low	High
People with speaking impairment	Medium	Medium	Low	Low	Medium	Low	Low
People with visual impairment	High	High	High	High	High	High	High
Under 05 years	High	High	High	High	High	High	High

⁷ Disaster Terminology by UNISDR

- **Buildings.** In any disaster, the loss of shelter is considered the most crucial loss after human loss. In assessing the natural hazard risk to housing units, the structural condition of units had to be collected. The housing census of Pakistan done during 1998 provided details about housing conditions in the form of categorization into three groups given below:
 - a. Katcha (bad condition)
 - b. Semi pacca (moderately good condition)
 - c. Pacca (sound condition) dwelling units
- **Agriculture.** The hazards like floods, landslides, conflicts and hailstorms had a great impact on crops. All the hazards, vulnerability functions were used to assess the major crops and fruits of the district like wheat, rice, maize, fodders, persimmon, grapes, apricot, apple, peach, plum, strawberry, vegetables and some other to analyse the impact of hazards. Below table shows the impact of hazards on crops in the districts.

Crop Type	Impact of Hazards				
	Flood	Hail storms	Glacial Avalanches	Conflicts	Land slides
Wheat	Medium	Medium	Low	High	Low
Rice	Low	Medium	Low	High	Low
Maize	High	High	Low	High	Low
Fodder	High	High	Low	High	Low
Persimmon	High	Medium	Low	High	Low
Apricot	High	Medium	Low	High	Low
Apple	High	Medium	Low	High	Low
Peach	High	Medium	Low	High	Low
Plum	Medium	Medium	Low	High	Low
Strew berry	Low	Medium	Low	High	Low
vegetables	High	Medium	Low	High	Low
Other	High	Medium	Low	High	Low
Beans	High	Medium	Low	High	Low

- **Essential Facilities.** Essential/ critical facilities are the primary physical structures, technical facilities and systems that are socially, economically or operationally essential for the functioning of a society or community, both in routine circumstances and in the extreme circumstances of an emergency. These include as transport, airports, electricity, water, sanitation, communication, and health services, places exposed to fire, police and public administration services. Having known the risk to these facilities, special consideration can be given when formulating disaster management plans. Further, a critical facility should not be located in a high-risk area if at all possible. If a critical facility must be located in a high-risk area, it should be provided a higher level of protection so that it can continue functioning and provide services.
- **Exposure Analysis.** The composite exposure layer can be calculated from the sum of weightages of exposure elements like population, buildings, crops, and essential infrastructures i.e. roads, schools and health facilities. The district categorized in low, moderate high on the basis of exposure concentration. UC wise exposure analysis is: -

UC Name	Exposure/ Vulnerability	UC Name	Exposure/ Vulnerability
Matta Kharare	High	Ghaligay	Medium
Baydara	High	Koz Aba Khel	Medium

Chuprial	High	Darmi	Medium
Dorishkhela	High	Shapleen	Medium
Kotanai	High	Jano Chamtail	Medium
Khwazakhela	High	Kashora	Medium
Devli	High	Aka Maruf Bami Khel	Medium
Kanjo	High	Kokari	Medium
Bar Aba Khel	High	Showar	Medium
Hazara	High	Gowalari	Medium
Kabal	High	Ghaligay	Medium
Kashora	High	Bartana	low
Gulibagh	High	Sakhra	low
Charbagh	High	Fatehpur	low
Manglawor	High	Tirat	low
Mingora	High	Bashigram	low
Dangram	High	Madyan	low
Odigram	High	Mankial	low
Tindodag	High	Bahrain	low
Barikot	High	Balakot	low
Matta Kharare	High	Islampur	low
Baydara	High	Kota	low
Ashri	Medium	Shamozi	low
Shin	Medium	Totano Bandi	low
Arkot	Medium	Tal	low
Kala Kalay	Medium	Beha	low
Pir Kalay	Medium	Balakot	low
Koza Bandi	Medium	Utroor	low
Sangota	Medium	Kalam	low

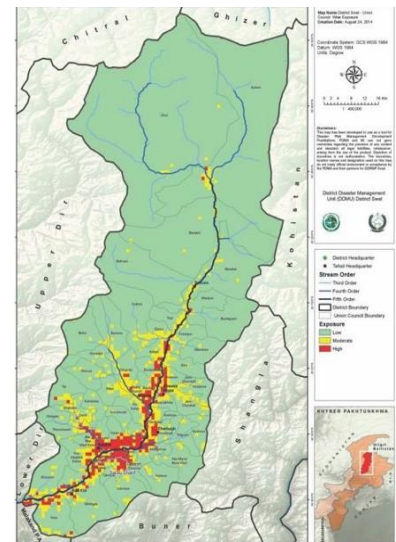


Figure 4 Union Council wise Exposure Map

Capacity Profile

The capacity profile of a district comprises the total available resources a district may possess during the time of disaster. Three factors can explain the capacity/ resource profile: human resources e.g. how much manpower the district possesses; assets/ financial resources e.g. the availability of funds and capital; and infrastructure e.g. availability of buildings for shelter and rescue during a disaster. A detailed description of resource availability and capacity has been outlined in Annexure II. Resources available include manpower and light to heavy machinery reported through various local and provincial stakeholders. It is crucial that these resources are used effectively, as in previous situations mismanagement has been witnessed.

District Disaster Risk Profile

Risk can present itself in many shapes and forms and exists for all physical systems. Some of the common types of perceived risks include economic risks, financial risks, health risks, safety risks, security risks, information risks and risk to social status or emotional well-being. A combination of risks come into effect when physical systems are exposed to hazards such as floods, droughts, earthquakes and heat waves. The vulnerability of a system to a particular hazard or set of hazards also determines the nature and extent of exposed risks. If the risk of a hazard to a system is materialized it can turn into a potential disaster.

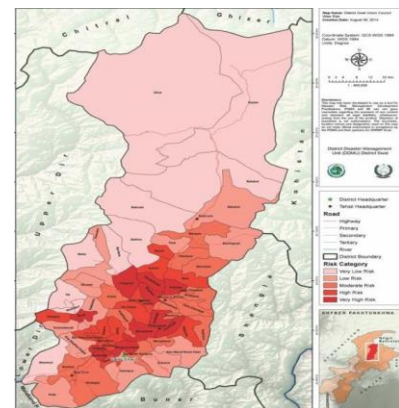


Figure 5 Union Council wise Risk Map

Therefore, disaster risk is a system's vulnerability, its exposure to a hazard and the degree of exposure and the system's ability to deal with the hazard. Swat risk assessment can be derived from three factors: its exposure to a number of hazards, vulnerability to these hazards, and capacity to endure them. Each of the three factors is described above and presents a holistic view of the district's disaster profile. Swat is a highly disaster-prone region in KP not only due to an active hazard profile but also because of its fragile socioeconomic situation, weak institutions and limited financial and human resource capacity.

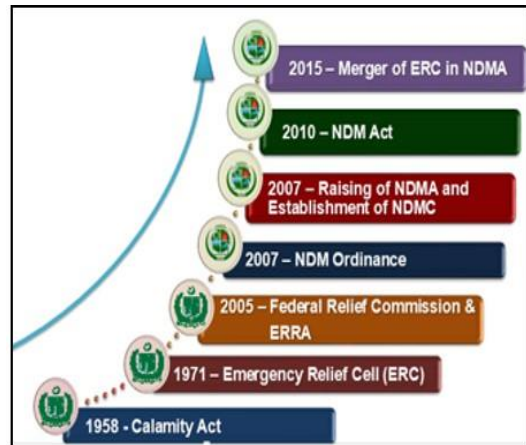
UC Name	Risk Indexing	UC Name	Risk Indexing
Baydara	Very High Risk	Jano Chamtail	Moderate Risk
Chuprial	Very High Risk	Kashora	Moderate Risk
Dorishkhela	Very High Risk	Miandam	Moderate Risk
Kotanai	Very High Risk	Fatehpur	Moderate Risk
Khwazakhela	Very High Risk	Madyan	Moderate Risk
Devli	Very High Risk	Kashora	Moderate Risk
Gulibagh	Very High Risk	Manglawor	Moderate Risk
Charbagh	Very High Risk	Tirat	Low Risk
Mingora	Very High Risk	Bashigram	Low Risk
Odigram	Very High Risk	Mankial	Low Risk
Tindodag	Very High Risk	Islampur	Low Risk
Mattakharare	High Risk	Kota	Low Risk
Ashri	High Risk	Totanobandi	Low Risk
Shin	High Risk	Kala Kalay	Low Risk
PirKalay	High Risk	Aka Maruf BamiKhel	Low Risk
Sangota	High Risk	Kokari	Low Risk
Qambar	High Risk	Showar	Low Risk
Ghaligay	High Risk	Gowalari	Low Risk
Darmi	High Risk	Bartana	Very Low Risk
Kanjo	High Risk	Sakhra	Very Low Risk
Bar Aba Khel	High Risk	Bahrain	Very Low Risk
Hazara	High Risk	Balakot	Very Low Risk
Kabal	High Risk	Shamozi	Very Low Risk
Dangram	High Risk	Tal	Very Low Risk
Barikot	High Risk	Beha	Very Low Risk
Arkot	Moderate Risk	Balakot	Very Low Risk
Kozabandi	Moderate Risk	Utroor	Very Low Risk
Koz Aba Khel	Moderate Risk	Kalam	Very Low Risk
Shapleen	Moderate Risk		

Union Council wise risk indexing in the district – Source: Derived from the analysis carried out through FGDs

Chapter 3: Disaster Management Architecture

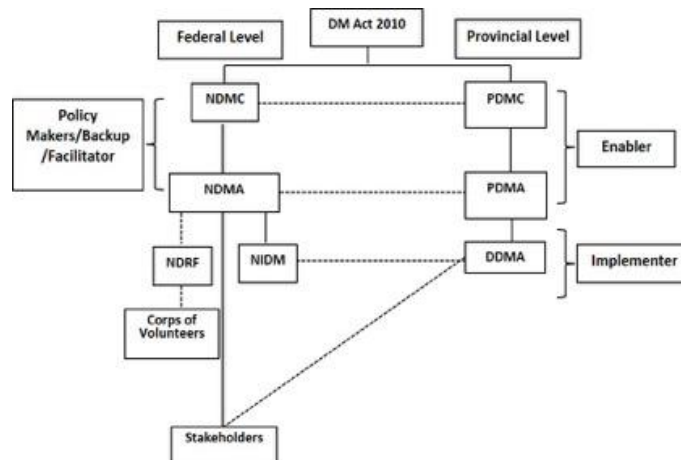
Evolution of Disaster Management System

A rudimentary system existed till 2005 where different organizations under various legal arrangements were performing with limited scope. The West Pakistan National Calamity Act 1958 and Civil Defence Act 1952 were the main legal framework for the maintenance and restoration of order in affected areas by relief against such calamities and focuses on emergency response. Emergency Relief Cell at federal level and Relief Commission at provincial level were responsible for disaster relief. Federal Relief Commission and Earthquake Reconstruction and Rehabilitation Authority (ERRA) were created in wake of Earthquake 2005, to handle the relief and reconstruction respectively.



Evolution of DM System in Pakistan

In the back drop of the 2005 earthquake, to achieve a proactive approach, the NDM Ordinance was promulgated in December 2006, and later enacted as the NDM Act in 2010 by Parliament. Under the Act, a three-tiered disaster response system was created. At the Federal level, the NDMC headed by the Prime Minister, was established as the policy-making and oversight institutional mechanism for DRM. NDMA was established in 2007 as a lead agency at the Federal level. At the provincial level, similar to the federal level, the PDMC headed by the respected Chief Executive was formed, with similar responsibilities as the NDMC. PDMA was formed, which is led by the Director-General appointed by the respective Provincial Government. At the district level, DDMA (KP Province named them as DDMUs) were established in all the districts across Pakistan for responding to emergencies/disasters at the local level. The disaster management system is displayed in the figure below.

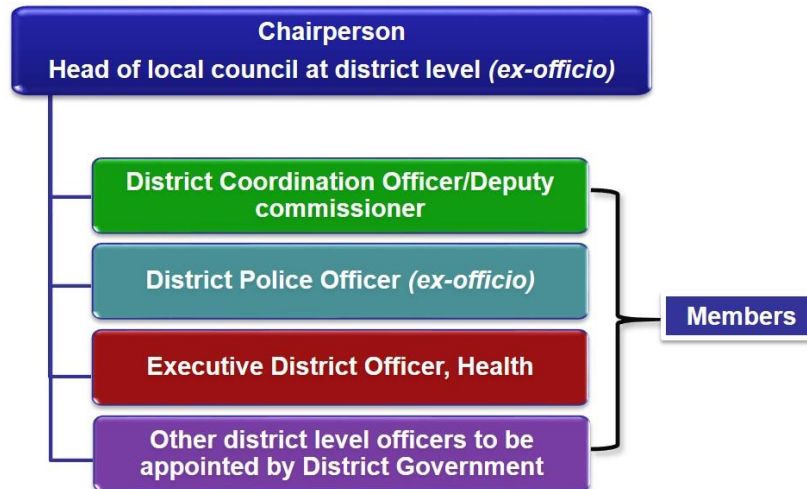


Pakistan DM Structure as promulgated in DM Act

District Disaster Management Authority (DDMA)

Constitution and Structure of DDMA

Section 18, Chapter IV of NDM Act 2010, envisaged constitution of DDMA (KP Province named them as DDMUs) for every district by the province. AS per the Act, the district authority shall consist of such number of members, as may be prescribed by the Provincial Government. The Act has proposed the following organizational structure for all district level DMAs.



The Chairperson of the district authority have power to exercise all or any of the powers of the authority in case of emergency. However, the exercise of such powers shall be subject to ex-post facto approval of the District Authority.

Powers and Functions of District Authority

District authority shall be as the district planning, coordinating and implementing body for disaster management and take all measures for the purpose of disaster management in the district in accordance with guidelines laid down by the National and Provincial Authorities. The major functions of the District Authority are: -

- a) Prepare a disaster management plan including district response plan;
- b) Coordinate and monitor implementation of National Policy, Provincial Policy, National Plan, Provincial Plan and District Plan;
- c) Ensure vulnerable areas in the district are identified and measures for prevention of disaster and mitigation of its effects are undertaken by the departments of the Government at the district level as well as by the local authority;
- d) Ensure that the guidelines for prevention, mitigation, preparedness and response measures as laid down by the National and Provincial Authorities are followed by all departments at district and local authorities level;
- e) Give directions to different authorities at district level and local authorities to take such measures for the prevention or mitigation of disasters as may be necessary;
- f) Lay down guidelines for preparation of disaster management plans by the departments at the district level and local authorities in the district;

- g) Monitor the implementation of disaster management plans prepared by the departments at the district level;
- h) Lay down guidelines to be followed by the departments at the district level;
- i) Organize and coordinate specialized training programmes for different level of officers, employees and voluntary rescue workers in the district;
- j) Facilitate community training and awareness programmes for prevention of disaster or mitigation with the support of local authorities, government and non-government organizations;
- k) Set up, maintain, review and upgrade the mechanism for early warnings and dissemination of proper information to public;
- l) Prepare, review and update district level response plan and guidelines;
- m) Coordinate with and give guidelines to, local authorities in the district to ensure pre-disaster and post-disaster management activities in the district are carried out promptly and effectively;
- n) Review development plans prepared by the departments of the Government at the district level, statutory authorities or local authorities with a view to make necessary provision therein for prevention of disaster or mitigation;
- o) Identify buildings and places which could, in the event of disaster situation, be used as relief centres or camps and make arrangements for water supply and sanitation in such buildings or places;
- p) Establish stockpiles of relief and rescue materials or ensure preparedness to make such material available at short notice;
- q) Provide information to the Provincial Authority relating to different aspects of disaster management
- r) Encourage the involvement of NGOs and voluntary social-welfare institutions working at the grassroot level in the district for disaster management
- s) Ensure communication systems are in order and disaster management drills are carried out periodically;
- t) Perform such other functions as the Provincial Government or Provincial Authority may assign to it or as it deems necessary for disaster management in the district.

Additional Powers of District Authority

For the purpose of assisting, protecting or providing relief to the community, in response to any disaster, the District Authority may: -

- a) Give directions for the release and use of resources available with any department of the Government and the local authority in the district;
- b) Control and restrict vehicular traffic to, from and within, the vulnerable or affected areas;
- c) Control and restrict the entry of any person into, his movement within and departure from, a vulnerable or affected areas;

- d) Remove debris, conduct search and carry out rescue operations;
- e) Provide shelter, food, drinking water and essential provisions, healthcare and services;
- f) Establish emergency communication system in the affected area;
- g) Make arrangements for the disposal of the unclaimed dead bodies;
- h) Director any department of the Government of the Province or any authority or body under that Government at the district level to take such measures as are necessary in its opinion;
- i) Require experts and consultants in the relevant fields to advise and assist as it may deem necessary;
- j) Procure exclusive or preferential use of amenities from any authority or person;
- k) Construct temporary bridges or other necessary structure and demolish structures which may be hazardous to public or aggravate the effects of the disasters;
- l) Ensure that the NGOs carry out their activities in an equitable and non-discriminatory manner;
- m) Take such other steps as may be required or warranted to be taken in such situation.

Local Authorities

Functions of the Local Authority

Section 25 of KP DM Act sets functional responsibilities for local authorities. Subject to the directions of District Authority, the local authority will perform following functions: -

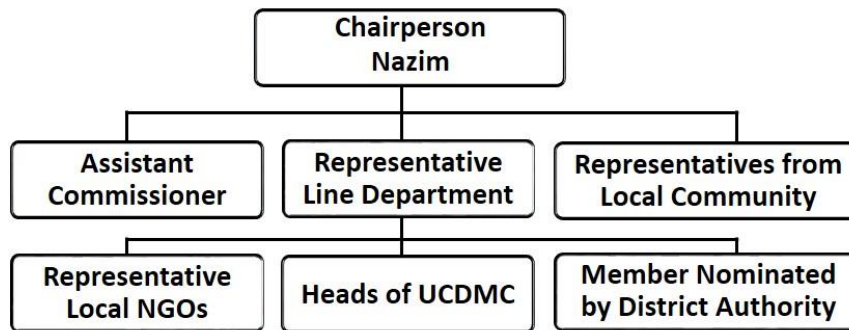
- a) Ensure that its officers and employees are trained for disaster management;
- b) Ensure that resources relating to disaster management are so maintained as to be readily available for use in the event of any threatening disaster situation or disaster;
- c) Ensure that all construction projects under it or within its jurisdiction conform to the standards and specification laid down for prevention of disasters and mitigation by National, Provincial or District Authorities;
- d) Carry out relief, rehabilitation and reconstruction activities in the affected areas in accordance with the Provincial and District Plans;
- e) The local authorities may take such other measures as may be necessary for the disaster management.

In case of any unfortunate disaster communities always are the first to act with the support of basic administrative units. So it is of prime importance to strengthen these bodies in every way including basic and required knowledge and skills and have access to adequate physical, technical and financial resources to plan and manage DM activities well on time. These bodies are the actual tools of any management authority without which the Swat District Disaster Response Plan management is nearly impossible. Suggested grass root level management committees are as under: -

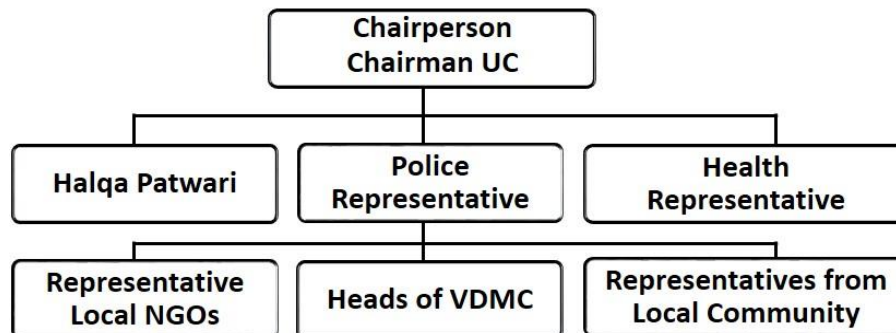
- a) Tehsil DM Committee (TDMC)
- b) Union Council DM Committee (UCDMC)
- c) Village DM Committees (VDMC)
- d) Community Bases Organizations (CBOs)

Functions and Structure of the Local Authority

- a) **Tehsil Disaster Management Committee (TDMC).** Committees at this level are the frontline of disaster risk reduction and response. Tehsil Authorities play a prime role in organizing and delivering emergency response and relief before, during and after the disaster. This is the lowest administration level for many of government departments where they directly interface with communities. Extension workers of agriculture, education, health, police, revenue and other departments can play vital role in risk reduction, awareness raising, damage assessment, and loss of life and recovery need assessment. Chairperson Tehsil DM committee will lead the risk reduction and response operation with the help of other members in consultation with DDMA. The proposed structure of the TDMC is as follow: -



- b) **Union Council Disaster Management Committee (UCDMC).** UC are the lowest tier in the governance structure. At UC, UCDMC shall be established for coordination and implementation of disaster management activities. Suggest structure of the UCDMCs are as under, however adjustment may be made according to the situation.



- c) **Village Disaster Management Committee (VDMC).** Subsequent to the UCDMC, the next lower tier of the DM committee is the Village Disaster Management Committee (VDMC). The VDMC plays a pivotal role as these committee members are at the forefront during disasters. Therefore, the stronger and more organized committees are, the more effective the disaster response can be. The VDMC is responsible for developing the village disaster management plan. It is important that these plans address the specific needs of all inhabitants of the area including vulnerable groups. For selection of VDMC the following may be considered: -
- 1) Member should be the permanent resident of the respective village.
 - 2) Only one member from one household should be designated as member of VDMC.
 - 3) Member should preferably be literate.
 - 4) Should possess the willing to take active part in capacity building initiative and relief work.

- 5) Representation should must be given to women, vulnerable groups and PWDs.
- 6) Notable, educated and enthusiastic personal could be preferred.

VDMC should generally comprise of 10-15 members depending upon the population of the village, head by the village head (Lumberdar etc.). The VDMC should include elders of the area, educationist (headmaster, teachers etc.), religious scholars, females, minorities, youth representative, NGO representative, specialists (paramedics, nurses, LHW, trained individual on first aid/search & rescue/assessment etc.) and any other deemed necessary. Following functions may be performed by the VDMC: -

- 1) Take village level decisions and coordinate the activities at the village level;
- 2) Maintain and account for the inventory of community based disaster preparedness materials and their periodic checking, maintenance and replacement;
- 3) Ensure a continuous monitoring of preparedness and response;
- 4) Coordination with government authorities/departments and with UCDMC;
- 5) Register of community based disaster preparedness activities, training and drills;
- 6) Register of usage of shelters, details of persons or groups using that infrastructure;
- 7) Maintain village disaster fund if established.

d) **Community Based Organizations (CBOs).** CBOs are the non-governmental bodies created from within the community. Tehsil level authorities develop and promote the capacity of CBO in order to reduce risk and damage. CBOs will be trained about local early warning system, evacuation, first aid, search and rescue, firefighting etc. Linkages would be developed between CBOs and relevant local agencies; e.g. agriculture, banks, health and veterinary services to promote disaster preparedness. Skills and knowledge of CBO leadership will also be developed in financial management, people management, resource mobilization, interpersonal communication and presentation and negotiation skills. The provision of Citizen Community Boards (CCBs) in Local Government Ordinance (LGO 2001) provides a good opportunity to organize communities and mobilize resources for issues like local level DRM.

Roles and Responsibilities of Line Departments and Stakeholders

Below are the key functions of the stakeholders detailed roles are given in the NDMP. Municipal/Tehsil Municipal Committees (MCs) share similar roles and responsibilities as the DDMA but at different administrative levels.

Before Disaster	During Disaster	After Disaster
Health Department		
<ul style="list-style-type: none"> • Develop department response plan to deal with diseases, injuries following mass causality accidents, cross border firing and disasters with relation to department's mandate and assets • Train volunteers in first aid and preventive measure against diseases in disaster prone areas and in areas along the LoC • Assess likely health impacts and 	<ul style="list-style-type: none"> • Establish emergency health operation to ensure better coordination and mobilization in emergency/ disaster situation at all levels • Mobilize medical teams and paramedical personnel to go to the affected areas as part of the rapid assessment • Provide medical assistance to the affected population • Receive casualties and 	<ul style="list-style-type: none"> • Carrying out the detail damages and losses in the health sector • Regular and vigilant health risks monitoring to deal with post-disaster diseases/ epidemics • With available resources, start repairing the damaged health infrastructure in order to cater health needs of the affected population during early recovery and rehabilitation stages

<p>share with DDMU and relevant agencies for planning purpose</p> <ul style="list-style-type: none"> • Prepare a list of medical and paramedical personnel in disaster prone areas and disseminate it to concerned administrators • Coordinate with DDMU and jointly identify appropriate actions for reducing vulnerability to health risks • Provide technical support in all health related areas to DDMUs • Devise strategies for community involvement in all aspects of emergency preparedness, response and recovery plans with regards to health sector • Stand by arrangements to meet any medical needs during and after the incident and stocking of sufficient medicines in all hospitals/medical centres • Establishment of temporary team to provide vaccination and medication when required 	<p>injured in case of a major incident</p> <ul style="list-style-type: none"> • Provide mobile medical services and ambulance service with medical facilities to affected areas • Carry out technical assessment on health infrastructure availability and need • Set-up medical camps and mobilize emergency health teams • Provide blood transfusion facilities and motivate the people to donate blood 	<ul style="list-style-type: none"> • Ensure availability of clean drinking water and proper dumping of hospital waste • Regularly monitor and supervise early recovery and rehabilitation activities in the Health sector
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Communication and Works (C&W) Department

<ul style="list-style-type: none"> • Carry out survey of condition of all roads network/ systems at all level • Develop model designs of various facilities and infrastructure (bridges, roads) for safer construction in hazard-prone rural and urban areas • Formulate guidelines for safe construction of public work • Prepare list, with specifications and position, of heavy construction equipment, debris /road clearance machinery available in the district • Ensure that builders, contractors and masons use safer construction methods as per the international best practices • Allocate funds for promoting 	<ul style="list-style-type: none"> • Send information to other district departments on road conditions especially regarding blocked or impassable roads after a disaster • Ensure draining the flood water from roads and remove debris from under the bridges for smooth flow of water • Monitor disaster situation (in case of flood and landslide) with regard to roads and coordinate with other district departments for transporting relief items to affected areas • Organize immediate rehabilitation of roads and other infrastructure for restoration of public transport routes after 	<ul style="list-style-type: none"> • Undertake a detailed assessment of damages to government buildings, roads infrastructure including bridges, culverts, etc. • Prepare a report of damages to be shared with the district and state authorities along with budget requirements for the rehabilitation and reconstruction of damaged/ destroyed infrastructure. • Take steps to ensure speedy repair and restoration of transport links
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<p>safer construction practices</p> <ul style="list-style-type: none"> • Monitor construction of road infrastructure in hazard prone areas of district to ensure that safer construction techniques are followed • Incorporate disaster risk assessment in the planning process for construction of all roads and bridges • Organize periodic training of engineers and other construction personnel on disaster resistant construction technologies • Instruct all officials at construction sites to keep manpower and materials prepared for protection and repair of damaged road site • Direct construction authorities and companies to preposition necessary, machinery, workers and materials (search & rescue facilities) in or near areas likely to be affected by disaster 	<p>disaster</p> <ul style="list-style-type: none"> • Provide assistance to the damage assessment teams for survey of damage to roads infrastructure • Take steps to clear debris and assist search and rescue teams • Collate and disseminate information regarding operational and safe routes and alternate routes, fuel availability etc. to personnel operating in the field • Launch repair missions for damaged critical infrastructure and routes • Take steps for prompt removal of uprooted trees on the roads 	
Education Department		
<ul style="list-style-type: none"> • Conduct MHVRA for all education facilities and identify structural vulnerabilities • Implement actions to reduce the vulnerability of infrastructure in education sector in hazard-prone areas • Ensure that construction of all educational institutions in earthquake zones is earthquake resistant • Arrange for training of teachers and students about the steps to be taken at different stages of disaster and organize them, through coordination with PDMA/ DDMUs, as volunteers and inspire them for rescue, evacuation and relief works • Launch awareness campaign to promote preparedness in educational institutions through conducting drills, 	<ul style="list-style-type: none"> • Make available education institutions buildings for use as emergency shelter and relief centre if necessary • Provide local voluntary assistance for distribution of relief material and assistance by using students and staff • Ensure the continuity of learning by establishing temporary facilities • Determine the extent of loss in educational institutions and prepare plans for their rehabilitation 	<ul style="list-style-type: none"> • Undertake a detailed assessment of damages caused by disaster to educational facilities

<p>reducing vulnerability</p> <ul style="list-style-type: none"> • Develop a response plan for the department covering aspects of risk reduction, preparedness and response and curriculum development on disaster risk education in schools and learning institutions • Conduct drills for various disaster situations like earthquake, fire, terrorist attacks etc. • Encourage local educational authorities and teachers to prepare school safety plans and their implementation 		
Agriculture Extension Department		
<ul style="list-style-type: none"> • Undertake vulnerability and risk analysis for food and agriculture hazard-prone areas, particularly in relation to floods, droughts, and erosion • Identify areas likely to be affected by any anticipated hazard • Arrange for keeping stocks of seeds, fertilizers and pesticides. Create community seed banks at the UC level to support the small farmers with minimum seeds requirements • Ensure sustainable livelihoods in areas of recurrent climate risks by promoting supplementary income generation from off farm and non-farm activities • Promote effective insurance and credit schemes to compensate for crop damage and losses to livelihoods due to natural hazards • Coordinate with DDMU and jointly identify appropriate actions for reducing vulnerability of food and agriculture to disaster risks • Coordinate with DDMU, and research institutions to establish warning systems for 	<ul style="list-style-type: none"> • Assist in saving crops, agricultural land and livestock in disaster situation • Monitor damage to crops and identify steps for early recovery • Ensure adequate availability of food stocks in disaster situation • Organize distribution of seeds, seedlings fertilizers and agricultural inputs for affected farming community 	<ul style="list-style-type: none"> • Quantify the loss and damage within the quickest possible time and finalizes planning of agriculture rehabilitation • Prepare detail report of damages/losses to agriculture sector, assess the need and submit it to DDMU for onward transmission to PDMA • Make available inputs like seed plant, fertilizers and agricultural equipment to victims of disasters on credit basis • Organize ration depots at location required by the local authorities • Restoration of flood damages to agricultural fields, and link roads during emergency • Provision of agricultural machinery to farmers on subsidized rates for harvesting and threshing of wheat and paddy • Ensure availability of adequate supply of seeds, seedlings, fertilizers, pesticides and agricultural implements to the affected farmers • Document the lesson learnt and revise the departmental contingency and response plan accordingly

<p>identification of risks to food and agriculture sectors</p> <ul style="list-style-type: none"> • Develop disaster risk management plan to deal with hazards and disasters with relation to department's mandate and assets • Promote contingency crop planning to deal with year to year climate variations and crop diversification including use of hazard resistant crops, to deal with shifts in climate patterns • Develop capacity and raise awareness of staff of departments at State levels, local extension workers and farmers on disaster preparedness for food and agriculture sectors 		
Livestock and Dairy Development Department		
<ul style="list-style-type: none"> • Arrange fodder for livestock • Build capacity of farmers for adoption of disaster resilient measures • Maintain emergency stocks of fodder & vaccines • Increase awareness on epidemics & diseases of livestock Identify safe points for livestock 	<ul style="list-style-type: none"> • Arrange fodder for livestock • Build capacity of farmers for adoption of disaster resilient measures • Maintain emergency stocks of fodder & vaccines • Increase awareness on epidemics & diseases of livestock Identify safe points for livestock 	<ul style="list-style-type: none"> • Arrange fodder for livestock • Build capacity of farmers for adoption of disaster resilient measures • Maintain emergency stocks of fodder & vaccines • Increase awareness on epidemics & diseases of livestock Identify safe points for livestock
Public Health Engineering		
<ul style="list-style-type: none"> • Repair and maintenance of structure in command areas • Preparation of contingency plan for organization • All water supply schemes to be functional • Water testing laboratory to be stocked and equipped 	<ul style="list-style-type: none"> • Repair and maintenance of structure in command areas • Preparation of contingency plan for organization • All water supply schemes to be functional • Water testing laboratory to be stocked and equipped 	<ul style="list-style-type: none"> • Repair and maintenance of structure in command areas • Preparation of contingency plan for organization • All water supply schemes to be functional • Water testing laboratory to be stocked and equipped
Forest Department		
<ul style="list-style-type: none"> • Protect forests, wildlife and aquatic resources • Train staff in firefighting, handling of animals and conservation of species • Supply drought resistant seeds and control grazing of animals 	<ul style="list-style-type: none"> • Protect forests, wildlife and aquatic resources • Train staff in firefighting, handling of animals and conservation of species • Supply drought resistant seeds and control grazing of 	<ul style="list-style-type: none"> • Protect forests, wildlife and aquatic resources • Train staff in firefighting, handling of animals and conservation of species • Supply drought resistant seeds and control grazing of animals

<ul style="list-style-type: none"> • Publish materials for communities to raise awareness on hazards 	<p>animals</p> <ul style="list-style-type: none"> • Publish materials for communities to raise awareness on hazards 	<ul style="list-style-type: none"> • Publish materials for communities to raise awareness on hazards
Local Government & Rural Development (LG&RD) Department		
<ul style="list-style-type: none"> • Encourage disaster resistant technological practices in buildings and infrastructure • Develop response plan • Undertake vulnerability and risk analysis for rural populations • Coordinate with DDMU to build community resilience to disaster • Undertake vulnerability analysis of local government infrastructure in hazard prone areas • Orient department staff in hazard prone areas on disaster risk assessment • Encourage the people in earthquake prone areas to adopt earthquake resistant technologies • Prepare maps showing population concentration and distribution of resources • Report activities in periodic meetings of the DDMU convened by the DC • Liaise with other line departments and agencies for a coordinated mitigation approach • Alert all concerned about impending disaster • Ensure safety of establishments, structures and equipment in the field • Ensure formation of committee for rescue, relief and rehabilitation work and local volunteer team • Make available piped water, in adequate quantity, for drinking and house-hold purposes • Prepare technical design for mitigation of risks to the newly 	<ul style="list-style-type: none"> • Activate disaster management focal point • Ensure information flow from affected area and maintain regular contact with DEOC • Coordinate the response activities of DDMU • Ensure availability of drinking water at times of need • Provide necessary infrastructure to carry out relief works • Assess initial damage and quantify the loss/damage • Organize reconstruction of damaged houses on self-help basis with local assets and materials received from the response organizations 	<ul style="list-style-type: none"> • Arrange repair of link roads, water supplies and cleaning of canals. • Take up repair/reconstruction work of infrastructure damaged by disaster • Equip and develop the capacities of emergency response

<p>identified schemes</p> <ul style="list-style-type: none"> • Protection of water sources from contamination by continuous water treatment and stream pollution control 		
Social Welfare Department		
<ul style="list-style-type: none"> • Sensitization of disaster managers related to gender issues in disaster management • Prepare special projects for socio economic uplifting of women towards DRR • Make necessary arrangements for involvement of women in DRR at district level • Organize health camps for regular medical check-ups of women and aid to the needy • Assist in provision of drinking water facilities near settlements • Organize training programs for women to cope with disaster situations • Coordinate with NGOs working in the area. 	<ul style="list-style-type: none"> • Involve the Health Ministry in catering for special health needs of women • Establish relief camps for women and ensure fulfilment of basic needs of women in general relief camps • To take steps for safety of women and girls in disaster affected areas 	<ul style="list-style-type: none"> • Ensure that needs of women survivors are addressed in post disaster situations during the relief rehabilitation and reconstruction phases • Prepare special programmes for the rehabilitation of women • Ensure separate sanitation facilities for women in camps • Introduce special vocational training programs for women • Facilitate participation of women in the management of relief, rehabilitation and reconstruction activities • Support rehabilitation of livelihoods of women survivors, which is mostly in the informal sector and is ignored
Police Department		
<ul style="list-style-type: none"> • Identify the 'High Risk' and 'Risk' areas for different disasters and keep the force in readiness for undertaking emergency rescue, evacuation relief operations • Coordinate the wireless frequency of Police with the wireless network of other departments • Establish the Disaster Control Room at District level • Maintain communications with the police installations in the areas likely to be affected by disaster • Instruct all concerned to accord priority to disaster related wireless messages if required by appropriate officials • Monitor law and order and any crisis situation in the State and ensure efficient, coordinated 	<ul style="list-style-type: none"> • On receipt evacuation alert organize personnel and equipment for evacuation and undertake evacuation operations • Provide necessary help in evacuation of casualties from the affected area and arrange traffic cover • Carry out search & rescue operations • Set up emergency evacuation shelters, and transport affected people to camps • Carry out firefighting operations if required • Facilitate working of rescue workers, fire-fighters • Provide assistance to victims of road accidents • Prevent harassment of women and children during any emergency 	<ul style="list-style-type: none"> • Maintain law and order, especially during relief distribution • Protect life, property and liberty of citizens • Preserve, promote public peace and p Prevent public nuisance • Keep close watch for any criminal and anti-state activity in the area • Arrange security of government property and installations damaged in a disaster • Arrange security for humanitarian aid workers • Participate in damage and need assessment • Coordinate with other offices for traffic management in and around damaged areas • Assist the local administration in putting a stop to theft and misuse in relief operation

<p>and timely response at appropriate levels</p> <ul style="list-style-type: none"> • Ensure law and order during any disaster situation in the affected areas and prevent destruction of public property by violence, fire or natural calamities. • Ensure smooth and speedy flow of information by collecting, analyzing, processing and disseminating information to all concerned. • Prepare policy support plan in consultation with DDMU • Impart training to the members of Police Force in first aid, evacuation, rescue and relief operations • Arrange drills for fire extinguishing, rescue, evacuation and transportation of injured persons and prepare coordinated Action Plans in cooperation with concerned local agencies 	<ul style="list-style-type: none"> • Ensure security measures at evacuation points, in evacuated areas, at relief centers and godowns • Protect resources and equipment required and being used at the scene of incidence /rescue • Ensure easy access for emergency rescue vehicles to disaster sites • Manage traffic for the deployment of emergency vehicles 	
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Department of Civil Defence

<ul style="list-style-type: none"> • Ensure standardize and good equipment and fire appliances for fire brigades and other institutions • Provide first aid, fire safety and rescue training to communities, individuals and organizations • Improve community awareness on public safety • Train staff on search and rescue techniques • Organize volunteers, train them in rescue and relief and first aid • Educate and train volunteers on first aid and emergency evacuations and protection procedures against poisonous gases, chemical/biological/radiological explosions or attack • Participate in emergency drills with other stakeholders • Specify, coordinate and enforce 	<ul style="list-style-type: none"> • Conduct search and rescue activities in coordination with DDMU • Provide first aid and psycho social support to injured and traumatized • Evacuation of damaged buildings/structures and demolition • Assist in debris clearance and restoration of essential services • Identification and diffusion of unexploded bombs • Provide emergency rescue equipment to stakeholders if required • Work with the fire brigade in rescue and first aid operations • Liaise with the armed forces on matters relating to Civil Defence 	<ul style="list-style-type: none"> • Provide assistance, render advice and impart training in bomb detection and disposal • Assist in relief and camp management • Security and management of relief stores, warehouses and distribution • Training of other organizations like police etc. in rescue, relief, first aid, psycho social support
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<p>fire protection measures in urban and commercial concerns and in other premises considered critical</p> <ul style="list-style-type: none"> • Organize Warden Service in classified towns and train its volunteers for civil defence services • Inspect Municipal Fire Brigade and fire protection measures in industrial/commercial 		
Rescue 1122 Services		
<ul style="list-style-type: none"> • Maintain state of preparedness to deal with emergencies • Establish a system for rapid communication, exchange of information and quick response to combat or deal with an emergency • Establish community emergency response teams through enlistment, training, coordination and supervision of volunteers to assist the service in safety promotion and management of emergencies • Impart training and grant certificates to rescuers, volunteers and other private persons for due performance of emergency management duties • Establish direct contact with local and international organizations and training institutions to maintain the Service according to international standards • Play a lead role and coordinate the working of other organizations or agencies which have lawful authority to respond to an emergency 	<ul style="list-style-type: none"> • Arrange transport where necessary for carrying persons require emergency medical treatment from the emergency area to the nearest hospital or health care unit having arrangements for emergency medical care and treatment. • Search and rescue activities • First aid and psycho social support to injured and traumatized • Evacuation of damaged buildings/structures and demolition • Emergency first aid and transport; • Assist in debris clearance and restoration of essential services • Provide emergency rescue equipment to stakeholders if required 	<ul style="list-style-type: none"> • Collect, compile, maintain and analyse emergency response data and statistics relating to emergencies and to use it for research and prevention of such emergencies. • Suggest measures for the prevention or mitigation of hazards endangering public safety on roads, public parks and other public places with regard to public safety provisions • Assist DDMU in relief distribution, establishing relief camps and early recovery
Pakistan Red Crescent Society (PRCS)		
<ul style="list-style-type: none"> • Conduct MHVRA in close coordination with DDMA according to the standard procedure • Develop response and share with DDMU for coordination and implementation 	<ul style="list-style-type: none"> • Conduct rapid need assessment in devising the response strategy • Assist DDMU in establishing relief/evacuation camps, food distribution to displaced persons 	<ul style="list-style-type: none"> • Mobilize disaster affected communities for early recovery and rehabilitation efforts • Conduct damage need assessment and incorporate it in DDMUs data • Prepare village level early

<ul style="list-style-type: none"> • Provide all necessary trainings, conduct drills/ exercises and provide necessary equipment to DRR committees with close coordination of DDMU • Establish district disaster response teams through enlistment, training, coordination and supervision of volunteers to assist PRCS during emergency 	<ul style="list-style-type: none"> • Provide health services and ambulance support to affected population • Establish information management centre at evacuation/relief camps with close coordination of DDMU 	<p>recovery / rehabilitation plans and mobilize resources for their implementation</p>
Armed Forces		
<ul style="list-style-type: none"> • Identify high risk areas in consultation with DDMU • Prepare proper disaster response plans for providing the assistance during disaster • Organize task forces unit for working with other departments. Each unit should be composed of, engineers, doctors with medicines and nursing assistants. • Conduct regular capacity building exercises 	<ul style="list-style-type: none"> • Assist DDMU in search and rescue services and facilitate evacuation of affectees • Establish relief camp and provide relief assistance to affectees in coordination with DDMU • Install temporary bridges where appropriate to ensure mobility of affected population and transportation of relief items • Provide logistic back-up to DDMU in terms of trucks, boats, helicopters etc. if needed • Provide health care facilities to affectees 	<ul style="list-style-type: none"> • Conduct survey in affected areas and assess requirements of relief and rehabilitation • Assist local administration in removing the dead bodies and debris in affected areas • Set up field hospital if required • Provide assistance in reconstruction /repair of road and bridges where needed • Participate in reconstruction and rehabilitation operation if requested
Media		
<ul style="list-style-type: none"> • Develop the understanding of DM concepts, issues and policies for necessary action by mass media on reporting disasters. • Launch information programme for quick dissemination of disaster warnings to appropriate agencies and community groups • Provide information to communities about precautionary measures they can take to avoid loss of life and property from hazards • Inform the public with timely and factual information about the extent of disaster, losses 	<ul style="list-style-type: none"> • Disseminate warning messages to at-risk communities in an easy to understand language through multiple channels, while being sensitive to people's access and timing issues • Ensure that the news to be broadcasted reflects the true and clear presentation of the actual position and does not create panic in the minds of the people and also advises them to desist from taking unreasonable steps • Advise public about measures to be adopted during the emergency period 	<ul style="list-style-type: none"> • Communicate about potential secondary risks to minimize further loss or damage • Communicate about rehabilitation and reconstruction plans of authorities, UN and NGOs, others in the affected areas • Encourage survivors' participation in recovery through conducting surveys and communicating the opinions of public to authorities • Take steps for publicity of news and directives relating to the situation issued by the PDMA/DDMU • Curtail normal programmes to broadcast essential information

<p>caused and the current situation of hazard.</p> <ul style="list-style-type: none"> • Inform communities about any impeding hazard and disseminate early 	<p>in order to avoid further losses; e.g. evacuation, unsafe areas, water purification techniques</p> <ul style="list-style-type: none"> • Inform about actions being taken by authorities'/aid groups to save lives and property • Relay messages concerning welfare of isolated or trapped groups for the benefit of families, relatives, friends and rescue teams • Facilitate communication among affected people and their relatives, friends, families in other parts of the country or world • Highlight needs of survivors to make sure that all groups of people affected by the disaster receive appropriate aid, irrespective of their social, ethnic, political status • Highlight the need for application of minimum standards to ensure that minimum needs of disaster survivors in terms of water, sanitation, shelter, food and health are met 	<p>on disaster if requested by the PDMA/DDMU</p> <ul style="list-style-type: none"> • Arrange dissemination of information of the short and long term measures of different ministries, departments/agencies for relief and rehabilitation of the affected people • Influence for integrating risk reduction in rehabilitation and reconstruction programmes
Humanitarian Sector		
<ul style="list-style-type: none"> • Support disaster response plan development and implementation at all levels • Mobilize communities and develop local level capacities on disaster risk reduction • Provide technical support in conducting MHVRA in close coordination with the DDMU • Provide necessary trainings, drills/exercises and equipment to the DRR committees in coordination with DDMU 	<ul style="list-style-type: none"> • Facilitate local authorities in emergency relief operations (search& rescue, establishment of evacuation/relief camps, food distribution to displaced, provision of health services, etc.) • Establish information management centers at evacuation/relief camps in close coordination with the DC office and the DDMU 	<ul style="list-style-type: none"> • With the support of DMCs assess damages/losses and needs and contribute to the district government's data • Prepare village level early recovery and rehabilitation plans and mobilize resources for their implementation • Provide emergency livelihood support to communities in terms of providing agriculture inputs, conditional cash grants, etc.
Communities		
<ul style="list-style-type: none"> • Support disaster response plan development and implementation at all levels • Participate in local level 	<ul style="list-style-type: none"> • Facilitate local authorities in emergency relief operations (search& rescue, establishment of evacuation/ 	<ul style="list-style-type: none"> • Support DMCs in assessing damages/losses • Assist all in prepare village level early recovery and

<p>capacities on disaster risk reduction</p> <ul style="list-style-type: none"> • Assist all in conducting MHVRA • Participate in trainings, drills/exercises and maintain equipment issued by DDMU/others to DMCs 	<p>relief camps, food distribution to displaced, provision of health services</p> <ul style="list-style-type: none"> • Facilitate all in evacuation, establishment of camps and relief 	<p>rehabilitation plans and mobilizing resources for their implementation</p> <ul style="list-style-type: none"> • Assist all in execution of early recovery interventions
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Chapter 4: Emergency Response

Declaration of Emergency

The declaration of emergency depends upon the nature and magnitude of the disaster. Disaster within the capacity of district authorities would be managed by the district on declaration of emergency by the province. Following four categories have been identified in the National Disaster Response Plan 2019: -

- a) **Category 1 (C1).** Localized emergency events for example, small scale fire, landslides, flood, canal or sub canal breach, low level epidemics etc. dealt by DDMA at district level. The DDMA is capable of handling the situation on its own. Emergency may be declared by the District Nazim.
- b) **Category 2 (C2).** The emergency/ disaster which overwhelms the capacity of the DDMA to manage the DDMA can request for assistance to the PDMC through PDMA. In this situation an emergency is be declared by the Chief Executive of the Province.
- c) **Category 3 (C3).** In case the emergency/ disaster is beyond the capacity of provincial/regional/state government, national emergency is declared by the Prime Minister of Pakistan.
- d) **Category 4 (C4).** In case the emergency/ disaster is beyond the capacity of government at national level, Prime Minister of Pakistan may launch appeal for international assistance.

Basic Criteria for Declaring Emergency

Following are some of the important consideration for declaring an emergency: -

- Loss of human life
- Loss of property
- Loss of livelihoods
- Loss of agriculture (crops/ fruit trees)
- Loss of livestock/ fodder
- Loss of storage foods
- Sever damage to infrastructure
- Mass displacement

Criteria for Declaring an Area Calamity Affected

As per the National Calamities Act 1958, if more than 50% loss of livelihood of the affected population has occurred, the district authority can declare the area “**Calamity Affected**”. Normally a technical committee is formed to assess the situation after a relief phase and make recommendations for declaring the area calamity affected.

Key Action - Pre and During Disaster

- a) **DDMA**

Pre- Disaster	During Disaster
• Prepare disaster management plan.	• Activate DEOC
• Prepare contingency plans cover all potential hazards in the district.	• Inform/ make district level departments ready for emergency response
• Identify areas vulnerable to disaster in the district and take measures for prevention of disaster and mitigation of its effects.	• Periodically inform PEOC and NEOC about the latest situation.
• Organize and coordinate trainings program for DDMU team, departments and voluntary rescue workers at district level.	• Conduct rapid and multi-sectoral assessments of disaster affected areas and determine the extent of loss and damage.

<ul style="list-style-type: none"> Facilitate community training and awareness programmes for prevention/ mitigation of disaster impacts with support of departments and local NGOs. 	<ul style="list-style-type: none"> Incident management at disaster level.
<ul style="list-style-type: none"> Prepare and update SOPs for each department at district level. 	<ul style="list-style-type: none"> Organize evacuation on priority basis.
<ul style="list-style-type: none"> Prepare, maintain, review and upgrade the mechanism for early warnings and device information dissemination strategy that information reach to the end user. 	<ul style="list-style-type: none"> Prepare detail plans for the resources requirement for relief operations and share it with the PDMA and NDMA.
<ul style="list-style-type: none"> Identify and prepare list of public buildings which can be used as relief centres in the event of disaster and prepare plan for various supplies (water and sanitation etc.) for these buildings. 	<ul style="list-style-type: none"> Provide food, drinking water, medical supplies, non-food items to the affected population.
<ul style="list-style-type: none"> Stockpile relief and rescue materials or ensure preparedness to make such material available at short notice. 	<ul style="list-style-type: none"> Deploy Medical, Search and Rescue and emergency response team immediately.
<ul style="list-style-type: none"> Monitor hazards, risks and vulnerable conditions within the district on regular basis and device plan accordingly. 	<ul style="list-style-type: none"> Set up relief Camps.
<ul style="list-style-type: none"> Encourage participation of NGOs and voluntary social welfare organizations and communities in different aspects of emergency response. 	<ul style="list-style-type: none"> Coordinate with PDMA and NDMA to deploy resources for emergency response.
<ul style="list-style-type: none"> Enforce vacation of encroached areas (in hazard prone areas) by vulnerable population. 	<ul style="list-style-type: none"> Coordinate and facilitate with I/NGOs, UN bodies and Philanthropist organizations for resource mobilizations for response.
<ul style="list-style-type: none"> Clearing of river plains, nullahs/ natural drainage system before Monsoon Season 	<ul style="list-style-type: none"> Develop complaint mechanism system and set up complaint mechanism cell in the DEOC and at sub District level.
<ul style="list-style-type: none"> Educate people about Building Codes and Land Use Planning. 	<ul style="list-style-type: none"> Organize regular media and public information briefings.
	<ul style="list-style-type: none"> Organize detailed assessment for the early recovery program and prepare proposal and submit to PDMA and NDMA.
	<ul style="list-style-type: none"> Prepare Situation Report on daily and weekly basis and circulate to the PDMA, NDMA and all stakeholders etc.

b) Tehsil Administration and Union Councils

Tehsil Administration	Union Councils
Pre- Disaster	During Disaster
<ul style="list-style-type: none"> Prepare Contingency Plans covering potential hazards in the area. 	<ul style="list-style-type: none"> Assist assessment team in damage and loss assessment.
<ul style="list-style-type: none"> Organize and conduct damage/ loss assessment. 	<ul style="list-style-type: none"> Prepare a list of beneficiaries in affected area.
<ul style="list-style-type: none"> Incident management at Tehsil level. 	<ul style="list-style-type: none"> Provide storage facility and security for relief goods at village level.

<ul style="list-style-type: none"> Organize and conduct rapid assessment for relief needs and response. 	<ul style="list-style-type: none"> Assist government in distribution of relief.
<ul style="list-style-type: none"> Assist in post-disaster assessment for early recovery and post-disaster rehabilitation. 	<ul style="list-style-type: none"> Assist government in verification of beneficiaries.
<ul style="list-style-type: none"> Assist and organize relief operation in affected area of the Tehsil/ Taluka. 	<ul style="list-style-type: none"> Prepare a record of relief distribution.
<ul style="list-style-type: none"> Identify and prepare a list of public Buildings which can be used as Relief Centers in the event of disaster and Prepare Plans for various Supplies (Water and Sanitation etc.) for these buildings. 	<ul style="list-style-type: none"> Identify and prepare a list of Public Buildings which can be used as Relief Centers in the event of disaster and prepare for various supplies (water and sanitation etc.) for these buildings.
<ul style="list-style-type: none"> Organize and manage Relief Camps in the affected area. 	
<ul style="list-style-type: none"> Organize water and sanitation facilities with help of PHED department for relief camps. 	
<ul style="list-style-type: none"> Identify and prepare list of vulnerable groups for relief response. 	
<ul style="list-style-type: none"> Distribute relief goods through District Government to the affected communities and priorities given to poorest, child headed household, women headed household, disabled and elderly in the community. 	
<ul style="list-style-type: none"> Coordinate and facilitate government departments, UN, I/NGOs and Philanthropists for relief activities. 	
<ul style="list-style-type: none"> Facilitate and support District government and local government/ elected representatives in relief. 	
<ul style="list-style-type: none"> Coordinate with district administration and update them on relief activities. 	
<ul style="list-style-type: none"> Prepare final report on relief operation and sent it to DDMU. 	
<ul style="list-style-type: none"> Monitor relief operation regularly and report to DDMU. 	

District Emergency Operation Centre (DEOC)

The DEOC serve as the hub for all activities and will be part of the DDMU office with full/part time staff and facilities for representatives from different departments, media and those humanitarian organizations who will join during the disaster time. DEOC will be equipped with all necessary facilities and headed by an officer to be appointed by the DDMU Chairperson. The DEOC will be working round the clock during the disaster time and in the non-disaster time during normal office hours. The main objectives of the DEOC are to: -

- a) Collect, collate/ analyse and disseminate information.
- b) Disseminate timely warning.
- c) Coordinate with different stakeholders for effective response and issue instructions.
- d) Organize and manage emergency operations.
- e) Mobilize and deployment of resources.

Structure of DEOC

The DEOC will be supervised and directed by the DDMU Chairperson, headed by an officer to be appointed by the chairperson and supported by the team to look after operations, coordination, communication, public information, administration, and logistics & IT support and complaint.

The DEOC will work 24/7 during a disaster and during non-disaster times, the DEOC will be functional according to normal office hours and will focus on emergency preparedness and contingency planning.

Function of DEOC

- a) Monitor the situation and ensure that the DEOC is functional.
- b) Receive early warnings, screen and issue disaster alerts and warnings from nodal agencies and other sources, and communicate the same to all designated authorities and stakeholders.
- c) Issuance of early warnings to the concerned communities.
- d) Coordinate with PEOC at PDMA-KP, concerned departments and other stakeholders.
- e) Gather emergency response tools and relief stock information during peace time and mobilize during a disaster.
- f) Monitor emergency operations and make efforts for preventing secondary hazards.
- g) Conduct rapid assessment of relief needs by collecting information from the affected area and circulate to PDMA KP and other concerned departments and stakeholders.
- h) Deploy evacuation, medical, search and rescue teams in the affected area.
- i) Provide relief assistance in terms of relief camps, medical and sanitation facilities and temporary shelters to the affected population in the district.
- j) Liaison with concerned departments and stakeholders engaged in emergency response by anticipating resource inventory.
- k) Forward urgent information to relevant agencies for immediate action and arrange daily briefings on disaster situations for general public and specific groups.
- l) Record-keeping and preparation of consolidated reports and response plans and projects

Store, Equipment and Communication

DEOC will be equipped with all facilities required to obtain, analyze and dissemination of information. The proposed list is as follow: -

- a) Desktop computers, laptops, printing, fax, scanning and photocopying machines.
- b) Master maps, range of status boards and map boards.
- c) Telephones (landlines, cellular and satellite phones), telecommunication system (very high frequency wireless radio communication) and satellite phones.
- d) Internet facility, television sets and cameras.
- e) Audio/video conferencing facilities; connection to external video links.
- f) Generators/uninterruptible power supply/power back-up system.

Monitoring of Disasters

In collaboration with concerned departments, mechanism to monitor the disasters may be developed. Indicators corresponding to respective disaster may be determined and regularly analyzed by respective agencies. As soon such indicators touch the tipping points, DDMU may accordingly make decision. Such disaster monitoring mechanism enable DDMU to decided, as soon it touches the threshold level, to accordingly initiate response activities. During pre-disaster phase an advisory is issued by DEOC for public information. During this phase continuous monitoring of

situation such as identification of threat, hazard and risk and strategic forecasting shall be conducted by DEOC.

For the purpose of disaster monitoring each disaster are classified under separate category, which include seasonal disasters (droughts, floods, cyclones, extreme temperature), evolving disasters (pandemics) and unpredictable disasters (earthquake, avalanche, GLOF, landslides).

- **Seasonal Disasters.** Seasonal disasters recur with regular cycle, and these are tied with the seasonal changes i.e. whether conditions, precipitation etc., and at certain degree those can be predicted with proxy indicators. DEOC coordinating with concerned departments may anticipate, and ensue advance preparedness actions including contingency plans before the onset of disaster.
- **Floods / Flash Floods**
 - a) With regards to flood monitoring, DEOC shall coordinate with meteorological and irrigation department.
 - b) DDMU shall monitor the flood situation from June to September and extend assistance as and when required.
- **Extreme Temperature**
 - a) DEOC throughout the summer and winter seasons will frequently monitor the temperature on daily basis and record maximum and minimum temperatures acquiring such information from meteorological department.
 - b) Report number of heat related illness and fatalities registered in various hospitals and health centers by deriving information from health department.
 - c) Determine threshold level in collaboration with PDMA and initiate response activities.
- **Epidemics and Pandemic-prone Disasters.** District has experienced epidemic like dengue in the past. Such pandemics should be monitored to identify the tipping point, when the risk is heightened. DEOC in collaboration with Health Department shall be frequently monitored the situation may activate emergency response when required.
- **Unpredictable Disasters.** These types of disasters such as earthquake, avalanche and landslides pose serious risk consistently over time. So far no technology exists to anticipate the occurrence of such disasters, yet DDMU shall make all possible arrangements to respond to such emergencies in shortest possible time to save precious lives, property and environment.

Activation and Stand-Down Procedures

DEOC activation and stand down procedures during the various stages of emergencies are mentioned below: -

- **On Receipt of Alert (Standby - Stage 1).** DEOC coordinator will collect information from TDMC/UCDMC about the damages, after analyzing the situation, advise/ recommend chairperson DEOC for alert or standby position of DEOC. SOPs to be followed for this stage shall include following: -
 - a) Monitoring the situation.
 - b) Alert the DEOC staff for operationalization of DEOC at short notice.
 - c) Coordinate with key departments, Army and humanitarian organizations
 - d) Closely coordinate with TDMC/UCDMC and PEOC to get information and review it.
- **On Receipt of Warning (Stage 2).** DDMU will issue notification for full activation of the DEOC. The coordinator will inform key departments, Army, emergency services, civil defense, Pakistan

Red Crescent Society (PRCS), NGOs and media. DEOC will remain fully operational on 24/7 basis. SOPs to be followed for this stage shall include: -

- a) Place DEOC on fully activation/ operational mode.
 - b) Open all communication systems and links.
 - c) Collect essential information including situation updates, details of resources etc., which will be required for relief operations.
 - d) Inform all relevant departments and ask them to send their representatives/ liaison officers to operate from the DEOC.
 - e) Share daily situation report (sitrep) with PEOCs and other concerned. Sitrep template is attached at annex "A".
- **Stand Down Procedure (Stage 3).** After reviewing situation and consultation with all concerned, the coordinator DEOC will recommend the Chairperson for stand down. After getting approval of Chairperson, the coordinator DEOC will issue/ share notification of stand down to the key departments. SOPs to be followed for this stage shall include:
 - a) Coordinator DEOC will debrief the Chairperson for his approval of stand down.
 - b) DEOC will disseminate notification to the relevant departments and other stakeholders.
 - c) Final report on the emergency operations will be circulated to key stakeholders.
 - d) Inform PEOC and TDMC/UDMC for stand down and share final report with them.
 - e) DEOC staff will work in normal mode.

Disaster Response

Early Warning and Dissemination of Information

During a disaster, the district government may face uncertainty in taking appropriate action and disseminating early warnings. Upon the issuance of an early warning, communities may also hesitate to evacuate households or abandon belongings. There is a dire need to develop an end to end early warning system using a strong and tested coordination mechanism to issue warnings at the right time and by using appropriate tools and effective channels to reach the general public well on time so they can take appropriate actions for early evacuation.

Evacuation

In order to minimize the human losses, people are evacuated from the area in the wake of looming disaster. Evacuation plan can be prepared on the basis of hazard assessment and preparation for evacuation and final evacuation will be based on the early warning. Evacuation can be of small scale evacuation i.e. removal of people from dangerous/damaged/collapsed building; or large scale evacuation i.e. move of communities. Evacuation may be carried out before, during or after disaster for which detailed planning may be done in advance.

- **Evacuation Planning.** Following factors should be kept in mind while preparing an evacuation plan. Evacuation committee formulated for the purpose should coordinate with local authority for safe evacuation of community members: -
 - a) Determine the population for need to be evacuated.
 - b) Identify a safe place for evacuation.
 - c) Identify shortest and safest route including alternative route.
 - d) Safe assembly area or areas for assembling the community before evacuation.
 - e) Forming groups of people to be transported out of the endangered area.
 - f) Means and procedures of transportation of valuables and cattle etc.

- g) Identifying critical items, like medicine, edibles and water, to be taken along during evacuation.
- h) Necessary documents, like identity cards, educational certificates and property ownership documents, to be identified for taking along during evacuation.
- **Identifying Safe Evacuation Routes.** The safe evacuation routes may be identified and also be mapped. Following factors must be kept in mind while identifying safe evacuation routes: -
 - a) Select evacuation route that minimize the exposure to the hazard and other obstacles.
 - b) The evacuation route should lead to a safe area for assembly of people.
 - c) Since, loss of electric power, poles, towers, fire breakout etc. may affect the safe route so alternative routes should also be mapped and highlighted.
 - d) Route should be direct.
 - e) Evacuation route should be easily accessible to even the most vulnerable group like women, children aged and people with critical disabilities.
 - f) A sign board highlighting the safe evacuation routes should be put so that people can easily spot such routes.
 - g) The evacuation routes should be reviewed and monitored regularly. In case of issues adjustments have to be made and the communicated to the village populace at the earliest.
- **Execution of Evacuation.** Following will ensure effectiveness of the evacuation plan: -
 - a) Prior arrangement for shelters at earmarked evacuees' lodgment sites.
 - b) Provision of basic facilities in camps.
 - c) Adequate arrangements for transportation of the affected communities and their minimum belongings, including livestock.
 - d) Priority of evacuation be allocated to Elderly, Pregnant Women and Disabled persons.
 - e) Fool proof security arrangements for during evacuation and in the camps.
 - f) Separate camps for the cattle.

In situation like floods and complex emergencies; DDMA may resort to mandatory evacuation, in such like situation the responsible officials shall try to convince local communities for voluntary evacuation. At time, government may have to use pressure or force to evacuate local communities to protect them from the potential disaster. In emergency evacuation, whether it is voluntary or forced, communities should be allowed to take along minimum essential belongings and cattle.

Search and Rescue

The first 12 hours of any disaster are regarded as the most critical, therefore timely deployment of search & rescue asset/team can save precious lives. The general field of search and rescue includes many specialty sub-fields, typically determined by the type of terrain the search is conducted over. These include mountain, ground search and rescue, including the use of search and rescue dogs, urban search and rescue in collapse structure, combat search and water rescue. Various mediums like helicopters, boats or field rescue teams can be used for search and rescue of people during disasters. Program for enhancement of emergency response (PEER) qualified individuals of Rescue 1122 can be employed for the task. In case massive damages, urban search and rescue teams located in the province can be requested through PDMA.

Fire Fighting and First Aid

Access to health care is critical determinant for survival in the initial stages of disaster. Provision of medical assistance and firefighting (if required) can be a simultaneous action during search & rescue and all subsequent phases.

Rapid Need Assessment

Rapid Need Assessment is carried out by the government alone or in conjunction with UN system, immediately following a sudden-onset of a disaster. The aim of assessment is to acquire basic information on the needs of affected population and to support the identification of strategic humanitarian priorities. It thus enables the government and other stakeholders common understanding of the situation and is likely needs for immediate interventions, to identify the relief needs, NDMA in coordination with OCHA has finalized MIRA methodology to be followed by the RAPID need assessment (refer to NDMA guidelines for MIRA). Main features of the methodology are as following: -

- **Purpose.** To help decision-makers on the nature and dynamics of the crisis and to further strategic humanitarian priorities
- **Timeline**
 - a) Within 72 hours, a situation overview based primarily on secondary data (remote sensing) and other sources
 - b) Within 7 days, carry-out a field assessment on community level to identify needs and priorities of the affected/vulnerable population.
- **Process.** the MIRA process and report encompasses following three main steps:
 - a) Review and analysis of secondary data, which is the basis for the situation overview.
 - b) Community-level field assessment and primary data collection based on key informant interview and structured observations.
 - c) Final inter-sectoral analysis and release of final MIRA report.

Relief

It is the provision of services and public assistance during or immediately after a disaster to save lives, alleviate sufferings of the people, reduce health impact and meet basic subsistence needs of the affected people. During the relief phase, focus must be on provision of food, shelter, health assistance and WASH (water, sanitation & hygiene). NDMA guidelines for minimum standards of relief in camp may be referred too for planning relief operation. Efforts be made to conclude relief operation within three months, after which recovery must begin. However, in certain/exceptional cases it may surpass if situation so warrants. Government agencies are the major relief provider; however, Philanthropists, civil society organization and donor may also take part in relief depending upon the magnitude of the disaster. Some of the important feature of effective relief are:

- Elaborate Relief Mechanism
- Non-discrimination and taking care of vulnerable groups
- Efficient Logistic system for timely flow (receipt & distribution) of relief goods
- Liberty of action and facilitation for relief workers/humanitarian community
- Coordinated operations
- Efficient/transparent cash grant system
- Information management
- Media handling
- Basic Ethics to be followed by Government Officials
 - a) In the event of disaster, affectees go through a difficult time and they are more demanding than they would be in normal circumstances. Government officials also have a lot to deal with in that situation; however, they are obligated to adopt a caring attitude towards the survivor in terms of being responsive to their needs.

- b) Following the ethical priorities during disaster is often difficult for people in need and government official alike. This difficulty is amplified when government official is likely to face pressure from a host of **political, Religious/Sectarian, Ethnic, and Kith and Kin** quarters. Nonetheless, they must be ethically strong enough to withstand the pressures to ensure the well-being of the affected population.

Early Recovery

The restoration, and improvement where appropriate, of facilities, livelihoods and living conditions of disaster-affected communities, including efforts to reduce disaster risk factors is termed as recovery. The main purpose is returning individuals and families, critical infrastructure and essential government or commercial services back to a functional, if not pre-disaster state. The action often characterized by temporary actions that provide a bridge to permanent measures. Recover activities may begin when the emergency has ended. In some case recovery activities can be undertaken alongside the relief activities. During recovery, the focus is on shelter, agriculture, food security, health & nutrition, education, water & sanitation, governance, livelihood and community infrastructure sectors. Thematic areas of DRR, gender, environmental and protection should be mainstreamed in all the sectors during recovery interventions.

- **Determining the Recovery Needs.** In order to determining the recovery need, recovery need assessment (RNA) is conducted. A comprehensive methodology for RNA has been formulated by NDMA. The assessment is based on the primary data collected by the government authorities, verification by the joint team and analysis. Based on the assessment, the recovery needs are worked out for all the sectors.

Gender and Vulnerability Considerations

It has been established that the effective of disaster are more pronounced on the vulnerable groups of society such as women, children, elderly person and persons with disabilities. Within these categories there may be even more vulnerable groups, such as female heading their households, children with disabilities or persons with mental health issues. Because of their vulnerabilities, at times these groups have limited access to relief commodities.

It is therefore imperative for the responders to safeguard the rights of vulnerable people in disaster. They must be accorded priority in rescue operation and all other activities of response. It is also essential to cater to the unique needs of these groups while planning for and executing the response.

Disasters also often give rise to new protection concerns. Population displacement, weak law enforcement and the breakdown of social safety mechanisms can heighten the risks of looting, gender-based violence and child trafficking. These issues should be in the initial stages of a humanitarian response and should be taken care of until the emergency is over. Responses include simple measures such as floodlighting and lockable shelter kits, and more technical programmes such as family tracing, training and monitoring of vulnerable groups.

National Policy Guidelines on vulnerable groups in disaster, issued by NDMA may be consulted for integration of vulnerable groups in disaster preparedness and response.

Stockpiling and Availability of Relief Supplies and Commodities

The ready availability of relief supplies and commodities is an important factor in effective response. After disaster impact, there is usually an urgent need to provide and distribute the food, water, shelter/tents and medical supplies and assistance. The District Government of Swat has the warehouses containing necessary equipment. However, the warehouses need to be fully

operationalized and equipped with all necessary food and non-food items to meet potential challenges arising during any disaster. Elaborate guideline should be formulated for procurement and maintenance of relief items. NDMA guidelines on stocking, maintenance and supply of relief & rescue items must be referred to while developing the district guidelines. Moreover, it is considered that a single warehouse and other resources may not be sufficient in case of major disaster, therefore private building and resources must be earmarked for use in case of emergency. A databased of such resources must be developed by DDMU in coordination with TDMC and UCDMCs. The database must also be update regularly, especially before the monsoon/ winter season.

Media Handling

Media can play vital role in disaster response/management. Therefore, a well-organized arrangement be made at all tiers for information sharing/periodic media briefs by appropriate spokesperson. Efforts must be made to provide timely updated and accurate information to media houses for dissemination. Delays in provision of information may lead to frustration and misreporting by media house should be discourage at all levels. Good relations with the local media are also important and usually two-way benefits are involved. Not only do the local media benefit from good cooperation from the management authority, but they can also perform valuable services such as warning and public awareness. It is recognized that during pressurized response operations, disaster management authorities may regard media information as having to take a low priority. However, this should be avoided.

Monitoring and Evaluation

During the execution of response to track the progress and facilitate the mid-course correction, effective monitoring is essential. Methodology for the monitoring of the response activities may be determined by the DDMU. Frequent interaction with non-government actors can be an effective measure to monitor their activities.

Post disaster evaluation is vital to determine the relevance and fulfillment of objectives. An evaluation should provide information that is credible and useful, enabling the incorporation of lessons learned. The best practices adopted during the execution of response may also be recorded, analyzed and shared with all the concerned and implemented in future course of actions.

Adherence to Global Standards and Framework

During the execution of response to track the progress and facilitate the mid-course correction, effective monitoring

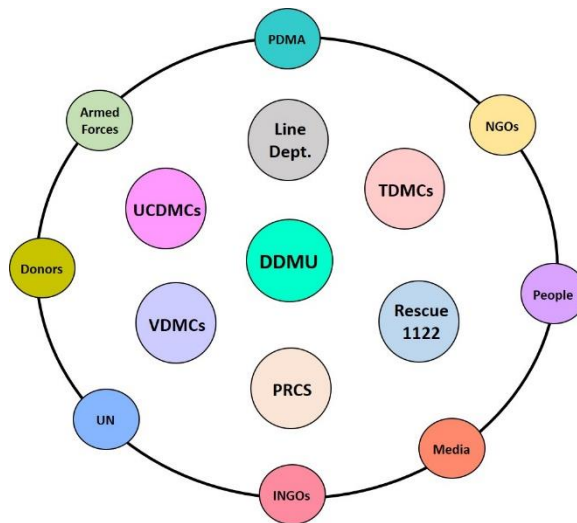
The relief programmes must ensure that most of the population has access to minimum life sustaining requirements: sufficient general food rations, adequate water, sanitation, and basic health care. This can only be ensured by following standards laid down either by the country or following the standards globally recognized. The principles of humanity, neutrality and impartiality must be ensured by use of Core Humanitarian Standards (CHS) and application of Do No Harm (DNH) principles.

The responders should also demonstrate their commitment to accountability to affected populations by ensuring feedback and accountability mechanisms are integrated into plans, programme proposals, monitoring and evaluations, recruitment, staff inductions, trainings and performance management and partnership agreements.

Coordination

Coordination is an important factor in the success of disaster management. A comprehensive mechanism should be put in place by DDMU to promote effective coordination during all the phases of response, involving all the stakeholders. The DDMU/DEOC will have to take a central coordination role, with responsibility for overseeing the overall provision and distribution of relief, monitoring and streamlining operations. An information management system (DDMU website) may be established to promote coordination and effectiveness of relief operations. Latest situation, updates, relief data, important decisions and policy matters must be hosted on the website. In addition, regular media briefings on a daily or alternate day basis may be organized to ensure continual provision of updated information.

Effective coordination can further be ensured by having focal/liaison persons from all key department in DEOC. Regular coordination meetings to provided strategic direction to relief efforts will also play an important role. Frequency of these meeting can be determine in consultation with all stakeholders, however a daily coordination meeting during the response phase is recommended. Stakeholders/key players are shown in below diagram.



Epidemics/ Pandemic Management

Communicable diseases remain a major public health concern in Pakistan, and are a primary cause of mortality. Pakistan is at high risk of epidemics because of its over-crowded cities, unsafe drinking water, inadequate sanitation, poor socio-economic conditions, low health awareness and inadequate vaccine coverage. Outbreak of COVID19 during March 2020 has further exposed and aggravated issues related to public health emergency response. In Pakistan the provincial government are responsible for preparedness and response to any health emergency in the respective province with support from the federal government when needed. DDMU, therefore in consultation with relevant stakeholders should prepare for and respond to epidemics/ pandemics in order to reduce morbidity, mortality and disability due to infectious diseases. Though a comprehensive multi-sectoral plan aimed at ensuring prevention and mitigation of epidemic and pandemic is needed for coordinated preparedness and response, therefore only essential recommendations are elucidated below.

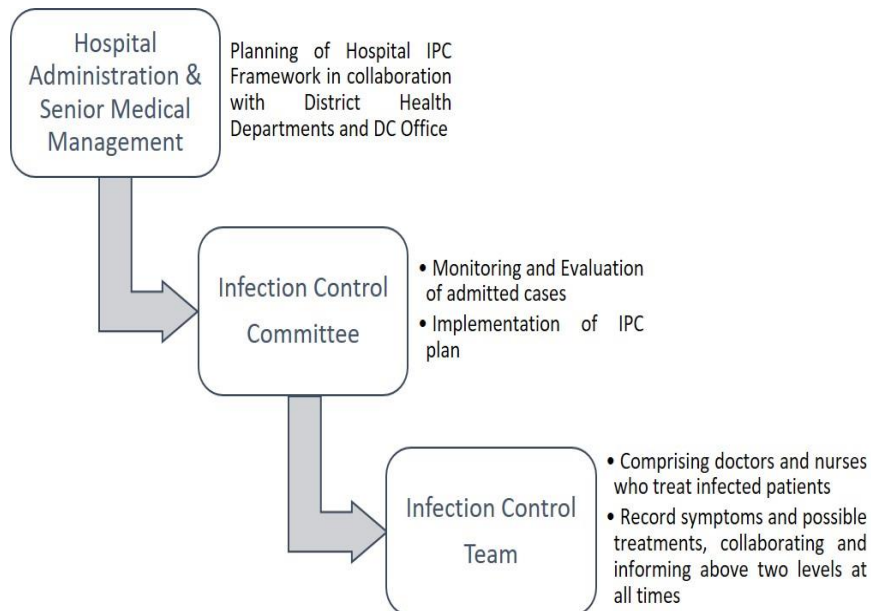
District Level Pandemic Management Planning

DDMU in consultation with the District Health Department will be the first responder during a pandemic. DDMU upon receiving orders and information from provincial or national authorities, should initiate the proposed District Level Pandemic Management SOPs. Below steps need to be taken in order to provide relief for a district in a pandemic which are based on the strategies and recommendations contained in international and national guidelines.



District Level Infection Prevention and Control (IPC) Program

The IPC program is a framework set by the National Institute of Health (NIH) under their National Guidelines of Infection Prevention & Control 2020. A set of SOPs and strategies at the national, provincial and district levels are to be followed in case of an infectious disease outbreak. The SOPs highlight key actions to be taken, and identifies relevant departments which will initiate certain protocols under an outbreak situation. The IPC program aims to effectively manage an outbreak crisis through its SOPs and contain the situation as soon as possible, preventing further public health risks.



Implementation of Infection Prevention and Control (IPC) Program

- **District IPC Focal Person.** The District Health Office should nominate a district focal person for the IPC who will oversee implementation of the IPC program in all health facilities across the district including private facilities. The Focal Person will coordinate with all the district stakeholders like the municipality, water resource and supply departments, sanitation services, trade unions, media, and educational institutions. The Focal Person should ensure that proper IPC organizational structures are in place, all facilities are functional and monthly monitoring visits are made to all sites.
- **Infection Prevention and Control Committee.** The IPC committee plays a supervisory role, ensures that the policies and procedures are implemented, and supervises standardized IPC professional healthcare. The committee must have adequate secretarial support. The IPC committee includes wide representation from relevant departments. The committee shall be chaired by the hospital. The District Health IPC Committee may include representatives from all health facilities, public and private, non-health stakeholders and relevant NGOs. They must meet on a monthly or quarterly basis to review the situation, identify gaps and recommend corrective measures. The administrator or a suitable senior nominee must have adequate secretarial support for day-to-day administrative needs. This Committee provides relevant health data and statistics to the Emergency Committee, along with suggested actions and recommendations.
- **Infection Prevention and Control Team.** For effective functioning and delivery of the IPC Programme, it is essential that every acute healthcare facility (HCFs) should have dedicated and trained IPC doctors and nurses. The IPC team comprises an IPC doctor/ office and IPC nurse practitioner. It is essential that for effective delivery of service, all IPC practitioners must meet the core competencies to ensure that they have both the knowledge and skill to execute their tasks effectively.

The number of IPC practitioners required to run an effective programme depends on various factors such as the number of beds, number of HCFs, distance, types of acute HCFs with specialized units, tertiary care centers etc. The ideal recommendation is a minimum ratio of one full-time or equivalent IPC nurse per 250 beds. However, a higher ratio is advised, for example, one IPC nurse per 100 beds due to increasing patient activity and complexity, as well as the multiple roles and responsibilities of modern practitioners (WHO, 2016). If the setup is small, for example in BHUs and RHCs, part time IPC nurses may be hired.

The proposed functions and powers of the IPC focal person, committee and control team are laid out in detail within WHO's "Pandemic Influenza Risk Management" report of 2017 under the Global Influenza Program.

Template - Situation Report**DAILY SITUATION REPORT NO - ---**

(Period Covered: ----- – -----)

1. **Area Affected (Last 24 Hours)**

Ser	Area	Daily Incident
a.		
b.		
c.		

2. **Cumulative Damages (-----)**a. **Summary of Casualty - Injured/ Death**

Area	Deaths				Injured			
	Male	Female	Children	Total	Male	Female	Children	Total

b. **Summary of Damages of Infrastructure & Private Properties**

Area	Road	Bridge	Shop	Hotels	Masjid	Houses		Power Houses
						PD	FD	
Total								

*Note: PD: Partially Damaged, FD: Fully Damaged*Details of bridges is attached at **Annex A**.3. **Flood Relief Activities**a. **Relief Camps Established.**b. **Rescue Activities.**c. **Aviation Activities.**d. **Relief Activities.** Following relief items has been provided (date):

Ser	Relief Items	Total
(1)	Tents	
(2)	Ration Packs	
(3)	Tarpaulin	

4. **Threat to Next Likely Areas.**5. **River Discharges.** Details of river discharges is attached as **Annex B**.

6. **Weather Forecast for Next 24 Hours by PMD.**
7. **Rainfall Last 24 Hours.** Attached as **Annex C.**
8. **Weather Advisory / Press Release.** In response to PMD weather alert following alert issued: -
 - a. -----
 - b. -----
9. **Flood Warning / Alert.**

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National Disaster Response Plan 2019

National Disaster Management Authority, Islamabad; "MIRA Guidelines for enumerators", 2016

National Disaster Management Authority, Islamabad; Guidelines for Minimum Standards of Relief in Camp, 2017

National Disaster Management Authority, Islamabad; Guidelines on Stocking, Maintenance and Supply of Relief & Rescue Items, 2016

National Disaster Management Authority, Islamabad; National Policy Guidelines on Vulnerable Groups in Disaster, 2014

Information obtained from field visits/ online meetings

Information obtained from District Office

Information obtained from Regional Meteorological Department, Peshawar

The flagship regional platform of Asian Preparedness Partnership (APP), was founded by six countries of Asia including Pakistan for improving the preparedness and emergency response to disasters by strengthening the capacity of local humanitarian actors. The initiative is being implemented by Asian Disaster Preparedness Center (ADPC) with support from the Bill and Melinda Gates Foundation (BMGF).

In line with the regional initiative, Pakistan Resilience Partnership (PRP) was established in 2018, under the umbrella of NDMA. The objective of the PRP is to improve the interface and partnership between PRP partners namely government, local humanitarian organizations, private sector, media and academia for enhancing their capacities through partnerships, knowledge resources, training, and networking opportunities.

The Pakistan Resilience Partnership is contributing towards strengthening the disaster preparedness and emergency response capacity at national and local levels in disaster-prone areas within the country. The PRP strategy aims to develop the local humanitarian networks comprising of National Governments, Local Humanitarian Organizations, Private sector, media and academia, which will result in enhanced coordination and information exchange, during the period of emergencies caused due to disasters.

