

Acknowledgement

Provincial Disaster Management Authority Punjab is greatly indebted to all District Administrations and relevant departments for furnishing district and departmental contingency plans timely, on the basis of which this plan has been chalked out.

PDMA is also obliged to staff members Mr. Nawaz Khalid Arbi, Mr. Muhammad Sajjad, Mr. Zafar Haider Shamsee, Mr. Nisar Ahmad Sani, Mr. Nasir Mehmood and Mr. Irfan Khalid Mirza for their valuable inputs for the development of plan.

Authority would also like to extend gratitude to Mr. Hameed Ullah Malik, CDCP for his valuable inputs and constructive suggestions for the development of Contingency Plan for 2014.

Foreword

Contingency planning aims to prepare an organization to augur well during an emergency and its potential hidden impact. It engrosses informed decision making about resources, coordination and communication procedures as well as being aware of the myriad of technical cum logistical responses from all concerned in a very coherent manner to mitigate the effects of, or recover from any disaster.

Therefore, the planning process took concerted efforts from all concerned. This plan is thus an imperative requisite as we approach the flood / monsoon season 2014. Owing to its uniqueness, this plan will play a fundamental role in ensuring effective management of the entire process. It will serve as a mitigation tool against any possible emergency throughout the phases of monsoon / flood 2014.

The plan encompasses four critical pillars that are complementary and interrelated. Effective implementation of this plan requires collective commitment. This remains critical. However, in order to put this plan in operation at all levels, it calls for mutual resource mobilization from both state and non-state actors. Attainment of adequate resources will facilitate capacity development of local communities for disaster resilience. As we move towards the monsoon season 2014, I wish to ascertain the fact that the Provincial Disaster Management Authority Punjab is continuing to make every possible endeavor to secure lives and livelihoods of the disaster affected people.

Zaheer Abbas Malik (PAS)
Director General
PDMA, Punjab

MESSAGE FROM SMBR / RELIEF COMMISSIONER PUNJAB

Disaster Management is the coordination and integration of all activities necessary to build, sustain and improve the capability to prepare for, protect against, respond to and recover from disaster. Such action has to be multi-jurisdictional, multi-sectoral, multi-disciplinary and multi-resource initiative. Therefore, it is vital that the Provincial Government, District Administrations, Civil Society Organisations (CSOs) and the private sector discharge their respective roles and responsibilities and complement each other in achieving shared goals of disaster management.

In its commitment to safeguard the lives, properties, livestock, crops and livelihoods of the vulnerable communities of flood prone area, the Provincial Disaster Management Authority, Punjab has devised Disaster Response Action Plan for year 2014. Standard Operating Procedures (SOP) for all concerned Government Departments have been chalked out through consultative process. Roles and responsibilities of all departments have been defined and fixed in accordance with their overall mandate. Disaster Risk Reduction has been added to this plan as a cross cutting theme. Provincial Disaster Management Authority in collaboration with other Government Departments will make every possible effort to keep vulnerable communities safe.

The Punjab Relief Department with the grace of Allah is prepared for any calamity or disaster under the overall direction and supervision of the Hon'able Chief Minister Punjab.

Nadeem Ashraf

MESSAGE FROM CHIEF SECRETARY PUNJAB

Emergency and disaster contingency planning starts with considering the types of situations that can disrupt or impede normal life. Identifying and assessing common emergencies and disasters is essential for planning in order to ascertain and analyze your capacities to respond and minimize the effect of the same.

In an event of disaster, local officials must know whom to contact for assistance and understand the roles and responsibilities of all Government agencies involved in the response to effectively coordinate recovery efforts. This aspect of contingency planning has been specially incorporated in the disaster action plan for 2014.

I expect all the concerned authorities to ensure relevant actors are familiar with emergency plans, procedures and standardized emergency management systems through dissemination and training where needed.

Naveed Akram Cheema

A Glossary of Acronyms

3C	Command, Control and Communication Center
ADIO	Assistant Disease Investigation Officers
C&W	Communication and Works Department
CBO	Community Based Organization
CDGL	City District Government Lahore
CERC	Central Emergency Response Committee
DCO	District Coordination Officer
DGHS	Directorate General Health Services
DHQ	District Headquarter Hospital
DRTA	District Regional Transport Authority
EPD	Environment Protection Department
FAO	Food and Agriculture Organization
IDP	Internally Displaced Persons
LDA	Lahore Development Authority
LG&CD	Local Government and Community Development
LWMC	Lahore Waste Management Company
MISP	Minimum Initial Service Package
NFI	Non Food Items
NLC	National Logistics Cell
NTC	National Telecommunication Corporation
OCHA	Office for the Coordination of Humanitarian Response
OMC	Oil Marketing Company
PDMA	Provincial Disaster Management Authority
PHA	Parks and Horticulture Authority
PHED	Public Health Engineering Department
PITB	Punjab Information Technology Board
POL	Petroleum Oil & Lubricants
PRCS	Pakistan Red Crescent Society
PTA	Pakistan Telecommunication Authority
RHC	Rural Health Center
SUPARCO	Space and Upper Atmosphere Research Commission
THQ	Tehsil Headquarter Hospital

INTRODUCTION

Punjab is the most densely populated province of Pakistan consisting of 36 administrative districts. Punjab covers 205,344 square kilometers and a large proportion of this area is arable owing to the integrated irrigation system of the Province.¹ These rivers traverse the Province from north to south and due to the presence of these water channels, the land of Punjab is amongst the most heavily irrigated areas on the planet.

Punjab has a warm climate. The temperatures begin to rise in the middle of February and the spring continues until mid-April. From April onwards the hot weather sets in and the warm earth heats the air causing it to rise and create a low pressure area in the adjoining atmosphere. Moisture laden winds from Indian Ocean balance the pressure in atmosphere by rushing to the low pressure region directly above Punjab and other Provinces of Pakistan and India. This phenomenon is known as the southwest monsoon. June and July are oppressively hot with temperatures rising over 50°C. The soaring temperatures create the environment for monsoon winds to blow in to the area above Punjab and release their moisture in the form of excessive rains. The monsoon rains are usually observed between July and September. The accumulation of water due to excessive monsoon rains can flood certain areas of the Province.

PUNJAB'S POTENTIAL DISASTER PROFILE

Punjab is susceptible to a variety of disasters. Although there have been examples of tornadoes and earthquakes yet their frequency have been very low. Murree Hills, part of Islamabad and Rawalpindi are located on or close to fault line which can cause earthquake, however, rest of the Punjab is considered relatively safe regarding earthquake. Similarly occurrence of tornadoes is reported in decades. However, Punjab's geographic location and climatic conditions make it more vulnerable to monsoon floods. Likelihood of occurrence and intensity of floods have significantly been increased in the last few years. Punjab has faced three floods in consecutive four years due to climate change. Riverine and flash flood (hill torrents) have become regular phenomenon since 2010. Riverine floods provide some time margin to the administration for reaction whereas hill torrents are mostly unprecedented and most devastating in nature yet water recedes leaving back scars within no time.

¹ Commissioner, H. (n.d.). *Basic facts about Pakistan*. Retrieved 03 02, 2010, from High Commission of Pakistan in Dar-es-Salam, Tanzania: <http://www.mofa.gov.pk/tanzania/contents.aspx?type=contents&id=9>

Punjab has two major sandy deserts, Thal and Cholistan which are susceptible to drought. Canal system in Thal has changed the situation and has made it disaster secure to great extent. Canal system has raised ground water level and all farmers have installed their tube wells which have brought down the danger of drought to considerable level. Although government of Punjab has made every possible effort to provide drinking water supply in Cholistan Desert nevertheless vulnerability of livestock and livelihood remains there. Recent past clearly identifies floods as a major disaster and threat for Punjab. Floods in the Province have caused heavy losses to life, property, infrastructure and livelihood of the people. The availability of resources, preparedness, planning and institutional / organizational capacity has always been an asset of Punjab.

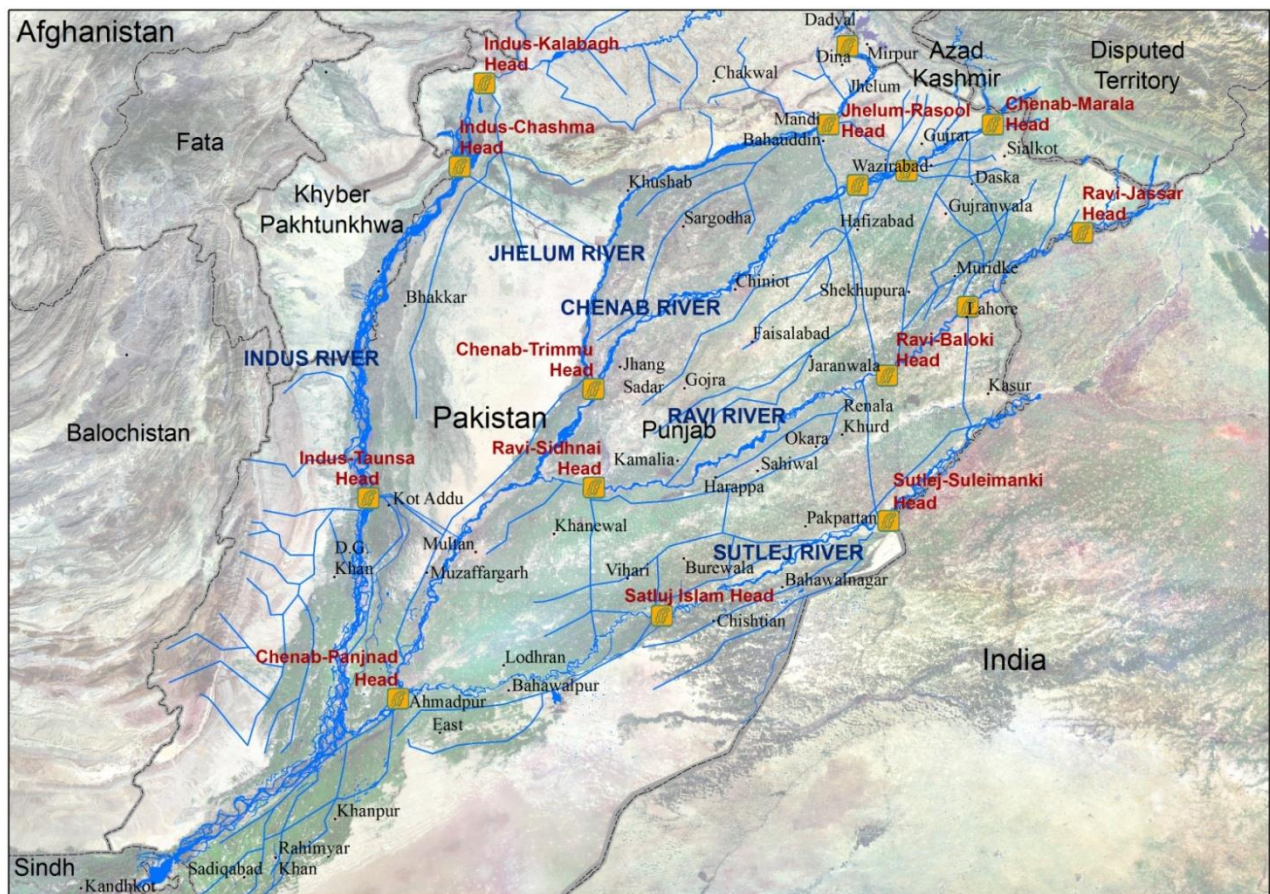


Fig. 1 Rivers and Major Headworks of Punjab

RISK OF FLOODING

Punjab is vulnerable to three types of flood risks: riverine floods, flash floods and, urban floods caused by incessant rains occurring intermittently in the major cities. Riverine floods pose flood risk to all districts of Punjab lying on the banks of the rivers. Flash Floods pose risk to D.G. Khan, Rajanpur and Mianwali districts in the shape of hill torrents and urban flood is a risk for mega cities. The floods of 2010 were the worst recorded floods and they were mainly caused by the riverine flooding in the Indus River and flash floods in Southern Punjab. A significant proportion of Punjab's population is dependent on Agriculture. Agriculture and livestock farming are the main sources of income in the flood prone areas of Punjab. Poverty is

yet another v factor that worsens the suffering in a disaster stricken area. Poverty hampers the capacity of communities to mitigate, respond and resist the impact of a hazard. Absence of safety nets and limited access shrink people's capacity to sustain the onslaught of disasters. More than half of the Province faces the risk of riverine floods.

Being the largest of all rivers, Indus possesses a significant flood threat if the discharge rate exceeds 0.8 million cusecs. An exceptionally high flow rate of 0.8 million Cusecs was recorded at Taunsa Barrage in 1995 and 2010. This particular barrage is designed for a peak discharge of 1.1 million Cusecs and its strength was tested in the year 2010 when the flow rate went up to 0.96 million Cusecs at its peak. The Indus sustained a discharge of more than 0.95 million Cusecs at the Kalabagh and Chashma, but the flow rate exceeded a million Cusecs during the floods of 2010. A similar example of exceptionally high flow rate is that of 6 million Cusecs at Trimmu Headworks on Chenab River. This flow rate had been recorded in three different years in the 90s. The river Jhelum also merges in Chenab at Trimmu Headworks in Jhang District and cumulatively they pose serious flood risk to the downstream regions. Chenab is one of the most threatening rivers as it flows through heavily populated districts of Gujrat, Sargodha, Jhang, Khanewal, Muzaffargarh and Multan. In 2010 a high flood along the Chenab River posed a serious threat to Multan City. The first Headworks on this river are at Marala, which is immediately south of the Indian occupied territory of Jammu. Any flooding in this river north of Marala would only be informed at a notice of maximum 6 hours, leaving too less a time for protective measures. Expectancy of damage to lives, properties and livelihood remains very high in case of flooding in eastern rivers because likelihood of flood occurrence is low therefore people have encroached the entire area hence even a flood of low intensity is expected to cause high damage.

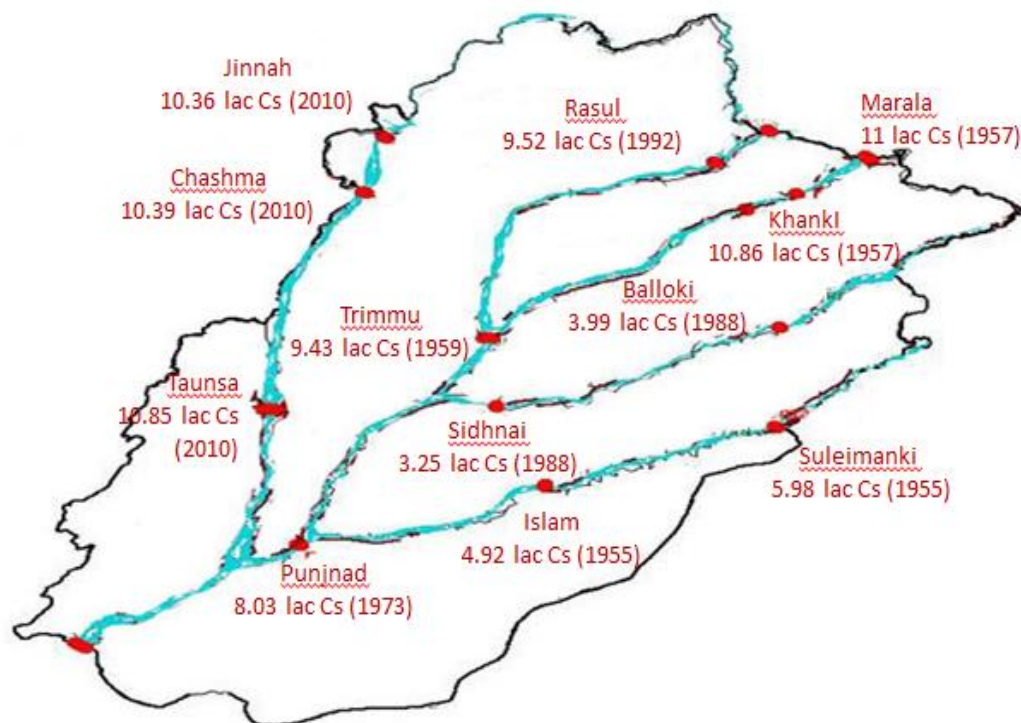


Fig.2 Historic peaks of water flow in all major rivers

Apart from the riverine floods, the western districts of the Province face the risk of flash floods originating in the western mountain ranges. Districts such as Rajanpur, DG Khan, Mianwali and Khushab are vulnerable to flash floods emanating from Koh-e-Suleiman ranges. More than five million cusecs of water flowed into the Indus River from these districts during the floods of 2010. Another threat of flash floods is prevalent in areas along the Indian border where the rivers cross into Pakistan. Numerous water channels flowing through the Parmandal range tend to cause flooding across the populous districts of Sialkot, Gujranwala, Sheikhupura, and Lahore.

Urban flooding is yet another hazard that Punjab has to be prepared for. The Lai Nullah in Rawalpindi poses a serious threat to the city as heavy rains along Margalla Hills can fill this water channel beyond its capacity. Lahore, Gujranwala, Sialkot, Narowal, Shiekhupura and Faisalabad are similar examples of population centers that face the risk of water accumulation in the population centers.

SHIFT OF WEATHER PATTERN

Heavy rain in the plains and catchment areas in the Punjab, together with snow melting in the northern mountains in July to September causes the swelling of the river Indus and its tributaries causing annual floods (Fig 1). The Significant increase and Westward Shift of MONSOON Rainfall in Pakistan revealed that;

- Rainfall over the Catchment Areas of Eastern Rivers has decreased (moved away) and the Probability of occurrence of Heavy Rainfall Events, leading to FLASH FLOODS/FLOODS, would be HIGH over western rivers instead of eastern rivers of Pakistan in the future.
- Northwest Pakistan (Central parts of KPK & North-western parts of Punjab) are Extremely Vulnerable to Flash Floods/Floods (Fig 2).

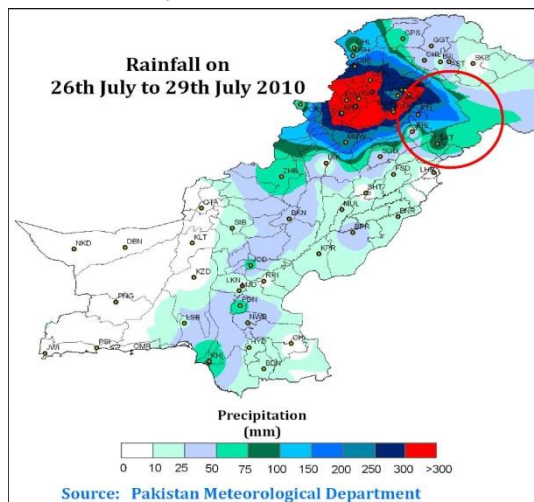
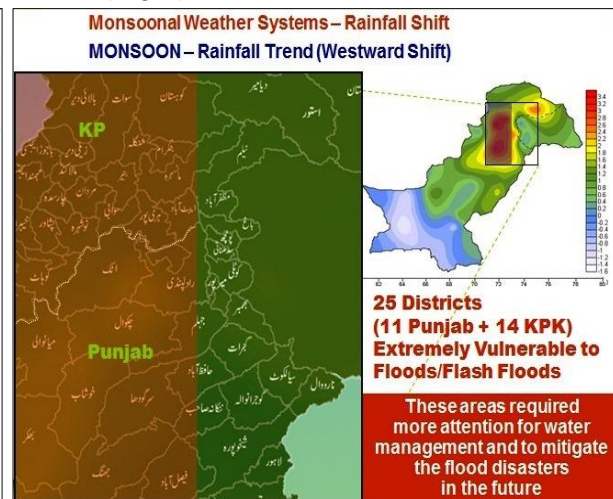


Fig.1



PAST FLOOD HISTORY

The floods in 2010, 2011, 2012 and 2013 (resulting from heavy torrential rains, flash and riverine floods in the north and northwestern and southwestern regions of the country) impacted large land areas, affecting millions of people, mostly by destruction of property, livelihood and infrastructure, and a significant death toll as villages were damaged and destroyed from the Himalayas to the Arabian Sea.

Table 1: LOSSES/DAMAGES DUE TO FLOODS 2010, 2011, 2012 & 2013 IN PUNJAB

Year	No. of District Affected	Villages Affected	Persons Affected	Area Affected (Acres)	Cropped Area Affected (Acres)	Houses Damaged	Person Died
2010	11	1,810	5,038,992	3,471,109	1,914,104	379,520	258
2011	12	335	26393	136758	125513	1284	4
2012	12	1271	887345	1490827	473998	67324	60
2013	22	2994	184,147	945,541	745,655	20411	111

SCOPE

Floods in recent past in the Province have caused heavy loss to life, property, infrastructure, and livelihood of the people. The availability of resources, preparedness, planning and institutional / organizational capacity has always been an asset of the Punjab. Viewing the likelihood of occurrence and past experience this plan speaks more of a flood contingency plan. However, all government departments will follow the same chain of command, channels and Standard Operating Procedures.

PURPOSE

The purpose of this plan is to clarify the roles and responsibilities of different stakeholders, and to introduce coordination mechanisms for immediate response and fast track rehabilitation. This plan integrates the standard operating procedures (SOPs) of various Provincial Government Departments and District Governments and civil society and proposes a consistent approach for reporting damages, needs and relief assessment. It is pertinent to mentioned that the Guidelines and Standards set by NMDA have been incorporated rather, to be more precise, have been mainstreamed at all stages and levels.

ROLE OF PDMA PUNJAB

The Provincial Disaster Management Authority (PDMA) is responsible for spearheading the Government response to a disaster. PDMA is the coordinating authority that provides a platform for all departments to come together and strategize the preparedness and response to a disaster. This Disaster Response Plan developed by PDMA clearly articulates the coordination mechanism between key provincial departments. PDMA has set up a Command, Control and Communication Center (3C) to coordinate disaster response. PDMA maintains a state of readiness with all equipment in working order. All departmental representatives report to the 3C in case of a natural disaster. These departmental representatives are subject experts and they furnish their advices to the Director General, PDMA to help him plan the course of

action in response to a disaster. All departments possess equipment that can be mobilized and the PDMA's job is to utilize the cumulative resources of the Government of Punjab to respond to a disaster. The Irrigation, Agriculture and Highway departments have over 400 bulldozers that can be utilized to remove debris and recreate routes in a disaster stricken area. These departments along with the department of Communication & Works and Water and Sanitation Agencies have other similar equipment such as Motor Graders, Road Rollers, Excavators, Scrapers, Cranes, Tractors and Drill Machines. The departments can also facilitate the delivery of relief goods and services by providing equipment such as Loaders, Trolleys, Dump trucks, Water Trailers. The Army and the Disaster Response Force of PDMA comprising Rescue 1122 and Civil Defence have the capacity to provide Boats, Life Jackets, Bailey Bridges, Search lights, Sand bags, Ropes and De-watering pumps. All of the above mentioned equipment's utility has to be planned at PDMA's 3C.

PDMA oversees search, rescue, evacuation, provision of relief, and finally the rehabilitation of the affected people (men, women, boys and girls). PDMA oversees the deployment of Rescue 1122, Civil Defence, District Governments, Departments and Police for immediate search and rescue operations. PDMA plans and executes the provision of food, drinking water, medical supplies, and non-food items to the affected population to complement the efforts of the District Governments. PDMA also provides temporary shelters to the displaced people. These shelters are always provided with basic facilities such as proper water and sanitation. Prior to the incidence of a disaster, PDMA communicates early warning information to all stakeholders and after the Disaster, it communicates with the media for public dissemination of information about the extent of the disaster, possible damages, and remedial measures of the Government of Punjab. The PDMA also organizes initial and subsequent assessment of disaster affected areas and determines the extent of damage and the volume of relief required. After the initial assessment, PDMA plans and sets up rescue and relief sites near the affected area to provide essential food, health, and security cover for all evacuees. A detailed assessment is subsequently conducted to plan the early recovery and rehabilitation work.

PDMA has setup its own high frequency radio network that is used in case of any disruption in the conventional communication channels. High Frequency Radio technology is not disrupted by most damages caused to the fixed communication infrastructures and it has the capacity to transmit to a number of users simultaneously. HF Radio network is immensely important for the rapid transmission of disaster response instructions. Radio technology is also used by the Police department, Armed Forces, UN agencies, IFRC and ICRC in the emergency operations. Land line or traditional telephone communication suffer degradation during a disaster due to the switching equipment, network disruption or loss of electrical power etc. In this situation, it is important to have alternate plan for land line telecommunication. Telephone service providing company must accord high priority to restoration/repair of land line telecommunication system. However, In case of disaster, complimentary Public Call Offices will be setup for affected communities.

ACTION PLAN

All the risk prone districts have been identified and divided into three categories i.e. A, B and C according to the risk (Table 2). All vulnerable districts have also been marked according to likelihood of disaster occurrence and area at risk (Table 3).

Table 2: Risk Prone Districts

District	Risk	District	Risk	District	Risk	District	Risk
Bhakkar	A	Hafizabad	A	Chiniot	B	Lodhran	C
Bahawalpur	A	Narowal	A	Multan	B	Khanewal	C
D.G.Khan	A	RY Khan	A	Mianwali	B	Khushab	C
Multan	A	Attock	B	Gujranwala	B	Okara	C
Mianwali	A	Bahawalnagr	B	Sialkot	B	Rawalpindi	C
Muzaffargarh	A	Khanewal	B	Sheikhupura	B	Sargodha	C
Rajanpur	A	Khushab	B	Sheikhupura	B	Sahiwal	C
Layyah	A	Lahore	B	Pakpattan	B	TT Singh	C
Jhang	A	MB Din	B	Faisalabad	C	Vehari	C

High Risk	A	Medium Risk	B	Low Risk	C
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Table 3: Disaster types and the Areas At Risk

Disaster Type		Vulnerable Districts
Riverine Flood	Indus	Mianwali, Bhakkar, Layyah, Muzaffargarh, DG Khan, Rajanpur and Rahim Yar Khan
	Jhelum & Chenab	Jhelum, Gujrat, Sialkot, Sargodha, Mandi Bahauddin, Chiniot, Jhang, Khushab, Khanewal and Multan
	Ravi	Lahore, Sheikhupura, Nankana Sahib, Okara and Sahiwal
	Sutlej	Kasur, Pakpattan, Vehari, Lodhran and Bahawalpur
Flash Flood		Mianwali, Dera Ghazi Khan, and Rajanpur
Urban Flood		Lahore, Rawalpindi, Gujranwala, Sialkot, Faisalabad, Narowal & Sheikhupura

Workplan 2014													
S.No	Activities	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	District contingency Plan				DDMA								
2	Helpline	PDMA											
3	Media Cell						PDMA						
4	District Mock Exercises					DDMA							
5	Provincial Cabinet Committee Meeting				PDMA								
6	Control Room Operations						PDMA						
7	Provincial Contingency Plan				PDMA								

S.No	Activities	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
8	Met Weather Updates						PDMA						
9	Departmental Contingency Plan				CPD*								
10	DDMA Monthly Meeting					DDMA							
Drought													
	Field Observation, Cholistan		DDMA										

CPD: Concerned Provincial Department

The action plan of the Provincial Disaster Management Authority for the year 2014 is as under.

PLANNING & REVIEW

During floods of 2013 a relatively new phenomenon of urban flooding emerged in northern Punjab particularly in Narowal, Sialkot, Gujranwala, Lahore and Nankana Sahib which provided an impetus to realign Government's priorities viz-a-viz disaster management. Keeping in view the ever emerging reality of disaster risk management/reduction Government of the Punjab under Senior Member Board of Revenue/ Relief Commissioner Punjab constituted a following high level committee with the mandate to study the patterns of rain and flooding in all major rivers besides urban flooding, mapping of the hazard and redusting of existing laws, regulations and policies.

i. Senior Member, Board of Revenue	Chairman
ii. Secretary (Planning & Development)	Member
iii. Secretary Irrigation	Member
iv. Secretary LG & CD	Member
v. Secretary C& W	Member
vi. Director General, PDMA	Member/ Secretary

Two meetings of the said committee held under the Chairmanship of SMBR/Relief Commissioner Punjab on 18.04.2014 and 29.04.2014 to review the constructions of Pacca houses / roads etc. in riverine areas. Intervening features i.e. blockage of rain water/channel passages based upon natural flow / gradient either by private people or by public sector projects.

All the district coordination officers of Gujranwala divisions were directed to identify send information about encroachment in natural water ways on following proforma and take necessary immediate remedial measure to avoid any eventuality.

Vulnerability and Risk Assessment-PROFORMA

(Fill this proforma carefully so the information can be utilized for appropriate
Decision/Policy making)

District/Tehsil: _____

1	2	3	4	5	6	7	8
River/ Nullah's name and location where obstacles identified	Union Council / Village	Detail of Pacca houses/roads/factories etc. in riverine area /nullahs and where this is continuing and can cause more damages in future. Khasra numbers must be mentioned	Identification of places where overflow occurred due to gradient level	Past history of destruction due to overflow / flooding mentioned at Column 3 & 4	Geo-Location of the potential threats blockage, encroachments mentioned at Column 3 & 4	Water spread / flooding in past i.e. in natural courses due to encroachments (in cusecs)	Remarks

Decisions of the said meetings are as under:-

Decisions	Action by
<p>Nullah Aik is highly sensitive and dangerous in the vicinity of Sialkot city, therefore, practicable measures may be taken to minimize the losses.</p> <p>The concerned department should adopt concrete measures to remove obstructions / obstacles on the passage of natural water ways / culverts on GT Road.</p> <p>Culverts under railway track near Islampura, Kamoki are under consideration for construction. The Chair directed that re-survey of the passages should be conducted for ensuring natural water flow.</p> <p>Secretary Irrigation along with his Chief Engineer will convene a meeting with District Administrators, Gujranwala Division in 4 – 5 days and probe the issue of natural water ways in detail, and suggest comprehensive preventive measures on the issue.</p> <p>Government may reconsider its earlier policy of 50% and above calamity affected mouzas while including below 50% calamity hit mouzas where individual loss is more than 50% of the ownership.</p> <p>A hardship committee may be notified to assess the losses on case to case basis in every district</p>	<p>Secretary Irrigation Commissioner Gujranwala Concerned DCOs</p>

OTHER PLANNING AND REVIEW STEPS

- Guidelines for preparation & contingency planning were passed on to all government line departments and district governments.
- Chief Minister, Punjab constituted a Cabinet Committee to review a monitor pre-flood arrangements 2014. First meeting of the Cabinet Committee held on 27.05.2014 under the Chairmanship of Provincial Minister for Irrigation at Civil Secretariat, Lahore. (Minutes enclosed as Annex-“A”)
- Chief Secretary, Punjab had chaired a meeting on 30.04.2014 to review pre-floods arrangements for the upcoming monsoon season. (Minutes enclosed as Annex-“B”)
- Information on Floods from India through Pakistan Commissioner for Indus Waters

RISK REDUCTION EFFORTS

- All the vulnerable points along the Nullah's Aik, Deg, Palkuh, Basanter , Nikki Deg & Bein have been identified and work is in progress
- All the five breaches of Nullah's Aik have been plugged and protection wall of city Sialkot constructed
- Construction of an embankment along Hasri drain near Kamoki has been approved and initiated
- Necessary directions have been issued to all quarters concerned to remove encroachments along irrigation system/structures/water bodies
- De-silting and cleansing work on 18 drains of Gujranwala Division has started (Rs. 198 million)

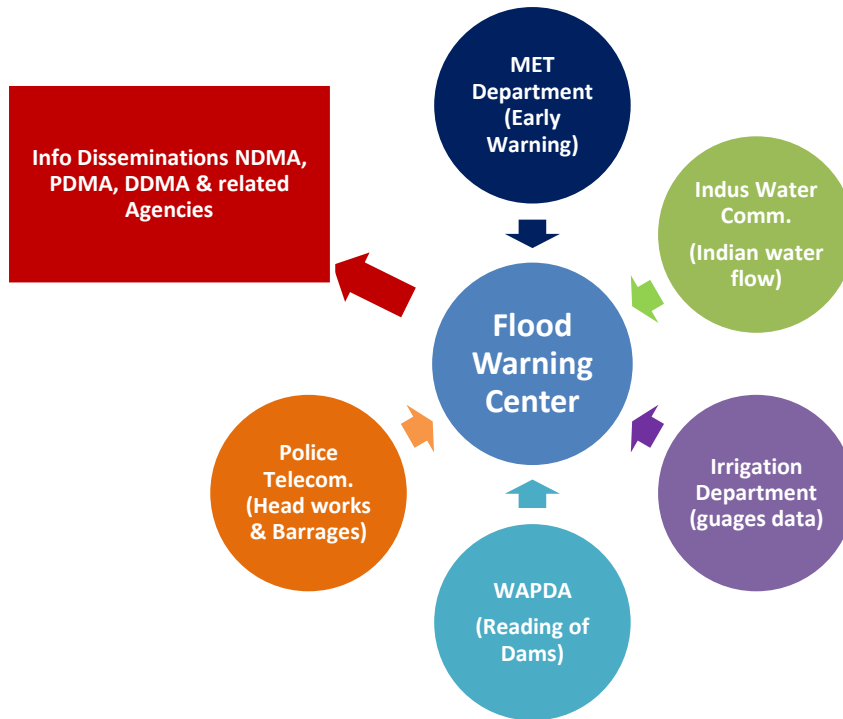
PREPARATION/MITIGATION MEASURES

- All the departments and district governments have prepared submitted their respective Contingency Plans
- All the DDMA's have conducted Mock Exercises with Disaster Response Force (DRF)
- Necessary trainings given to DDMA's regarding Camp Management, Disaster Risk Reduction and CBDRM
- Civil Defence & DCOs have registered number of volunteers for emergency situation
- Necessary relief stock is procured and placed for emergency situation
- Adequate quantity of reserve stock of stones have been arranged and placed at strategic locations as per SOPs
- C&W has prepared Communication Contingency Plan to keep road / bridge links functional in flood season.
- Food Department has identified places for safe storage of stock.
- Provision of medicines & vaccines for livestock in flood prone areas / camps is being ensured.
- Pak Army, PDMA and PES (1122) are maintaining close liaison with all stakeholders, so that in case any unusual situation arises from monsoon and flooding, the same will be handled timely in an effective manner.

FLOOD EARLY WARNING CENTER

Flood forecasting and Warning Center has started functioning at 46 Jail Road, Lahore w.e.f 15.06.2014 to disseminate the Early Warning to all quarter concerned.

- Manned round the clock
- Information sharing on Rivers, Hill torrents and Nullah's flows



Contact details:

Mr. Imtiaz Ahmed	Director Flood Warning Center
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Res: #	042-35431493
Fax #	042-35862081

FUNCTIONING OF CIVILIAN WIRELESS NETWORK

Most of the communication infrastructure was destroyed during the devastating floods of 2010 that affected more than 20 million people in Pakistan. Many telecommunication towers were uprooted by rising water levels, disrupting land based and cellular networks. In many areas, the only means of communication left were the wireless radio links of Police and Pakistan Armed forces. PDMA Punjab is the central commanding authority responsible for coordinating and spearheading the response to a disaster, yet we could not coordinate with district administrators and departmental representatives in areas where the conventional telecommunication networks were down. It became evident that a fully functional wireless network under PDMA's own command was imperative for disaster risk reduction. Keeping this dire need in view, PDMA in collaboration with donors established Punjab's first Civilian Wireless Network. I played a pivotal role in the procurement and installation of wireless sets, towers and

allied equipment. The wireless network is now functional in 16 vulnerable districts of the province and was successfully utilized in relief operations during the floods of 2013.



The Command, Control and Communication Center: 3C

The Command, Control and Communication Center serves as the hub of coordination for the Government response to a disaster. All the relevant Government departments are present in this center to plan and coordinate the response activities. This center receives early warnings and issues information to the public, media, ministries, departments and humanitarian response agencies. The 3C coordinates relief and early recovery work in the post disaster scenario. The 3C is operational around the clock during a disaster until the affected communities have been rescued, evacuated and aided with relief goods. The 3C oversees the deployment of evacuation, medical, search and rescue teams in the affected area. The following figure provides a visual depiction of the departments that are present at the 3C.



Figure 3: The Command, Control and Communication Center: The list of departments / agencies depicted above is not exhaustive

The 3C is supported by a team of GIS specialists, a Province-wide high frequency radio network, high speed internet connectivity and other resources such as telephones (landlines, cellular and satellite phones), fax, internet/emails, computers, printers, photocopiers, TV sets, range of status boards and map boards, generators etc. The 3C is responsible for preparation of alternative communication and transportation plans in case the current facilities are disrupted by a disaster. The Government representatives plan their interventions based on the maps showing both affected and vulnerable areas and populations. The 3C also coordinates with all operational humanitarian organizations such as, Pakistan Red Crescent Society (PRCS), and related International humanitarian organization agencies to further sharpen the response. Child Protection has been mainstreamed across disaster response. A Gender and Child Cell (GCC) has been established at PDMA which will assume overall responsibility for ensuring that disaster relief efforts are child and women friendly. PDMA emphasizes the protection of women and children as about 70% of those affected in a disaster (including the floods of 2010) are women and children. The GCC-PDMA will cater to the differential needs of women and children in disasters. It will also collect sex and age disaggregated data on key indicators. The members of 3C base their decisions on a rapid assessment of the disaster. This assessment is carried out by the district representatives of

different departments and is shared among all participants at the 3C. The representative of Irrigation department, in case of a breach, informs all stakeholders of the current discharge rate in the affected water channel and the estimated area that is expected to be inundated by water flowing out of that breach. This rapid assessment would follow an assessment of the resources that are required to rescue the affected population, evacuate the vulnerable communities, and provide immediate relief to the victims of the disaster. The members of 3C compare the resources at their disposal with those required to respond effectively. These members then take key decisions regarding disbursement of relief goods such as food, drinking water, medical supplies, non-food items etc. During the execution of all such Governmental interventions, a representative of 3C organizes regular media and public information briefings.

The Director General, PDMA maintains a close working relationship with the Met department and issues warnings to all stakeholders in case the Met department informs of any imminent disaster. After the incidence of disaster, PDMA immediately informs all pre-assigned departmental representatives to report to the 3C. The representative of the Information department designs the communication strategy for media and public. This representative organizes press briefings and press conferences to inform the public about the extent of the disaster and the coordinated response of the Government. The representative of the Information department remains present at the 3C to stay informed of local situations about which the public should be provided real-time information and advice. All information is disseminated to the national news channels and daily newspapers.

Contact detail:

Sr. #	Name	Designation & Contact detail	Status
1	Mr. Muhammad Sajjad	Director Operations PDMA 042-99203303, 99204409, 0300-4441170	Incharge
2	Mr. Nisar Ahmed Sani	Director Coordination, PDMA 042-99203303, 99204409, 0343-9209201	Liaison Officer
3	Mr. Zafar Haider Shamsee	Assistant Director Admin, PDMA 042-99203303, 99204409, 0307-4444785	Logistic Officer

MEDIA WATCH AND AWARENESS CELL:

Communication during and immediately after a disaster situation is an important component of response and recovery, in that it connects affected people, families, communities and departments. PDMA viewing the importance of information sharing establishes media cell before the onset of monsoon season with effect from 15th June which remains operative 24/7 mode till 15th October every year. This media cell keep close liaison with all stakeholders at provincial level as well with district emergency control centers. Director (Administration), PDMA will supervise this media cell, Information department deploys one information officer exclusively for this cell from May to October. This cell issues warnings utilizing all media options, print and electronic media in case of emergencies. Cell in collaboration with all media houses also issue certain guidelines and instruction for victims of disaster and share information regarding various rescue, relief and rehabilitation programs.

Contact detail:

Name	Designation & Contact detail
Mr. Nawaz Khalid Arbi	Director Admin PDMA 042-99203303-99204409, 0321-9467208, email:nawazkhalid123@gmail.com

HELPLINE 1129:

Early warning system is good tool to lessen the loss of lives, properties and livelihood, the simulation model which is yet under construction which will enable Department to intimate and warn vulnerable communities. No doubt, early warning system can help to minimize losses. Parallel to this early warning PDMA is keeping 1129 helpline operative in collaboration with Punjab Information Technology Board (PITB) on 24/7 mode to help people of flood prone areas. This helpline provides information to the vulnerable communities on flood situations that can help communities to prepare themselves in accordance with nature and intensity of the disaster and timely evacuation in worst case scenario.

In worst case scenario and heavy floods individuals get trapped in floods. It is quite difficult for the rural poor and in situation of misery to remember / memorize 10 digits phone numbers of district and tehsil helplines which can be changed every year. Four digits permanent number is easy to be memorized. Apart from early warning and intimation services helpline also receives SOS calls and these SOS calls are diverted to respective districts to respond to request of the callers on war footing basis. Helpline operators remain in contact with callers and keep them updated on every effort and move.

PDMA designated Focal Person share all weather updates with helpline team on daily basis which in turn respond to the questions of the callers. Before the onset of monsoon season PDMA conduct orientation session with helpline operators to update them various innovations and other program which are being carried out in / for disaster prone areas.

Helpline is good tool for management to overview the performance of field teams, efficacy and effectiveness of rescue, relief and rehabilitation program. Because helpline not merely receive SOS call and warn communities of disaster but provide opportunity to communities and vulnerable to give their feedback and lodge complaints against field force or program in operation. This feedback mechanism helps management to review programs and revise in accordance with the ground realities. In case of complaints against any individual / field team member, management initiate enquiry at provincial or district level as the case may be.

VOLUNTEERS:

Disasters bring people closer and everyone tend to reach out and extend help to the victims of disasters. In order to channelize such support PDMA has started registration of such people who want to provide their services as volunteers. PDMA launched awareness campaign for the registration of youth as volunteers in media. These volunteers render their services during disasters in various operations e.g. registration of victims, distribution of relief goods and camp management.

PREPAREDNESS

United Nation World Food Program (WFP) has established a state-of-the-art warehouse at Muzaffargarh with the storage capacity of over 2500 MT. PDMA has stock sufficient relief items to cater for south Punjab in case of any eventuality.



Apart from the above warehouse WFP also established flospane (small warehouses) in 8 vulnerable district of Punjab with the storage capacity of 300-500 MT (each).

Sr. #	District	Location
1	Bhakkar	Adjacent to AC office, DCO office Complex Bhakkar
2	Rawalpindi	Food Godowns, Tipu road near Rawalpindi medical college , Rawalpindi
3	Gujrat	Inside Zimidar degree college, Bhimber road Gujrat
4	Sialkot	Inside the premises of pilot secondary school, opposite to Sialkot stadium, Sialkot
5	DG khan	Inside Baloch Lavi premises near railway station DG khan
6	Mianwali	Inside district council office premises opposite to DCO office complex Mianwali
7	Rajanpur	Sports complex near Indus highway Rajanpur
8	Bahawalpur	Adjacent to fisheries complex, chandi peer road, near chowk azam Bhawalpur



PDMA'S STOCK POSITION

STOCK POSITION				
Lahore			Muzaffargarh	
Sr. #	Particulars	Qty	Qty	Total
1	De-wtering Set	30	5	35
2	Fiberglass Boats	67	7	74
3	Out Board Motor Engines (OBMs)	67	7	74
4	Life Jacket	23	15	38
5	Tents	14,762	15,007	29,769
6	Mosquito Net	5,000	768	5,768
7	Blankets	225	0	225
8	Quilt	125	0	125
9	Water Filtration plants	6	0	6
10	Rice 20 kg bag	572	2,072	2,644

Flood Fighting Equipment Available in the Divisions & Districts of Punjab

Sr. No	Flood Fighting Equipment	Lahore Division	Gujranwala Division	Rawalpindi Division	Sargodha Division	Faisalabad Division	Multan Division	Sahiwal Division	D.G.Khan Division	Bahawalpur Division	Punjab (District Administrations)
1	Life Jackets.	120	239	884	704	37	188	74	214	42	2,502
2	Life Rings.	25	50	27	157	16	61	12	50	15	413
3	Life Lines	4	33	16	2	3	17	4	31	6	116
4	Boats	112	39	29	71	4	26	3	146	4	434
5	OBM Engine	31	30	26	39	1	24	1	37	4	193
6	First Aid kits	20	34	63	78	60	92	23	92	20	482
7	Rescue Bag.	15	13	6	7,205	7	11	2	18	10	7,287
8	Safety Harnesses	24	34	48	6	14	58	4	98	22	308
9	Ambulances	20	83	75	35	34	82	48	48	26	451
10	Floating Stretchers	5	13	20	1	3	13	0	5	1	61
11	Fire Brigade	7	39	33	11	11	31	16	17	21	186

Sr. No	Flood Fighting Equipment	Lahore Division	Gujranwala Division	Rawalpindi Division	Sargodha Division	Faisalabad Division	Multan Division	Sahiwal Division	D.G.Khan Division	Bahawalpur Division	Punjab (District Administrations)
12	De-Watering Sets	498	134	62	59	35	246	71	183	78	1,366
13	Sucker Machine	1	3	31	1	46	8	11	9	7	117
14	Jitter Machine	1	3	8	0	3	8	10	8	7	48
15	Water Tanks / Bowzers	20	39	58	27	16	32	15	27	24	258
16	Tractors Trollies	92	228	57	82	38	122	81	146	60	906
17	Dumpers	4	0	10	0	4	0	0	4	0	22
18	Excavator	1	1	3	2	0	1	1	1	0	10
19	Cranes	0	5	0	2	0	2	0	0	0	9
20	Bulldozers / Loaders	14	20	8	18	0	25	7	41	15	148
21	Jeeps	95	113	97	51	58	153	21	114	23	725
22	Pickups	46	103	59	35	15	187	16	88	9	558
23	Mini Trucks	20	50	16	3	3	69	1	11	2	175
24	Axes / Shovels / Picks	17	27	102	77	9	283	116	147	13	791
25	Dry Suits	2	12	6	5	4	10	3	4	5	51
26	Electrical Power Generators	5	19	19	2	12	7	6	7	17	94
27	Extension ladder	3	16	8	3	7	21	5	20	5	88
28	Fogging Machines	24	52	74	2	43	45	70	45	97	452
29	Hydraulic Cutter	0	1	4	0	1	2	1	20	2	31
30	Jumping Sheet	4	8	25	4	6	12	3	5	1	68
31	Megaphones	1	6	12	3	7	15	0	10	5	59
32	Rescue Tripod	1	3	3	1	2	5	3	4	1	23
33	Rope ladders	0	1	2	0	0	0	0	0	0	3
34	Ropes	10	27	49	3	16	38	12	119	5	279

35	Rubber Gloves (11000 Watt).	11	8	10	0	7	4	10	30	1	81
36	SCBA Cylinders	11	48	34	61	10	70	9	27	13	283
37	Search Lights	2	25	56	138	17	99	4	10	4	355
38	Tents/Blankets	147	3,454	1,051	472	0	72	202	455	0	5,853
39	Toches / Lamps	8	17	46	392	7	356	9	20	20	875
40	Dredgers	0	0	0	0	0	8	0	0	0	8
41	Sand Bags	0	5,000	0	0	0	1,000	0	0	50	6,050

HAZARD ASSESSMENT

The Provincial Disaster Management Authority (PDMA) has developed a Flood Plain Mapping Application that predicts the extent of flooding along the Indus River. Through this system, PDMA now knows about the possible damages at the click of a button through simulation modeling. PDMA uses this model to predict the approximate number of people that are likely to be affected by the flooding, the approximate households that are expected to be displaced, and the facilities that are expected to be disrupted. A screenshot of the Flood Plain Mapping Application is provided below. The following interface provides the exact names, population and other characteristics of the villages that would be submerged in case of a certain flood discharge in Indus.

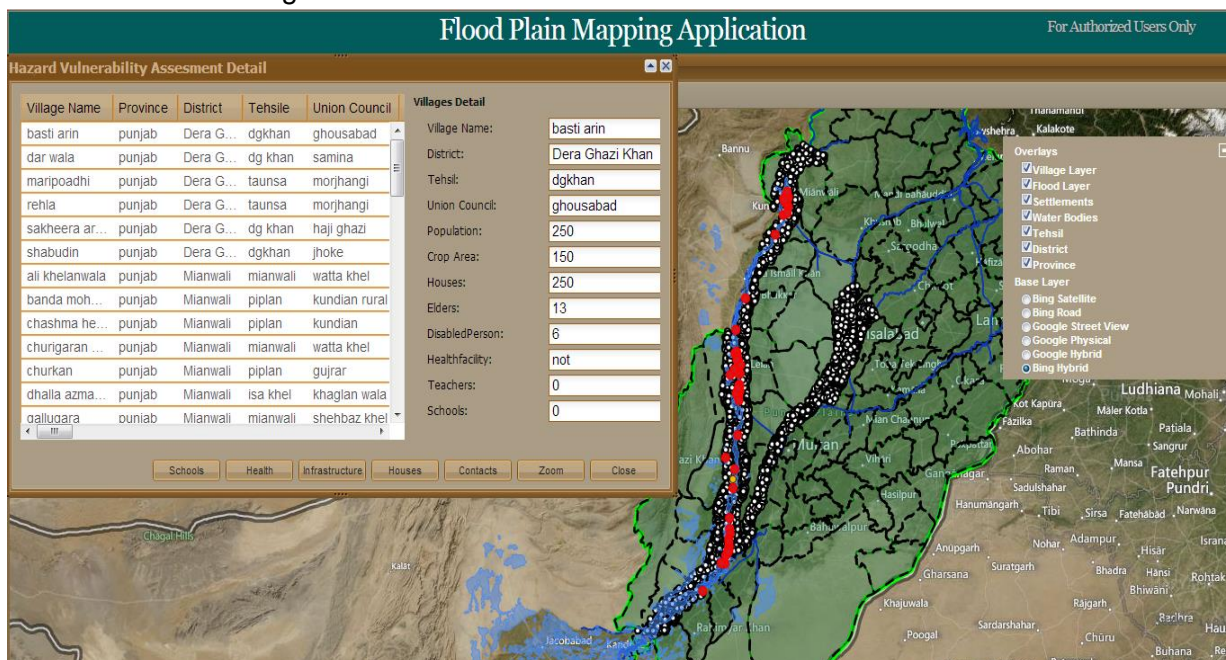


Figure 4: Flood Plain Mapping Application

The data on people, households and facilities that this system utilizes is still being collected through one of Punjab Government's largest survey studies. In the year 2012 PDMA planned to conduct a detailed study of 5,680 settlements that are located in a 10 kilometer band parallel to all major rivers in nine vulnerable districts of Punjab. PDMA marked all of the settlements on the map with the help of Geographic Information System. An Android based data entry application was developed to help conduct the socio-economic and vulnerability assessment of the residents of these settlements. PDMA mobilized the District Disaster Risk Management Coordinators (DDRMCs) for the execution of this comprehensive

assessment. The DDRMCs were equipped with Android phones which allow direct data entry and geo tagged pictures of the important infrastructure in each village. A database of buildings and structures was created, that can be utilized to provide shelter or any medical aid to people displaced from other areas. Along with the information of buildings and Government structures, the DDRMCs are also collecting information on the number of people residing in the settlements, number of persons that might require extra care in case of evacuation, number of households, number of disabled / elderly, and a variety of other data such as the availability and status of schools, dispensaries, godowns, police check posts, power infrastructure and other facilities. Till the date of this report's publication, the DDRMCs had surveyed 4,437 villages out of the 5,978 that PDMA had identified earlier. The following figure shows the villages of Dera Ghazi Khan District that fall within ten kilometers of Indus River. Almost all of these villages have been surveyed and the Flood Plain Mapping Application utilizes the data collected through those surveys to estimate the extent of disaster in case of a

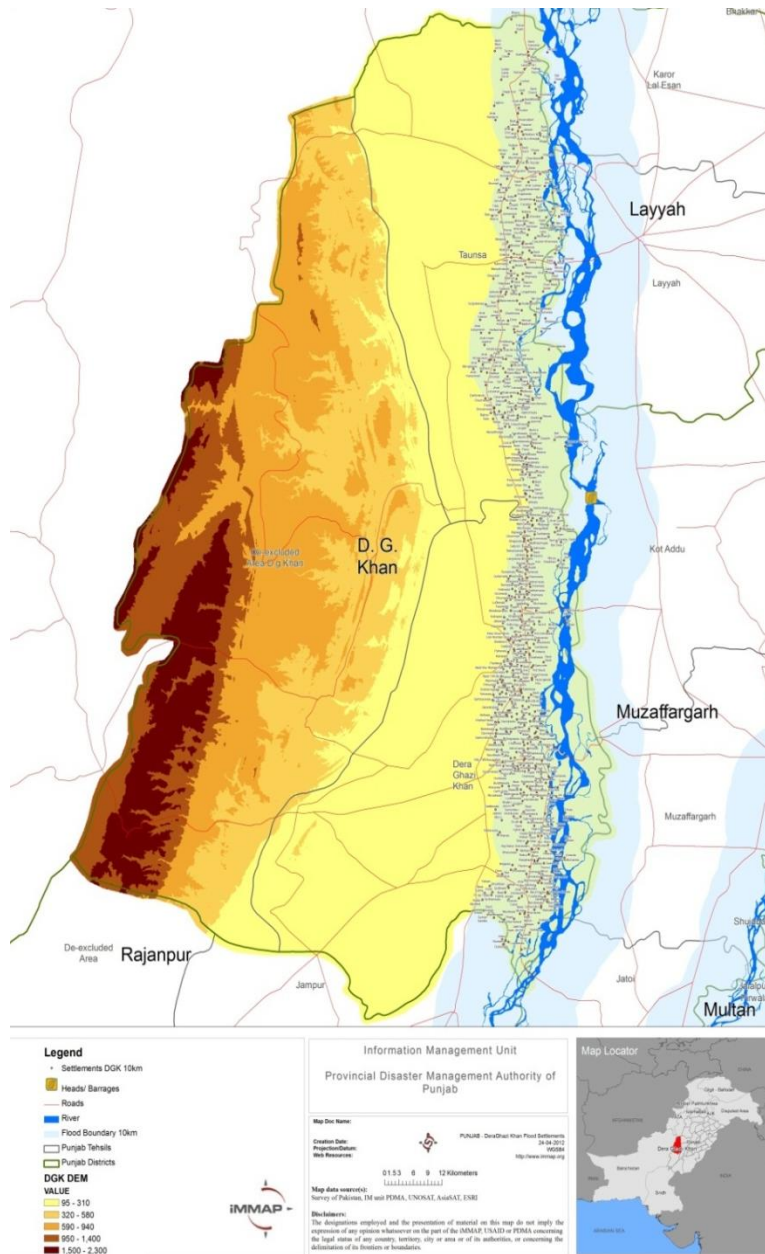


Figure 5: Villages surveyed in D.G Khan district

certain flood discharge near Taunsa.

PDMA has to provide immediate relief to the communities affected by flooding. However, important decisions regarding relief can only be taken once PDMA has knowledge of the extent of damage in the affected communities. PDMA Punjab can now estimate the number of people that would be affected, the livestock population that would be dislocated, the schools, medical facilities and godowns that would be inundated in case there is a flooding in Indus River. Based on these estimates, the Government of Punjab can now plan in advance. PDMA would know the amount of food hampers, tents, blankets and drinking water that might be needed in case of flooding. The C&W and Irrigation departments would know the vulnerable highways and water channels. In a similar manner, all departments can make specific preparation in advance.

DISASTER RESPONSE FUNCTIONS

EVACUATION

Emergency evacuation is the rapid removal of people from a threatened environment to a safer place. Punjab Emergency Services and Civil Defence, along with the implementing arms of the Home department are primarily responsible for evacuation of the affected people. Their key personnel should be trained in various evacuation techniques for the different types of disasters. The transportation plan for evacuation would be formulated in close consultation with Punjab Emergency Services, Punjab Police, the Communication & Works department and the Transport department. The department of Civil Defence along with the Education department would mobilize groups of Razakars and Scouts to assist the evacuation process. Evacuation is prioritized on a need basis. The first to be evacuated are seriously injured or bedridden patients followed by handicapped or disabled persons, pregnant women, elderly persons, children and women. The rapid evacuation of injured persons by the concerned agencies has to follow a simple color tagging process that prioritizes the patients that are in most urgent need of medical assistance.

The District Health Department or the paramedic staff of Rescue 1122 must evaluate the medical conditions of multiple victims and then attach a colored tag to each patient. Red, yellow, green, and black tags indicate the urgency of evacuation in a decreasing order. A red tag indicates that the patient suffers life threatening injuries and requires top priority evacuation and immediate medical attention. Patients with yellow tags can sustain themselves for a short while and they should therefore be evacuated after taking due care of red tagged medical emergencies. Patients with green tags should be rehabilitated at site and then evacuated once the red and yellow cases have been taken care of. Black tags are affixed to corpses or cases where resuscitation is impossible.

Evacuations would be coordinated by the PDMA and would be ordered by the DCO considering the on-ground scenario. Forced evacuation can also be ordered by the DCO in the face of clear and present danger. Prior to that, people are informed to evacuate by getting their attention through sirens, drum beatings, radio, cable TV or other local communication means.

Communities that are under the threat of a disaster or that have already been affected by a disaster would be informed by the PDMA and the District Governments about the evacuation routes along with the transportation or shelter arrangements that the Government has made for them. To estimate the social impact of the disaster, all evacuations would be documented.

GUIDELINES FOR EFFICIENT EVACUATION

Search & Rescue are the foremost activities of the evacuation process. Most of the resources would be dedicated to these activities during the initial 12 hours after the disaster. Alongside, relief camps would be set up in safe areas that are easily accessible from all sides. The locations of relief camps in districts have been duly indicated in the flood contingency plans issued by the District Governments. These camp sites would be equipped with proper medical, water and sanitation facilities by the District Governments. Evacuation routes to the identified camps would be rapidly planned and informed to the personnel undertaking the search and rescue operations. All efforts would also be made to engage Government and private transport vehicles for the evacuation of victims along these identified routes. The staff of Punjab Emergency Services is well trained in carrying out timely and effectively coordinated operations to locate and rescue persons in distress and deliver them to a place of safety. Any harm to a rescuer should be averted as he/she is the most important person in a rescue attempt.

Families would preferably be evacuated together as one unit, minimizing chances of separation in a family. Evacuation of children without families would only be undertaken as a last resort and with the ultimate goal of earliest reunification. The best interest of the child would be considered while making the decision to evacuate.

URBAN SEARCH AND RESCUE (USAR)

USAR focuses on locating and rescuing people trapped in a major structural collapse. Urban search and rescue is considered a "multi-hazard" discipline, as it may be needed after the incidence of a variety of disasters such as earthquakes, tornados, floods, storms, or terrorist activities. The rescuers trained in USAR initiate their operations by a quick site assessment and allocation of resources. They employ search cameras, sensitive listening devices, carbon dioxide detectors, and thermal image cameras etc. to identify the victims trapped under the rubble. Trained dogs are also brought in to detect the survivors trapped in the wreckage. After the identification of survivors the rescuers engage hydraulic and electric equipment such as jack hammers, drills, saws, disc cutters, ropes and stretchers etc., for cutting, breaching and lifting the rubble over the victims. The implementation arm of PDMA for Urban Search and Rescue would Rescue 1122, District Police and the District Administration. Army authorities would also be called in aid of civil power to complement the efforts of the civil authorities.

An early warning would allow in-time evacuation of the vulnerable population. The impact of a disaster can be mitigated if its onset can be foreseen. An early warning can substantially reduce the loss of lives, properties, and livelihoods. The warning must be articulated in clear and easy to understand local language. Pakistan Meteorological Department (PMD) is responsible for sharing information through an early warning system during the monsoon period. PMD shares the information on the flood situation from 15 June to 30 September every year. In case an anomaly is observed in the weather patterns during the

monsoon season, a warning is dispatched to all the relevant stakeholders such as PDMA which then informs the relevant departments to remain on high alert. A Flood Warning Center has been setup in Lahore to forecast and inform the possibilities of exceptional increases in the precipitation rates. The Federal Flood Commission also strives to improve flood forecasting and early warning systems.

ASSESSMENT

Immediate evacuation is followed by an assessment of all that is needed to overcome the effects of the disaster. Available resources have to be deployed to the neediest people and so this strategizing must be based on a reasonable assessment of the disaster, and the subsequent needs of the affected communities.

In case of a disaster, a rapid initial assessment would first be carried out to effectively conduct the Search & Rescue operations. This assessment would then be followed by detailed sectoral assessments to plan, implement and coordinate the response to a calamity. The initial rapid assessment is the exercise of collecting information, in order to identify the basic needs such as food, shelter, water, sanitation, medicines etc. The rapid assessment would be completed in the first 48-72 hours to get an immediate picture of the extent of disaster. This assessment would provide the basis for immediate response during the first 8-10 weeks. After the completion of 4-5 weeks, the expanded rapid assessment would also be carried out to gather detailed information on the affected communities and the feedback on the Governmental interventions in the last few weeks. Expanded rapid assessment guides the medium term response of three to four months. The assessments would be carried out by all concerned line departments; however, it would be spearheaded and coordinated by the 3C at PDMA.

The rapid assessment would evaluate whether the local capacity is adequate or external resources are required to provide immediate assistance. The assessment would be used to prioritize Government interventions. The Government may, If needed approach the International Development Partners to undertake the assessment of the disaster's impact on lives and livelihood.

If the disaster happens in more than one district and it is beyond the capacity of the district administration then PDMA would directly engage in initial rapid assessment within 48-72 hours of the disaster. PDMA would form a team of members from different departments to conduct the initial rapid assessment. The members and composition of the team would be flexible according to the situation and availability of human resource. This team would be supervised and guided by the PDMA. The assessment team would present report to the 3C at PDMA in addition to the concerned DCO and Divisional Commissioner. The assessment would involve field visits of the affected area, collection of information regarding the devastated areas and the affected communities.

Provincial Disaster Management Authority, Punjab, has devised new mechanism to carry out loss assessment survey to gauge the overall loss caused due to flood / disaster for various purposes by the flood affected districts. This assessment enables the government to know overall losses caused due to the disaster along with that helps to devise its strategy for

rehabilitation according to government's priorities within available resources. PDMA has brought innovation in the losses assessment process and mechanism. Damage assessment is conducted with Geographical references through use of Android set to mark geo coordinate through Geographic Information System (GIS). This minimizes the element of corruption and also helps planner to understand water behaviors during various kinds of floods (riverine floods, hill torrents, flash floods etc.) and their intensities.

In order to conduct damages assessment survey PDMA has developed various tools for different types of damages to agricultural crop, livestock, properties, houses and lives of disaster affected people. District Administrations notify Damage Assessment Committees, number of such Committee depends on the level and geo stretch of the damage caused during disaster. Generally Multi sectoral Committees are constituted which helps to avoid element of nepotism and favoritism. Normally survey teams comprise of representative from Revenue, Irrigation, Agriculture, Roads and Building departments. Provincial Disaster Management Authority helps District Administrations in capacity building of damage assessment Survey teams in the use of Android sets for GIS mapping, moreover, guide survey team what aspects of the damage needs to expose while taking photograph of the damaged property, crops and houses. Apart from extent of damage exposed, affectee with CNIC in original is also captured for future references with geo tagging.

District Administrations compile damage assessment data at tehsil and district level and submit to Provincial Disaster Management Authority. PDMA after receiving district wise damage report, prepare a consolidated damage report reflecting all kinds of damages and losses to the Government for further planning and strategy development for rehabilitation and compensation for the disaster affected people. Assessment may be made according to following proformas.

Deceased Persons-Proforma-1

District: _____

1	2	3	4	5	6	7	8	9	10	11
S.No	Name of Deceased Person	CNIC	%age	Address	Age	Gender	Date of Death	Cause of Death	Compensation Paid by District Administration or not yet	Graveyard registration receipt from TMA or Photo of Grave showing the name and address of deceased person

Injured Persons-Proforma-2

District: _____

1	2	3	4	5	6	7	8	9	10	11
S.No	Name of Injured Person	CNIC	%age	Address	Age	Gender	Cause of Injury	Nature of Injury	Compensation Paid by District Administration or not yet	Medical Certificate from Govt Hospital of Injury/s

Crops Damage Assessment-Proforma-3

District: _____

1	2	3	4	5	6	7	8	9	10
S. #	Tehsil	Qanoogoi /UC	Name of Mauzas affected	Name of Owner/ Farmer Affected	CNIC	Crop Affected (Acres)	Type of Crop	Total Land of Owner/Farmer (Acres)	% age of Muaza affected

House Damage Assessment-Proforma-4

District: _____

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
S #	Name	Father Name	CNIC	Khandan Number	House Senses Number	Address	Mauza	%age of Mauza Damaged	Patwar Circle	Union Council	Tehsil	Nature of House Katcha / Pakka	House damaged completely / Partially	% of House Damaged	Damaged by Flood / Rain	Contact # of affectees	Latitude	Longitude

Cattle Head Perished-Proforma-5

District: _____

1	2	3	4	5	6	7	8	9
S.No.	Name of Owner/ Farmer	CNIC	Father Name	Address	Category (i.e. goat, cow, buffalo)	Cause of Cattle Head Perished	Compensation Paid by District Administration or not yet	Remarks

PROVISION OF MEDICAL SERVICES

The victims of a disaster would most probably require immediate medical assistance due to injury, psychological trauma or general health problems such as diarrhea, cholera, high fever, flu, cough, eyes infection etc. The main purpose of providing health services in disaster situations is to prevent and reduce the morbidity and mortality, and to control the proliferation of infectious diseases after the disaster. Mobile clinics would immediately be setup in the affected areas. These clinics would be equipped with both clinical and human resource to enable them to cater to medical needs of a large number of victims. The Provincial and District Health Departments would be the lead agencies in this regard. However, the assistance of

International Development Partners and I/NGOs would also be solicited. The clinics and hospitals in the vicinity of the affected area would maintain a record of all patients to be able to identify any epidemic outbreaks that would further increase the spread of disease. The Social Welfare department would take all measures to rehabilitate orphans, destitute women and other vulnerable elements of the affected population. There would be an ongoing systematic collection, collation, analysis and interpretation of patient data. A Disease Early Warning System would track the outbreak of diseases such as cholera, typhoid and malaria. The main goal of this system is to minimize the morbidity and mortality by detecting epidemics at the earliest possible stages. The 3C must assess the functional status and capacity of local, public and private health institutions/organizations in the vicinity of the disaster affected area. The 3C would also inquire the availability of skilled health workers, essential drugs and medical supplies and equipment. The capacity of existing logistics system would be determined, especially as they relate to the procurement, distribution and storage of essential drugs and medical supplies. The outbreak of communicable diseases would be prevented in shelters, camps or other areas harboring the displaced persons. This would be achieved through immunizations, vector control or limiting proliferation by providing immediate medical assistance to the affected. The Minimum Initial Service Package (MISP) for saving lives of mothers and newborns will be incorporated into the health sectors response to cater to the health needs of women and children.

RELIEF MANAGEMENT - FOOD AND NON FOOD ITEMS (NFIS)

Relief management ensures the sustenance of large numbers of evacuees that are not able to carry the items of everyday use with them. The Government can provide respite by providing certain food and non-food items such as clothes, blankets, cooking utensils, hygiene kits, buckets, plastic sheeting, sleeping mats, water jerry cans, washing powder etc. The main purpose of the relief management is to provide life sustaining commodities to the affected communities in a fair and organized system.

Child headed households and separated/unaccompanied children would be given food distribution cards in their own name in a manner that does not cause further separations. Special attention and priority should be given to the persons with disability, elderly person heading household, women and adolescent heading household. Presence of child protection/social protection actors at distribution points would be ensured as this can serve multiple purposes including identifying of separated unaccompanied children.

An ideal distribution system is safe, accessible and transparent to the intended beneficiaries. Distribution must take into account the recipient's physical capabilities. Food is the foremost relief item that the worst affected communities require on an immediate basis. In the first few days after the disaster, the Government would provide ready to eat food items. Subsequently, food disbursement would shift to provision of dry ration.

FOOD ITEMS

An initial assessment would be undertaken to identify the number and demographics of the affected population to estimate the quantity and type of food required. This assessment would also factor the food available in local markets in the vicinity of the affected regions. The nutritional needs of pregnant women, lactating mothers and malnourished children would be catered to on the highest priority. The food package would be enough to provide 2100

calories/person/day. Food provided to the communities would be of good quality. Beneficiaries would be informed in advance about the distribution points, date, time and procedure. All measures would be adopted to counter the unethical collection of relief packages by outsiders that portray themselves as victims of a disaster. Special attention would be paid to persons with disabilities, elderly, women and stranded children. Food distribution would be coordinated among all organizations to avoid any duplication or under serving. The distribution points would be decided in consultation with local communities keeping in mind the convenience of recipients and the ease with which supplies can be transported to the point. The distribution points would be accessible to women, elderly persons, person with disabilities and children.

A complaint cell would be established for every ten distribution points allowing the beneficiaries to redress their grievances about the quality, quantity, distribution and targeting procedures. The selection and registration of affectees, distribution methodology, selection of distribution points, and monitoring of the distribution would be transparent, equitable and mindful of local traditions.

NON-FOOD ITEMS

Non-Food Items are provided to the displaced personnel to help them establish themselves in a new environment that they are forced into. Plates, buckets, jerry cans, and water storage vessels can allow the affectees to store and prepare their food for gradual consumption. The immediate provision of clothing and bedding gives a feeling of comfort, dignity and safety. In the same manner as other relief goods, preference must be given to women, children, elderly and the disabled.

SHELTER

Natural or man-made disasters often displace large numbers of people, forcing them to inhabit temporary shelters and camps. Temporary shelter is provided by the Government and humanitarian organizations as part of the emergency response. The Government utilizes public buildings such as schools or portable tents to provide immediate cover to the affected communities. The newly established settlements have in some cases continued to host the affected for a significant time after the occurrence of the disaster. In the light of this, the Government would seek to provide all possible amenities in these newly established communities. Provision of basic amenities helps to establish operational communities that are able to sustain for a longer duration. Public facilities such as schools, barracks, warehouses, play-grounds, parks, have historically been utilized to provide shelter to the displaced affectees. Tents are usually provided in case the number of displace person exceeds the number that can be temporarily accommodated in public facilities. Only a set number of people would be allowed to inhabit a public building. This set number would be decided keeping in mind the available space, availability of facilities such as electricity, water, and sanitation, and the time it takes to evacuate all the inhabitants. Temporary shelters would have separate toilets and bathing facilities for men and women and it would maintain healthy standards by conducting anti mosquito sprays etc. The elderly and disabled must be provided with the most comfortable and accessible areas of the public facilities designated as temporary shelters. The temporary shelters should never be overcrowded as it can create unhygienic conditions. The following criteria should be followed while assigning space in the public facilities:

Table 4: Specification of facilities provided to displaced persons

Minimum specifications of facilities to be provided in public facilities and buildings.
Minimum floor area of 3.5 square meters per person.
Minimum air space of 10 square meters per person.
Washing facilities:
One hand basin /10 persons or
One wash bench of 4-5 meters/100 persons.
Toilets
One seat/25 women
One seat plus 1 urinal /35 men
Maximum distance from building should be 50

CAMPS

Camps would be established in areas accessible by metalled roads so that provision of essential facilities is not difficult. Apart from organized camp sites established by the Government or humanitarian organizations there can also be numerous scattered settlements comprising of people living in the immediate vicinity of their homes or village. The scale of these settlements may vary from a few tents to larger groups of 50 tents. These independent settlements are not setup according to any prescribed rules and can be located in remote inaccessible regions; however communities residing in these settlements would be equally entitled to relief good that the Government disburses for the sustenance of affected people.

In case of a mass exodus of people from the affected communities, a tent village would be set up by the district authorities and humanitarian organizations. The basic purpose of these establishments is to provide safety, security and basic amenities such as water, sanitation and medical assistance to the inhabitants of these facilities. The camp sites selected should be safe, accessible and far from other hazards and risks areas. The camps would be designed in a way so as to maximize the protection and security of the displaced persons.

Once the immediate emergency phase is over, the Government would encourage affected population to repatriate to their original place of residence. This encouragement would not compromise the dignity of the affected population. Alternatively, safety of affectees would be a part of the security management. Police and other Law enforcing agencies would maintain law and order during and after the emergency, and provide security to the people affected by the disaster. Appropriate measures would immediately be taken to prevent the children from child labor or sexual exploitation. Disasters can cause the separation of Children from their parents or guardians making them vulnerable to abductions, involuntary involvement in unlawful activities, molestation and exploitation. Children's safety and security would be the responsibility of the Social Welfare Department, the Child Protection Bureau, the Police and similar law enforcing organizations.

The day to day camp management would be the responsibility of the District Government. The following specifications are the minimum standards of the services that are to be provided to the inhabitants of tent villages:

Table 5: Specifications of facilities provided at tent village camps

Land	3.0-4.5 square meter per person
Shelter	3.5 square meter per person
Water	15-20 liters per person per day
Food	2100kcal per person per day
Toilet	One per family of 6-10 persons
Health Centre	One per 20,000 persons
Child Friendly Spaces	2-4 year olds- 15 children:2 facilitators 5-9 year olds-20 children : 2 facilitators 10-18 year olds- 30 children :2 facilitators
Hospital	One for as many as 200,000 persons

The District Administration responsible for setting up of the tent villages would select a suitable land of 7-8 acres for every 1000 affectees. This area would then be planned into a community with wide roads dividing the area into accessible tents. The minimum distance between two tents would ideally be at least 8 meters. Water Reservoirs would be set up to ensure that every person has water available within a radius of 100 meters from his tent. A proper mechanism of solid waste disposal would also be provided. A mechanism for incineration or burial of the waste would also be built before allowing people to inhabit it.

WATER AND SANITATION

Improper management of water and sanitation can lead to outbreak of diseases in camps. Poor sanitary conditions contribute to the proliferation of Diarrhea cases. In emergencies the quality or availability of water becomes a major challenge. Contamination can lead to a manifold increase in water borne diseases. In relief camps; it is important to take the source of water into account. It is important to ensure that the quantity and quality of water meets the standards of potable water. Multiple water points would be planned to ensure the access to everyone. The distance of the water point from the camp/house would ideally not be more than 100 meters. The water sources should be planned in a way that each point caters to a manageable number of users:

Table 6: Specifications of water and sanitation facilities provided at relief camps

250 people per tap	Based on a flow of 7.5 liters/minute
500 people per hand pump	Based on a flow of 16.6 l/m
400 people per single use open well	Based on a flow of 12.5 l/m

In emergency situations, water is normally treated with chlorine purification tablets. The percentage of chlorine should not be increased beyond a certain level to make the water unconsumable. People must also have adequate facilities and supplies to collect, store and use sufficient quantity of water for their own consumption and domestic hygiene. Sanitation includes excreta disposal, vector control, solid waste disposal and drainage. Lack of attention to

proper sanitation can lead to a number of diseases. A rapid assessment would gauge the sanitary needs and would help to plan the design of an alternative system in case the original system of sanitation has been disrupted by a disaster.

The community members and sanitation experts would be consulted in the design of the toilets. It is important to construct separate toilets for women as well the disabled. Mechanisms for the regular cleaning of toilets would be developed in advance by the District Government. Hygiene education would also encourage the users to maintain the cleanliness of their toilets themselves. Toilets should be within 50 meters of all affectees and at least one toilet should be provided for every 20 people.

Vector control would be an essential part of the camp maintenance. Vector breeding sites would be monitored and treated by the District Health department. People diagnosed with malaria would be treated on a priority basis so that vector borne diseases do not spread from an affected person to others around him/her.

ROLES AND RESPONSIBILITIES OF DEPARTMENTS

LEAD DEPARTMENTS

Irrigation Department

Punjab's irrigation infrastructure consists of 14 Headworks and Barrages that generate 21 different Main Canals. These Canals along with their branches run almost 4000 miles to deliver water to more than 2000 distributaries and minor canals. This vast network of water channels delivers this resource to 20 million acres of irrigable land in the Province.

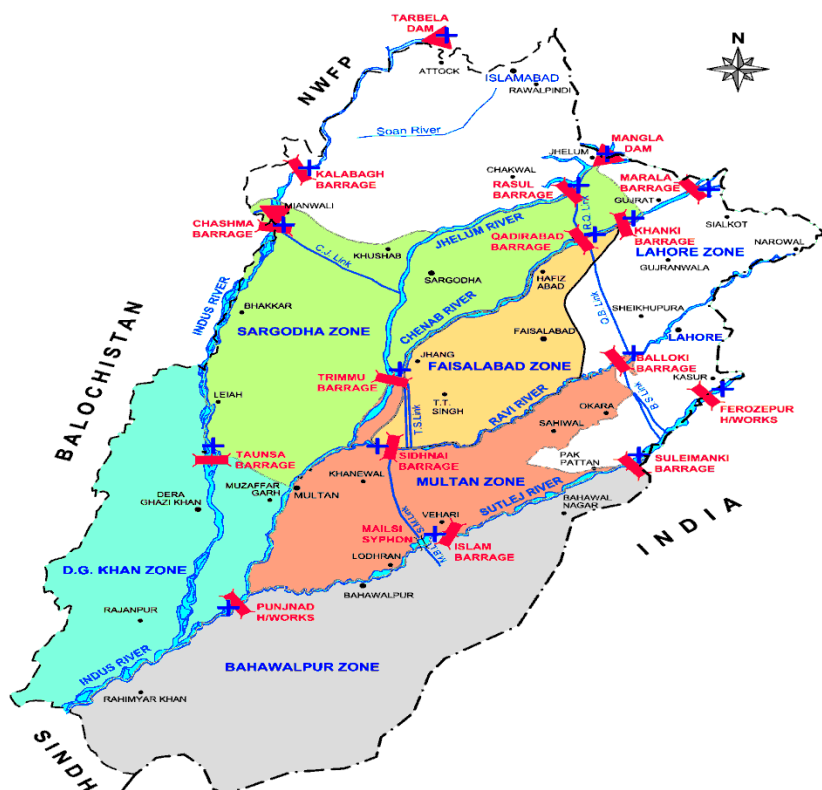


Figure 6: Headworks & Barrages in Punjab

RIVER	LENGTH OF RIVER (K.M.)	LENGTH OF BUNDS	SPURS / STUDS (NO.)
INDUS	547	811	131
JHELUM	363	155	43
CHANAB	731	1330	309
RAVI	694	630	127
SUTLEJ	515	406	30
TOTAL	2850	3332	640

Table 7: Length of embankments

The Irrigation department continuously monitors the water pressure in the major water channels of the Province. In case of rising discharge rates, the Irrigation department issues early warnings of potential floods or canal breaches through media, TV cable operators, police wireless network etc. The Irrigation department's flood response duties include protection of barrages, settlements, canals, bunds, spurs and communication infrastructure such as railways, highways etc. The Irrigation department monitors the vulnerable embankments throughout the Province. This is an enormous task as the embankments run for more than 3,300 kilometers throughout the Province.

The irrigation network of Punjab is divided into six different zones, each headed by a zonal chief. Each zonal chief prepares a flood fighting plan and submits it to the Chief Engineer, Drainage and Floods. The Chief Engineer reviews the zonal plans and prepares a comprehensive contingency plan for the entire department. The Chief Engineer (Drainage and Floods) mobilizes the Executive Engineers (XEN) for the inspection of flood works. Inspections usually result in the identification of damages to embankments or the encroachment of various people. The Irrigation department has to work in coordination with other civil authorities to take care of the encroachments on embankments and spurs. The Irrigation department maintains a close watch on the discharge rates in the major water bodies and for this purpose, the department has to ensure the functionality of gauges etc. The irrigation department must also maintain a state of readiness and so the department ensures the replenishment of stones and other flood fighting material. Stones can be used to fill breaches or reinforce embankments and so they must be stocked prior to the monsoon season. The Zonal offices also maintain a reserve stock of stones as depicted below.

Table 8: Sample template of stone procurement in 2013

Zone	Sanctioned Stone Limit	Available Stone	Balance stone Required	Cost of balance stone
	(Lac Cft.)	(Lac Cft.)	(Lac Cft.)	(M.Rs)
Sargodha	89.43	40.21	49.22	173.530
Lahore	97.80	27.80	70.00	212.000
Bahawalpur	45.08	32.97	12.11	69.112
D.G.Khan	168.11	67.98	100.13	150.460
Faisalabad	45.28	31.49	13.79	54.420
Multan	56.60	41.78	14.82	38.145
Total:-	502.30	242.23	260.06	697.667

The Irrigation personnel are deputed at head works and vulnerable points for timely warning. These personnel are equipped with wireless sets (base & mobile). The discharge rates and other relevant information communicated by these personnel is delivered to the Flood Warning Center at –Jail Road, Lahore. The Police Telecommunication Department Punjab assists the Irrigation department to establish the wireless network at vulnerable points. Police Telecommunication Department installs HF, VHF base sets at all the Barrages, H/Works, Bridges and Nullahs. The irrigation department also coordinates with the Indian Government to receive information on discharge rates in the Indian Territory. The Indian officials communicate the discharge of Ravi below Madhopur, Chenab at Akhnoor, and Sutlej at Bhakra dam.

The Irrigation department classifies floods into the five categories of low, medium, high, very high, and exceptionally high. The following table documents the designed capacities of rivers and the discharge rates for different types of floods

Table 9: River Discharge Rates

River	Gauge Site	Designed Capacity (lac Cs)	Flood Limits in Lac Cs.				
			Low	Med:	High	Very High	Exp. High
INDUS	Kalabagh	9.5	2.5	3.75	5	6.5	8
	Chashma	10	2.5	3.75	5	6.5	8
	Taunsa	10	2.5	3.75	5	6.5	8
JHELMUM	Kohala	12	1	1.5	2	3	4
	Mangla	10.6	0.75	1.1	1.5	2.25	3
	Rasul	8.5	0.75	1.1	1.5	2.25	3
CHENAB	Marala	11	1	1.5	2	4	6
	Khanki	8	1	1.5	2	4	6
	Qadirabad	9	1	1.5	2	4	6
	Trimmu	6.45	1.5	2	3	4.5	6
	Punjnad	7	1.5	2	3	4.5	6
RAVI	Jassar	2.75	0.5	0.75	1	1.5	2
	Ravi Syphon	4	0.4	0.65	0.9	1.35	1.8
	Shahdara	2.5	0.4	0.65	0.9	1.35	1.8
	Balloki	2.25	0.4	0.65	0.9	1.35	1.8
	Sidhnai	1.5	0.3	0.45	0.6	0.9	1.3
SUTLEJ	G.S.Wala	10 ft.	19.5	21.5	23.3	25.3	
	Suleimanki	3.25	0.5	0.8	1.2	1.75	2.25
	Islam	3	0.5	0.8	1.2	1.75	2.25
	Mailsi Syphon	4	0.75	1.1	1.5	2.25	3

Table 10: Flood Limits of Nullahs

Nullahs	Gauge Site	Flood Limits in Cusecs				
		Low	Med	High	Very High	Exp. High
Bein	Chak Amru	5,000	10,000	20,000	30,000	35,000
Deg	Q.S.Singh	3,600	7,500	15,000	25,000	36,000
Aik	Ura	2,000	9,000	13,000	16,000	33,000
Basantar	Narowal	2,500	4,100	7,500	11,600	17,800
Palkhu	Wazirabad	2,000	30,00	5,000	25,000	26,000

Discharge rates have crossed the designed discharges a few times in the recent past. Water either over flows or breaches the water channel when the flow discharge exceeds the designed discharge. Dates when the flow discharge exceeded the design discharge are shown in the following table:

Table 11: Peak flows in rivers

River	Gauge Site	Designed Capacity	PEAK FLOOD FLOWS (Discharge. In lac Cs.)			
			2012	Ever Recorded		
INDUS	Kalabagh	9.5	13.7.12	2.53	30.7.10	10.36
	Chashma	10	14.7.12	2.76	1.8.10	10.39
	Taunsa	10	20.7.12	2.11	2.8.10	10.85
JHELMUM	Mangla	10.6	5.8.12	0.15	10.9.92	10.9
	Rasul	8.5	5.8.12	0.31	10.9.92	9.52
CHENAB	Marala	11	5.8.12	1.16	26.8.57	11
	Khanki	8	5.8.12	1.86	27.8.57	10.86
	Qadirabad	9	5.8.12	1.81	11.9.92	9.48
	Trimmu	6.45	8.8.12	0.42	8.7.59	9.43
	Punjnad	7	10.8.12	0.16	17.8.73	8.03
RAVI	Jassar	2.75	6.8.12	0.15	5.10.55	6.8
	Ravi Syphon	4	6.8.12	0.37	6.10.55	6.59
	Shahdara	2.5	6.8.12	0.37	22.9.88	5.76
	Balloki	2.25	6.8.12	0.17	28.9.88	3.99
	Sidhnai	1.5	6.8.12	0.03	2.10.88	3.25
SUTLEJ	Suleimanki	3	13.8.12	0.05	8.10.55	5.98
	Islam	4	16.8.12	0.04	11.10.55	4.92

Time lag is the amount of time water takes to reach from one point to the other. Disaster response is often planned in a severe time constraint. If a very high flood is recorded at Tarbela, then according to time lag calculations, the Government only has 24 hours to take preventive measures at the Kalabagh dam. Flood would reach Kalabagh dam within 24 hours. The following table provides time lag for all major sites where the discharge is measured:

Table 12: Time lag

Site	Designed Capacity (Lac Cs)	Distance (K.M.)	Time Lag (Hrs.)
<u>RIVER INDUS</u>			
Tarbela Dam	6.5 (main spillway) 8.5 (auxiliary spillway)		
Kalabagh Barrage	9.5	169	24
Chashma Barrage	9.5	58	12
Taunsa Barrage	10	237	60
Guddu Barrage	12	139	30
Sukkar Barrage	12	160	42
Kotri Barrage	8.75	461	144
<u>RIVER JHELM</u>			
Mangla	10.6		
Rasool Barrage	8.5	66	9
<u>RIVER CHENAB</u>			
Marala Barrage	11		
Khanki H/W	8.5	56	12
Qadirabad Barrage	8.07	30	7
Trimmu Barrage	6.45	214	72
Punjnad H/W	7	257	78
<u>RIVER RAVI</u>			
Madhopur			
Jassar Bridge	2.75	94	8
Ravi Syphon	4	73	18
Shahdara Bridge	2.5	24	8
Balloki H/W	2.25	63	24
Sidhnai Barrage	1.5	198	78
<u>RIVER SUTLEJ</u>			
Ferozepur H/W	4.5		
Suleimanki H/W	3.25	126	24
Islam H/W	3	99	72

Excessive water pressure can rupture the embankments or levees of a water channel and therefore Irrigation department's foremost priority is to release excessive pressure by diverting additional water out of a threatening channel. Irrigation department maintains 19 breaching sections throughout the Province. These breaching sections are vast land areas; dug few feet to store excessive water. A threatening increase in water levels can be managed by diverting excess water into the breaching sections.

Total No. of Breaching Sections in Punjab	= 19 Nos.
➤ Related to Punjab Irrigation Department (PID)	= 13 Nos.
➤ Related to Railway Department	= 4 Nos.
➤ Related to Punjab Highways Department /NHA	= 2 Nos

As the name suggests, land areas dedicated to store excess water are filled by breaching a section of the threatening water channel. This breaching is conducted under the supervision of a committee consisting of Irrigation department's Chief Engineer and Executive Engineer, Additional District Collector, Additional Superintendent and a senior army officer. The Irrigation department always discourages encroachments in vulnerable areas such as river beds, bait areas and ponds etc.

The Irrigation department receives, collects, and maintains all information related to river discharges and flood situation in Punjab. The Irrigation department utilizes gauges and sounding rods to keep a track of the discharges in rivers. In case, the discharges increase beyond a safe threshold, the department sets up a Flood Emergency Cell that manages the continuous monitoring of vulnerable areas. The Irrigation department identifies weak points in embankments, and gets them repaired before the flood season. The department officials setup camps at all sensitive points of the embankment in order to monitor them on continuous basis. The Irrigation department compiles an inventory of heavy machinery and vehicles that can be used to repair damaged embankments in times of disasters. This department also possesses a list of suppliers and transporters of clay, sandbags, bamboos, stones, and construction material. All breaches are filled with the abovementioned materials. The latest assessment of the disaster, along with the remedial measures taken, is communicated to PDMA's 3C on a regular basis.

Irrigation department's foremost responsibility is the inspection and repair of flood protection bunds / embankments. Along with that the department has to continually monitor the discharge rates in major water channels. The department strives to remove all encroachments or debris from the en-catchment areas of water channels. These initiatives restore the original discharge capacity of the river. The department also procures and stores explosives for the opening of breaching sections whenever needed. The Irrigation department plays a lead role in the strengthening of all vulnerable embankments.

HEALTH DEPARTMENT

Government of Punjab is providing primary as well as tertiary health care services throughout the province with infrastructure of 2,456 Basic Health Care units, 290 Rural Health Centers, 81 Tehsil HQs, 36 District HQs and 19 Teaching Hospitals. The public sector health delivery system is composed of four tiers and it will continue to provide services at these four tiers throughout the onset of a disaster:

1. Outreach and Community Based Activities, which focus on immunization, sanitation, malaria control, maternal and child health, and family planning.
2. Primary care facilities include BHUs, RHCs.
3. THQs and DHQs provide inpatient and outpatient care.
4. Tertiary care hospitals located in the major cities for more specialized care.

Health Department's foremost priority is to provide first aid to the injured people and arrange evacuation of serious patients to the hospital for further assistance. The Health department shall create static camps and mobile health teams for prevention and control of communicable disease, immunization against vaccine preventable diseases, provision of essential drugs, treatment of common ailments, nutritional support and safe water supply, and awareness about common health problems. The static camps and mobile health teams would be equipped with the right tools and medicines. The Health department would make a roster of all medical officers and paramedics that would be deployed to these camps and teams.

An emergency control room will be established in the office of Directorate General Health Services and a representative of this emergency control room would be designated to PDMA's 3C. Purpose of the control room is to collect information from the ground level and disseminate it to the concerned quarters. The Health department would allocate medicinal and other resources to maintain sufficient stocks in the hospitals that fall in the area hit by the disaster. A camp office of the Directorate General Health Services would be setup in the field. An advance supply point of medicines and other logistics would be established at a safe population center near the disaster hit area. Additional resources would be mobilized from nearby hospitals, and medical colleges. The Health department would also coordinate with international organizations such as WHO and UNICEF to streamline the relief services such as the provision of medicines, immunization, and nutrition etc.

The Health department would carry out extensive disease surveillance in the disaster hit area through the Disease Early Warning System. The department would mobilize and deploy medical teams and paramedic staff for rapid assessment and quick response in the affected areas. Acute Respiratory Infection, Diarrhea, Malaria and malnourishment are common medical issues that are observed in most of the disasters. The Health department would be well equipped to respond to the onset of such medical issues. The Health department would report on the current status of surgical equipments, human resource, vehicles, ambulances, and medicine stocks, at hospitals both within the affected areas and in its vicinity. The Health department would provide emergency health kits, vaccines, safe delivery kits high energy biscuits, micronutrients and collapsible hospitals to health care providers in or around the area hit by the disaster. The National Disaster Management Authority has designated WHO as the key organization that will fill the gaps in the supply of medicines, rapid diagnostic kits, and vaccinations etc. The Health department would also coordinate with UNICEF and WFP to ensure the supply of nutrition supplements such as energy biscuits in areas affected by the disaster. The department would coordinate with community female health workers to assign health related task in emergency response. Additionally, the department would draw up list of CBOs/NGOs and other social welfare organizations working in health sector in the district and ensure their participation in emergency response.

A Health and Nutrition Cluster for overall management and oversight of Health department's disaster response would be formed at the Directorate General Health Services. This cluster would comprise the Director General of Health Services, Directors of Program on immunization, Communicable Disease Control, and Management Information System. The Provincial Coordinators of National Program on Primary Health, and Maternal / Neo Natal Child Health, would also participate in the Health and Nutrition Cluster. This cluster would coordinate their activities with the Provincial Disaster Management Authority and would lead the provincial

control room for over all guidance and proper mobilization of resources. Upon declaration of an emergency by PDMA, the Health department would mobilize its resources according to this plan.

Monsoon flooding is the most threatening disaster for Punjab. The Health department would ensure prepositioning of two weeks of reserve stocks of medicines etc before the start of the monsoon season. The department would then continually monitor the consumption of these stocks and would replenish them on an ad hoc basis. The department has employed a logistics support system for efficient monitoring of required medicines and kits. The department has already prepared a list of essential medicines that are required in flood like situations. In case the medicine stocks or even the infrastructure is damaged due to floods, the department would draw up a plan for early recovery of health infrastructure and service delivery.

The Health department would also engage medical colleges to create Emergency Response Teams. These teams would comprise specialists such as physicians, pediatricians, obstetricians, gynecologists, lady health workers, public health specialist, pharmacist, bacteriologist and epidemiologist. Health department would coordinate with UNFPA to deliver reproductive health kits in areas where women and children are vulnerable to further damages. The Reproductive health kits would contain various medical instruments and medicines to respond to gender based violence and treat communicable infections. The Minimum Initial Service Package (MISP) developed by UNFPA and advocated by RAF is one example of the reproductive health kit that should be distributed to pregnant women. The department would also develop easy to understand and culturally appropriate; hygiene messages for promoting better hygiene practices among mothers and children.

COMMUNICATION AND WORKS DEPARTMENT

The C&W Department is responsible for installation and maintenance of the communication infrastructure such as roads and bridges. The C&W department takes steps to ensure speedy repair and restoration of transport links. The department dumps stone boulders to avoid erosion at cross drainage structures and bridges. Sandbags are placed along road stretches that might be inundated due to excessive water accumulation. The department coordinates with the Police Telecommunication department to set red flags and berm indicators to identify danger zones. In case the communication infrastructures such as bridges are damaged at a certain place, the C&W department restores the infrastructure by putting up bailey, boat and steel floating bridges at affected sites. The Army's similar resources are called in if the moveable bridges of the C&W fall short. The C&W department has divided its geographic jurisdiction in Provincial Highway Circles, each headed by a Superintending Engineer. The Superintending Engineer would be responsible for the disaster response in his particular area. The Chief Engineers would be overall in-charge at the provincial level and would issue necessary instructions to the sub centers or highway circles for safeguarding the communication infrastructure. The Executive Engineers In-charge would lead the local response efforts and deploy equipment such as torches, lamps, red lights and even the steel floating and bailey bridges. The C&W department would coordinate with the Police and Transport department to prepare the alternative route plan to guide commuters to roads that are still open and safe for thoroughfare. Planning alternative routes would be based on educated estimates of the volume of traffic that would flow from the new routes. All efforts would be made to avoid

diversion of a large mass of vehicles to narrow or damaged roads. The position of roads and alternative routes would be informed to the general public through, press, radio and TV.

In case a particular road or bridge is damaged by the disaster, the Sub Divisional Officer along with Executive Engineer In-charge would visit the affected site and report the extent of the damage and possible remedial measures to the Superintending Engineer and Chief Engineer. The Executive Engineer would then inspect the possibility of diverting traffic on other roads and would impose speed and load restrictions on roads that are susceptible to any damage. In case of a breach or damage to road infrastructure, The Sub Divisional Officer will construct barricades and warning on both sides of the road. The Executive Engineer (XEN) would restore traffic on the road by erecting temporary bridges at the affected sites. The C&W department possesses five bailey bridges and six floating or boat bridges. The XEN would also provide the equipment required for immediate restoration work, for e.g. picks, axles, shovels, lanterns, torches, thick jute ropes, and empty cement bags etc. In case the road is blocked by a landslide or falling debris is threatening ongoing traffic, the Sub Engineer and Road Inspector will blast the land mass with explosives and clear the rest of the debris with heavy machinery or manual labor. The Communication and Works department also assists the Irrigation Department and Army with the opening of breaching sections.

LIVESTOCK & DAIRY DEVELOPMENT DEPARTMENT

The Livestock Department has to save animals and poultry population from any direct injuries or fatalities and infectious diseases during and after the disaster. The Livestock department would set up mobile veterinary camps and exercise vigilance about disease outbreaks in animals. The department would coordinate with Transport and other relevant departments for rescue operations particularly involving large animals such as cattle. The District Livestock Officers would arrange for the transport required to rescue or evacuate large animals from vulnerable areas. The Director of Animal Disease Reporting and Surveillance will lead the disaster response efforts of the department. The department will mobilize mobile veterinary units to provide immediate medical assistance to injured animals. The Livestock Department would mobilize teams from veterinary hospitals and universities such as University of Veterinary and Animal Sciences in Lahore. About 4,800 animals died during the floods of 2010 and so an immediate and fast response of the Livestock department is absolutely imperative.

The department would conduct a rapid assessment of damages to livestock and provide financial and technical resources to the district livestock departments for immediate provision of medical and material relief. The department would initiate the provision of fodder, de-worming medicines and vaccines for the animals in disaster situations. The department would also ensure a regular supply of feed and fodder to help the livestock sustain hardships that a disaster brings. The department would coordinate with the local feed mills to fulfill any short comings in concentrated feed and wheat straw. A reserve stock of feed and fodder would also be maintained to cover any unforeseen shortage. The four Government owned feed mills at Bohadar-Nagar, Bhuneikay, Rakh Dera Chahl and Kharimourat would provide concentrated feed during the shortage that might arise as the consequence of a disaster. Livestock that survive a prolonged drought would be administered fodder and feed that provides high nutrition. The department can make arrangements for delivery of animal feed on subsidized rates in

emergencies such as droughts. The department would also oversee procurement and replenishment of reserve stock of medicines, vaccines and flood fighting mission. The District Livestock Officers would spearhead the vaccination of vulnerable livestock. The Livestock department would mobilize Assistant Disease Investigation Officers (ADIO) for immediate deworming, treatment and first aid. The ADIOs would manage the disease diagnostic labs in various districts of Punjab and they would be responsible for utilizing the resources of these labs in the local disaster response. The Artificial Insemination Technicians would provide paramedical support to the ADIOs. Human resource from neighboring areas would also be diverted to the affected areas.

DEPARTMENTS RESPONSIBLE FOR SEARCH, RESCUE AND EVACUATION

Rescue 1122 Services

The Punjab Emergency Services (PES) also known as Rescue 1122 has been established for immediate response to emergencies, sophisticated rescue, and provision of emergency medical treatment to persons affected by emergencies. PES evacuated about forty thousand victims from the flood inundated areas during the floods of 2010. PES is trained in sophisticated search and rescue technique and is Punjab's foremost rescue agency. The agency possesses multipurpose rescue vehicles that contain essential rescue equipment such as heavy duty hydraulic cutters, spreaders, and electronic search and rescue devices. Apart from the Rescue vehicles the agency also possesses Ambulances, Fire fighting vehicles, Water Bowsers, Water Rescue vans, Recovery vehicles, Boats, OBM Engines, Life Jackets, Rings and Buoys etc.

Government of the Punjab has notified a Disaster Response Force (DRF) under the PDMA comprising Rescue 1122, Civil Defence, and the District Disaster Coordinators. This force would comprise of 7,500 personnel of Rescue 1122, trained in water rescue and creation of Community Emergency Response Teams. The DRF would be under the operational command of Rescue 1122. PDMA has already provided 210 boats to Rescue 1122 for rescue and evacuation efforts.

In case of a disaster, PDMA would mobilize the Disaster Response Force and the Community Emergency Response Teams (CERTs). The Disaster Response Force would carry out sophisticated search and rescue and evacuate affected and vulnerable people. To manage the high number of operations during a disaster, Rescue 1122 would establish a Provincial Monitoring Cell at its headquarters in Lahore. This monitoring cell along with Rescue 1122's command and control room would be operational around the clock and would also be linked with the 3C at PDMA through video conferencing and radio link.

Rescue 1122 assists the District Administration in setting of tent villages and provision of emergency medical treatment to the victims of a disaster. The District Emergency Officer manages and leads the rescue and evacuation efforts in his jurisdiction. He is responsible for the deployment of fire fighters, cordoning of hazardous areas, provision of first aid and medical treatment, immediate search and rescue of victims and management of the pre-hospital emergency system. Rescue 1122 has established a comprehensive pre-hospital emergency management system with emergency ambulances, rescue and fire services, and

community emergency response teams. Rescue 1122 is well trained in setting up medical camps for provision of emergency medical treatment. These camps are setup by Rescue 1122's doctors and paramedic staff. During the floods of 2010, the department setup 52 camps in flood prone areas and provided treatment to thousands of patients. First aid was provided to more than five thousand patients. Apart from immediate treatment, medical experts of 1122 also impart health education to help locals prevent themselves from water borne diseases such as Diarrhea, Dysentery, and Typhoid fever. Rescue 1122's training academy conducts a four months basic rescue course which includes emergency medical treatment, rescue and firefighting. Apart from the basic course, the academy also trains in sophisticated courses such as Medical First Responder and Collapsed Structure Search.

CIVIL DEFENCE

The Directorate of Civil Defence assists in the evacuation of people and their household properties from the disaster affected areas. The Directorate engages a large number of volunteers for search, rescue, evacuation and disbursement of relief goods. These volunteers generally known as "Razakars" are usually trained in swimming, rowing, handling of OBM, basic rescue techniques, first aid etc. Razakars build their skills in simulation and mock exercises. The Civil Defence collaborates with Punjab Emergency Services (Rescue 1122) in sophisticated search, rescue and evacuation operations. The District officer (Civil Defence) organizes mobile squads of Razakars and scouts in collaboration with local wardens and scout organizations to assist local administration/army, Rescue 1122 in evacuation and other disaster response activities. Razakars manage and utilize all boats, oars, out board engines, generators, search lights, and other lifesaving equipment. Razakars that know how to swim and dive are utilized for specialized water rescue. Razakars provide first aid to injured victims before transporting them to hospitals. These volunteers also assist the fire brigade in rescue, and Health department's representatives in the treatment of injured victims. The Civil Defence also assists the District Administration and Police in setting up information system for members of public, whose relatives, friends and family members are missing.

HOME DEPARTMENT

The Home department has four major implementation arms for disaster management activities: Police Telecommunication Department, Police Operations Department, Civil Defence, and Rescue 1122. The Police Department would follow the Standard Operating Procedures issued for a disaster situation. One of the foremost objectives of this department is to make arrangements for traffic control, planning alternative routes and maintaining law and order during evacuation and in relief camps and godowns of relief goods. The primary objective of the Police is to save human lives, and to protect vital infrastructure, installations, machinery, equipments, and stock of resources, from damages caused in the aftermath of a disaster. The department has to control crime against property. The wireless system and control rooms already established by the Irrigation department would be networked with the Police control. The police setup warning posts in and around all hazardous areas. Most of the police staff active in the field would be equipped with mobile wireless sets. DSP/Tele (TP) and Inspector Workshop will be responsible for the supply of these wireless sets to different areas and these officials would also work for prompt repair of all nonfunctional equipment. The police should lay

special emphasis on ensuring the security of the personnel of the international humanitarian organizations, donors, and embassies, visiting the affected areas. The police should ideally also be trained in search and rescue, evacuation, first aid and emergency response in collaboration with Civil Defence and Rescue 1122. The police would support district administration in evacuation of affected people and transport to camp sites. The police personnel must maintain law and order situation at the camp sites, relief centers, distribution points and shelter sites. The Police would ensure proper security for godowns housing relief goods and would assist local administration to stop theft and misuse of relief material. The police would also check and deter acts of theft and misappropriation. The department has to keep close watch for any criminal and anti-state activity in the area activities.

The police would draw up security plan for evacuation routes, warehouses, relief camps, relief centers, distribution points and public/private property for any potential disaster in the district and share it with DDMA. The Home department will setup a Provincial Crisis Management Cell for the coordination of the implementing arms of the Home department. The police has to ensure the security of all key points such as siphons, bridges, link drains etc. All police mobiles would be equipped with extra torches, rubber tubes, shovels, snake bite kits, and life buoys etc.

The Police would plan an active role in the relief disbursement by assisting in the supply and distribution of food and other relief items. An extremely courteous attitude is expected of Police at sites where relief is disbursed in a usually unorganized manner. The primary objective of a police officer deployed to help the affected is to protect the lives and property of the affected population, maintain law and order in the relief camps and godowns, and help the civil administration in the transport of relief goods and medicines. All the police personnel engaged in disaster response must be afforded a proper supply of water, food, and boarding.

SP/Mobile will spread head the patrolling of affected areas and evacuation routes. The SP would plan a shift wise system of patrolling duties to maintain law and order around the clock. Patrolling must be provided on the designated routes of relief supply. The Police would assist the district administration and Rescue 1122 in the evacuation of people at risk. The Police might would also be engaged in forced evacuations in case a disaster becomes imminent and local communities continue to underestimate the destruction that a disaster might cause. In case heavy duty electric lines get ruptured and fall down, the Police would cordon the area before informing WAPDA to take care of the issue.

The Police manages traffic during a disaster situation and develop alternative traffic management plan to avoid inconvenience. The Police has to coordinate with the C&W, or Highways Departments to direct traffic towards alternative routes.

The Police has to provide and install reflective lights / reflectors around the scene of incident at night, to facilitate working of rescue workers, fire fighters etc. The Police may also have to coordinate with the C&W Dept for this. The Police Telecommunications branch will provide the communication support to PDMA, Irrigation department or other departmental personnel responsible for patrolling the vulnerable areas. The Police Telecommunication department would deploy its personnel to the affected areas. These teams would be equipped with high frequency sets, ultra high or very high frequency base sets, battery chargers etc.

The department would create warning posts in key locations related to a disaster, for example constables would be deployed at vulnerable embankments that can collapse and flood the surrounding areas. HF, VHF and UHF sets would be provided by the department to establish the communication network that is absolutely essential for a well-coordinated response to a disaster.

PAKISTAN ARMY

The Pakistan Army's resources are employed for immediate search, rescue and evacuation. The Army is called in the 'Aid of Civil Power' only when a disaster overwhelms the resources at the disposal of the Government of Punjab. Search, rescue and evacuation are the primary responsibilities of the 'Disaster Response Force' so if the resources of this force fall short, the Army is immediately called in. The Army's setup in Punjab is administratively divided into six Corps with a Corps Commander leading each Corps. The District Coordination Officer of the affected district would request the relevant Army Authorities for aid of Army upon the approval of the Home Department. The Standard Operating Procedure of requesting the support of the Army is to route the DCO's request through Home Department, and the Ministry of Defense. The Ministry would inform the General Headquarters (GHQ) and officers at GHQ would request the relevant Corps Commander to activate the Garrison Officer In-charge and the Brigadier responsible for leading the on ground operations. PDMA has equipped the Army with 850 boats for rescue and evacuation. In addition to the on ground movement, the Army can also provide the necessary air support for reconnaissance, relief and rescue missions. PDMA pays for the maintenance expenditures of the 850 boats mentioned earlier. In the same manner, all of Army's expenditures on disaster response are debited to the requisitioning civil authority.

The Army plays a substantial role in the opening of breaching sections. The Irrigation department is responsible for the maintenance of manageable discharge rates in the major rivers of Punjab. If the water flow exceeds a set discharge rate, the breaching section is opened with the help of explosives and excessive water is diverted into a designated area. The Breaching Section Committee responsible for the opening of the section, contains a military representative, which is usually a representative of the respective formation Headquarters not below the rank of Lieutenant Colonel. In case a disaster disrupts the existing telecommunication channels in a certain area, the Army would spearhead or assist the installation of wireless stations. In case of high floods, the respective Corps Commander would setup a Flood Relief Committee, consisting of but not limited to Commander Corps Engineer, Commander Corps Signals, Chief of Staff, Colonel General Staff, Colonel Administration etc.

ROLE & RESPONSIBILITIES OF DISTRICT DISASTER MANAGEMENT AUTHORITIES

The District Governments are the first line of Defense. Each District Government has prepared its contingency plan that must be followed in letter and spirit during the flood season and in case of a disaster. The District Governments are required to undertake timely action to save the lives and livelihoods of local population. The Districts Government's responsibility is not limited to saving the human life, properties and livestock, it also includes the prevention of epidemic outbreaks amongst both human beings and livestock, to provide timely medical aid to the effected persons and to eventually rehabilitate the affected people. The

District Governments would be ready round the clock for providing timely warning to the people and providing assistance to flood victims with all available means and resources. The District Governments would keep sand bags, baskets, belchas, kasies, and other flood fighting materials ready and available. On receipt of a flood warning, the District Government will immediately convey the warning to all the concerned officers. Upon the receipt of warning, immediate action will be taken in each sector / sub sector for evacuation of the population from the low lying areas to safer places or to Relief Camps established for this purpose. An Assistant Commissioner will ensure that announcements in vulnerable areas are made through loudspeakers of the mosques. Further, the Assistant Commissioner will also utilize the services of the Revenue department. Each Patwari will inform the Numbardar, Headmaster of the School, Imam Masjid and Councillor etc. The District Coordination Officer would decide the strategic direction of District Government's response to a disaster. The tactical operations would be headed by the Additional District Collector (ADC). The ADC would be responsible for coordinating and supervising the disaster control and relief measures in the district. All the districts have notified District Disaster Management Authorities as under.

- **District Coordination Officer (Chairperson)**
- District Police Officer
- Additional District Collector
- Two Elected Representatives
- Two Representatives of NGOs/Civil Society
- Executive District Officer (F&P)
- Executive District Officer (Works & Services)
- Executive District Officer (Health)
- Executive District Officer (Education)
- Executive District Officer (C&D)
- SP Special Branch
- XEn Irrigation
- XEn Public Health
- District Emergency Officer (Secretary)
- District Head of Civil Defense
- Secretary Red Crescent Society
- Administrators of Tehsil Municipal Administrations
- All Tehsil Municipal Officers in District
- Such other District level Officers to be appointed by District Government

In case of a threat of disaster, and especially during the monsoon season, the District Government must establish a Disaster / Flood control room at the DCO's office. The Disaster / Flood Control Room has to maintain updated information regarding the threat of disaster. The District Administration would maintain a regular communication with the Flood Forecasting Division or the staff at a dam up stream in case of a flood. As soon as the Control Room receives any information on the imminence of flooding the administration should immediately arrange for announcements to be made through mosques, police, revenue department and other mobile teams. The District Government would immediately mobilize the equipment flood fighting equipment to tackle the challenges created by a disaster. The District Governments have provided comprehensive lists of flood fighting equipment to PDMA as part of their flood contingency plans.

The concerned Assistant Commissioner would be assigned the duty of setting up Relief Camps at safer places. The relief camps have to be well planned and well organized in all respects. The Districts submit their flood contingency plans to PDMA and each district's contingency plan notifies the location of relief camps. Daily Flood situation reports would be sent to PDMA. The Assistant Commissioners will transmit their reports to the DCO or Additional District Collector who will forward the same to the concerned quarters. The Executive District Officer (Health), and the Assistant Commissioner concerned will ensure the availability of adequate medicines stock for treatments, particularly for snake bite cases at each relief camp. EDO (Agriculture) or Livestock would arrange the supply of cattle feed in case of any disruption in the ongoing supply. Such roles and responsibilities of various officers are explained below:

EDO HEALTH

The Executive District Officer (Health) is responsible for mobilization of mobile units under the command of medical officers, and the provision of necessary vaccines, medicine, antibiotic drugs, ORS and anti-snake biting vaccine in adequate quantities in addition to all other necessary first aid items. EDO (Health) will ensure that adequate number of Doctors and paramedics are posted at each Flood Relief Camp. These Doctors will also be assisted by trained volunteers. He will ensure the availability of life saving drugs at the Flood Relief Camps/nearest Health Centers. The Medical Superintendent of DHQ/THQ Hospital will ensure availability of Doctors and paramedics round the clock in their respective hospitals with necessary medicines. The health facilities including BHUs and RHCs near the flood / disaster affected area will ensure proper accommodation of patients and sufficient stock of medicines. These facilities would regularly report the availability of required medicines. Mobile teams consisting of doctors, dispensers, and sanitary inspectors will be constituted. EDO (Health) will ensure that all dispensaries in the relief areas are adequately equipped with anti-malaria drugs, antibiotics, antiviral vaccines and lifesaving drugs. The EDO (Health) will also ensure preventive and curative measures to prevent epidemic outbreaks in the disaster areas.

EDO AGRICULTURE

The Executive District Officer (Agriculture) will ensure that farmers are provided necessary help and assistance in sowing of Rabi crops on recession of the Flood water. He will ensure that seeds, fertilizers and pesticides are readily available to the farmers affected by the Flood. EDO (Agriculture) will also be responsible of the availability of Toori (Husk), dry and green fodder for the livestock at all relief camps.

DISTRICT OFFICER (LIVESTOCK)

The District Officer (Livestock) will ensure that adequate drugs and Veterinary Officers are available at the relief camps. He would also dispatch Mobile Teams consisting of veterinary officers and assistants. Free vaccination of Livestock will be ensured during the pre-flood season particularly in the vulnerable villages/areas. The District Officer (Agriculture Extension) would assist the DO Livestock for the provision of fodder to the cattle at the relief camps. The Agriculture and Livestock & Dairy Development Departments have to set up stalls / shops for the supply of fodder at the Headquarter of each tehsil in order to meet the need of affected cattle. District Officer (Livestock) shall ensure that adequate stock of vaccine and

serum for cattle disease is available in the veterinary hospitals situated in the affected area. The DO (Livestock) would report the availability of adequate stocks of drugs.

EDO WORKS AND SERVICES AND DO BUILDINGS

The Executive District Officer (Works & Services) will ensure that breaches of respective district roads are immediately repaired. The District Officer (Buildings) will inspect all the Government buildings affected by a disaster. Immediate measures will be taken to carry out repairs of these buildings or if they are too dangerous then notice for their vacation must be issued and the buildings must be declared dangerous.

DISTRICT FOOD CONTROLLER

The District Food Controller will ensure that adequate flour or wheat is available on demand against payment for providing the same to the Flood affected people. The Food controller would also setup a scheme for the opening of temporary wheat ration depots in the areas affected by the disaster. The Food controller would repackage the available wheat in smaller packages of 5-10 Kgs, so that the limited resource can be divided into a greater population. The food controller will initiate the quick preparation of emergency ration packets comprising necessary available food items.

EDO EDUCATION

The school buildings in proximity of the flood affected areas will be used as Relief Camps. The Executive District Officer (Education) will liaison with the respective Assistant Commissioner and ensure presence of Class-IV employees, Scouts, Girls Guides and volunteers to assist the relief operations

TEHSIL / TOWN MUNICIPAL ADMINISTRATION

The Tehsil / Town Municipal Administration (TMA) plays an important role of providing clean drinking water facilities, and hygienic atmosphere in and around the relief camps. In addition to these responsibilities, TMA is also responsible for the dewatering of flood/rainy water from inundated areas within minimum possible time. The Tehsil / Town Municipal Administration would provide any assistance to the District Government for management of the relief camps and other relief operations. Preparedness against urban flooding is the prime responsibility of the TMA. Each TMA of Punjab has prepared its contingency plan that must be followed in letter and spirit during the flood season and in case of a disaster.

The TMAs are responsible for the restoration of water and sanitation facilities in their municipalities. They are also responsible for the disposal of waste or rain water in some cases. The TMAs are equipped with trucks, water bowsers, lorries, tractors, dewatering sets, bulldozers, loaders and dump trucks. All of these equipments are utilized to restore proper sanitary facilities, ensure the delivery of clean water and remove debris or excess water. TMAs mobilize sanitary inspectors along with sanitary workers for cleaning sewer lines and drains, and spraying of insecticides. The TMAs also make efforts to drain out the rain water from low lying areas. The excess water is drained into sewer lines or agricultural water courses. The TMAs employ de-watering sets to remove excess water. All TMAs are required to ensure the

maintenance of all dewatering sets prior to the monsoon season. The TMA maintains a list of all the choking points where rainy water accumulates as a result of heavy storms.

The TMA would store clean drinking water in overhead reservoirs and tube wells. This water would be chlorinated fortnightly for the hygienic supply to public. The clean drinking water would be disbursed to the affected areas with the help of water bowsers. The Tehsil Officer Infrastructure and Services would direct a Flood Control Center that has to be established in case that tehsil is seriously affected. In case of a high flood that requires people to displace, the TMA should assist the migration of the affected people in all possible manners.

The Tehsil Municipal Officer (TMO) is also responsible for the survey of dangerous buildings and the issuance of notices to the owners of such building to vacate the dangerous site. The TMO also ensures the availability of Para-medical staff along with first aid kits at each dispensary/emergency center. During the disbursement of relief, the local TMA would depute manpower for the distribution of food and essential commodities among evacuated people. The TMA can also assist in the arrangement of food, clothes, and clean water etc. in the relief camps.

ADDITIONAL DEPARTMENTS

PUBLIC HEALTH ENGINEERING DEPARTMENT (PHED) & WASAS

The Public Health Engineering Department (PHED) is responsible for provision of proper and clean water and sanitation facilities. Disaster can disrupt the existing water and sanitation system putting the affected population at risk of numerous medical issues. In post disaster scenarios, there is usually a high risk of sewer water mixing into clean water channels in areas that are totally inundated. This mixing can lead to epidemic outbreak of various diseases. The department develops plans to protect water from contamination by continuous water treatment and health education awareness in the disaster affected areas. The department conducts an assessment of water and sanitation schemes damaged by a disaster and prepares plan for fast track rehabilitation. The PHED department deploys teams to set up temporary new water supply system for affected population. The Water and Sanitation Agencies (WASAs) are agencies within the PHED department and exist in the five City District Governments of Punjab. WASAs must take all possible measure to avoid the mixing of contaminated sewer waste into delivery channels of potable water. WASAs can clear the inundated areas by employing heavy machinery such as Jetting units, Suction units, Dump Trucks, Backhoes, Front end loaders, Excavators and Cranes. To avoid the overflow of sewer lines, WASAs must ensure the regular dredging and de-silting of trunk and collector sewers. The dewatering sets should be fully functional prior to the monsoon season and the ponding areas should be inspected for any problems. WASAs should also arrange spare manhole covers to immediately respond to any such need. The agencies should reduce the chances of contamination by identifying and rectifying the leakages in water supply and sewer line. In case of a contamination in a certain area; WASAs should conduct the disinfection of water through chlorination or use of bleaching powder. WASAs should then regularly monitor the water contamination by testing samples at PHED's water testing laboratories. PHED must conduct random water quality testing on regular basis to ensure the minimum standards of the quality of water. The department must continually

ensure that the sanitation system is functioning in relief camps and it should make proper arrangements for drainage in the camps/temporary emergency shelters.

PHED would provide PDMA with a list of public buildings that can be used for temporary shelter in emergency. PHED will coordinate with the DDMA's to get a list of public buildings in the district and at tehsil levels which can be used for emergency shelter. The department would also make sure that proper water and sanitation facilities are available therein. PHED would set up community water supply systems in relief camps with water treatment system. The department is also responsible for the restoration of sewerage systems and sanitary conditions in affected areas. The department conducts rapid assessment of water and sanitation in the affected areas and provides safe drinking water to the affected population in emergency situations.

EDUCATION DEPARTMENT

The Education Department would establish relief camps and distribution points at schools, and would mobilize the teachers and students to help the affected population. The establishment of relief camps for longer durations can create educational shortcomings in the residents of camps and those living around them. For this reason, the Education department would also consider the setting up of emergency mobile schools and provision of teaching material to continue education during the emergency.

The department would compile a roster of the volunteer teachers and students who can be deployed as workforce in emergency response. Teachers and students would also provide voluntary assistance in disaster assessment and distribution of relief goods in the affected areas. Education department would also prepare a list of Government schools and colleges that may be used for relief camps. The department would ensure the provision of water and sanitation at schools being utilized as relief camps. The department would conduct an assessment of all the disaster affected schools and those severely damaged would be rehabilitated on a fast track basis.

AGRICULTURE DEPARTMENT

Agriculture Department is responsible for the assessment of standing crop losses. Punjab is overly dependent upon agriculture as a source of income and a large proportion of its population is employed in this sector. Crop losses affect the livelihoods of a majority of Punjabis. Floods disrupt the livelihoods of millions of people and so the Agriculture department has to immediately report on the standing crop losses and help in the prevention of further damages. The department would conduct an initial rapid assessment to assess the damages to the agriculture crops. The department would immediately provide technical advice to the farmer community to protect standing crop from any further damages. The Agriculture department would also provide farm machinery wherever it might be needed to protect the crops. The water in heavily inundated farms can at time be drained to other areas by removing earth from certain critical areas. The 'Field' section of Agriculture department would provide bulldozers and other such machinery to ensure dewatering of inundated farms. The entomologists of Agriculture department would also exercise vigilance about pest attack on the crop and take effective measures against it. The humid climate of post monsoon season is extremely conducive to the breeding of various insect species and it is fairly common to observe

high pest attacks in the monsoon season. The department would furnish its advice to help farmer cope with the increased pest population.

LOCAL GOVERNMENT & COMMUNITY DEVELOPMENT DEPARTMENT

The LG & CD department would ensure the availability of proper equipment and human resources that are required to dispose the waste, and deliver clean water in the disaster affected area through the TMAs. Prior to the onset of a disaster such as floods, the department would ensure that the TMAs undertake a comprehensive de-silting campaign in the tehsils and the urban areas of Punjab. In case the water accumulates in a specific area, this department would arrange dewatering sets to lower the economic losses due to inundation. If the level of inundation exceeds a certain threshold, the department would direct the TMAs to establish an Emergency Response Squad comprising sub-engineers, electricians, de-watering sets, and their operators. The LG & CD department would also ensure that TMAs proper solid waste management to avoid the accumulation of excessive waste that can hinder the rescue or relief services.

A natural disaster can cause disruption in both water and drainage channels. In the worst case scenario, the waste can flow out of the drains and into the water supply. This issue is commonly observed during flooding. The mixing of waste can engender an epidemic disaster due to water borne diseases. In case of contamination the LG & CD department would conduct awareness activities on water purification in the affected rural areas. The department would also have to coordinate with International and national non-Government agencies working on water/sanitation activities. The Local Government has to reduce the chances of such medical emergencies by keeping a close watch on the sanitary conditions of the disaster affected area. The Chief Officer for sanitation would dispatch sanitary mates and sanitary inspectors with the required dewatering and de-silting equipment. Their primary objective is to monitor disposal stations and main drains. They would also identify and eliminate the critical ponding points where the excess water would have accumulated. This department would maintain a close coordination with both Water and Sanitation Authority and Solid Waste Management. The Local Government department has the ability to mobilize heavy duty machinery such as tractors, front end loaders, sewer sucker, jetting machines, water bowsers, dewatering sets and generators etc. The Tehsil or Town Municipal Administration's emergency squads must coordinate with the teams of Water and Sanitation Agency and Solid Waste Management Department in all de-silting and dewatering activities.

SOCIAL WELFARE DEPARTMENT

The Social Welfare department has to coordinate with all CBOs/NGOs, INGOs, UN organizations, and Rural Support Networks to provide relief to the victims of a disaster and rehabilitate them. This department must maintain a list of all NGOs and donors articulating their key operations, thematic working areas and key human resources. The Social Welfare department has compiled guidelines on core issues and it can accelerate the adoption of those guidelines by distributing IEC (Information, education and communication) material on child protection, care of separated children, reunification process and care of disabled person in emergencies. The material will be prepared in local language and disseminated widely in affected area.

The Social Welfare department would monitor social protection issues in IDP Camps with a particular focus on the status of women and children. The department would coordinate with the DDMA's to ensure that needs of most vulnerable groups such as minorities, disabled, elderly, and widows are addressed in all possible ways. The department would assist the DDMA's in the management of relief camps, distribution of relief goods and the assessment of damages. The department will also play a major role in child protection by opening Child Welfare Units in the disaster affected areas catering to child victims of gender based violence, psychological trauma and physical harm.

CHILD PROTECTION AND WELFARE BUREAU (CPWB)

The Child Protection and Welfare Bureau (CPWB) will upon receiving an alert designate a representative to the 3C and mobilize resources for setting up temporary centers for provision of services for Separated and Unaccompanied children. It will also run Open Reception Centers for child victims of gender based violence, psychological distress and physical harm. It shall act in accordance with the SOPs on Child Protection during disasters (For details see Annex A).

INFORMATION TECHNOLOGY DEPARTMENT

The IT department would analyze the assessment of damages conducted by various departments to create an easy to use web based interface for Government decision makers, journalists and the general public. The interface developed by the IT department would inform the audience about the extent of damages caused by a disaster, and the remedial measures that have been undertaken by the Government of Punjab.

The Information Technology department would maintain a pool of telecom equipment preferably the satellite/wireless based devices, for the provision and establishment of emergency telecom network in the affected area. The National Telecommunication Corporation (NTC) will cooperate with the IT in this regard. The IT department would deploy a team of pre-trained technical staff that can restore the communication channels and establish new links where the prior channels cannot be restored. This team is well trained in establishing connectivity in a remote disaster stricken area.

INDUSTRIES DEPARTMENT

The Industries department has to ensure the safety of both the industries and the people living in their vicinities. Industries either using a hazardous raw material or producing a hazardous end product require special attention. A disaster can leak the hazardous product to nearby areas or on the contrary a leakage of certain poisonous gas or substance can engender an environmental disaster of substantial magnitude. The industries department would compile a location-wise list of all hazardous industries. All the industries that either consume a hazardous raw material or produce a hazardous end product would be included in that list. This list would be divided into broad types or categories to help articulate industry specific disaster management activities. After the identification of industries dealing with hazardous substance, the department would prepare contingency plans for all of those industries and provide them with equipment such as HAZMAT suits to rescue and evacuate people in case of a disaster at that particular industry. The Industries department would also work in collaboration with the

District Emergency Officer to sensitize and inform the local Rescue 1122 workers about the hazardous substance used in the nearby area and the safest way to deal with it.

Industries department would collaborate with the local industries to organize trainings on disaster preparedness and emergency response for factory workers and owners. Such trainings should be developed based on the hazardous material used at the particular factory. The Industries department has established collaboration with the fire departments in different tehsils or towns. This would help in the immediate deployment of fire fighters in case of fire in an industrial unit. The department would also take steps for the protection of industries from flooding or other natural phenomenon. The department would also take steps to immediately rehabilitate the industries adversely affected by disasters.

ENERGY DEPARTMENT

The Energy department is entrusted with the task of ensuring a regular supply of Petroleum, Oil and Lubricants (POL) throughout the disaster response. Any shortage in POL would jeopardize all response efforts, including rescue, evacuation or relief provision. The Energy department coordinates with the leading Oil Marketing Companies (OMC) to maintain a reserve stock of POL. This department works with Total PARCO, Chevron Pakistan, Pakistan State Oil, and Shell Pakistan to encourage them to store reserve stocks in various geographical regions of the province. The Energy Department has provided PDMA a list of depots where the reserve POL has been stocked. All OMCs take necessary measures in time to maintain reasonable stocks or reserve quantities of fuel and lubricants for a period of one month. The officials of Energy department visit the depots where reserve stocks are maintained to ensure uninterrupted supply of fuel to consumers.

TRANSPORT DEPARTMENT

The Transport Department supervises the Regional Transport Authorities and the District Regional Transport Authorities (DRTA) in all 36 districts of Punjab. These authorities conduct motor vehicle examination and issue road permits and fitness certificates to all transporters. DRTAs are managed by Secretaries and as part of their job, they maintain workable relations with all transport providers in their districts. In case of a disaster, the Secretary of DRTA would coordinate with local transport providers to arrange for transport that would be required for evacuation of people from affected areas. In case of shortfall in transport in a particular district, the Secretary of the adjoining district would mobilize the transporters in his district to assist with the evacuation of people from the affected area. The Transport Department has provided PDMA a list of all privately operated bus stands along with the transporters operational therein. The contact details of all Secretaries of DRTAs have also been provided.

INFORMATION DEPARTMENT

This department articulates the extent of disaster and the measures that Government of Punjab would be undertaking for rescue and relief operations. The information on the extent of the disaster and Government's response would be communicated to all media channels. This department is responsible for collecting information on Government's response from PDMA's 'Command, Control and Communication Centre (3C).

The information department would keep a watch on the sensationalism in the portrayal of disaster facts. All efforts would be undertaken to check and limit any propaganda that defames or ridicules the Governmental response without any proper knowledge of the rescue and relief efforts undertaken by the Government. Constructive criticism of media is immensely important to reorient the Governmental response; hence, the Information department is responsible for differentiating between rightful criticism and baseless negative propaganda that can spread hopelessness at the time of a disaster. The dissemination of information on preparedness and disaster specific safeguards can help save many lives before, during and after a disaster. The Information department would seek media's cooperation in delivering early warnings and information on evacuation routes etc. In case of epidemic disasters, the media can be engaged to relay health messages articulating the means of preventing communicable diseases.

The media inform the unaffected population on the condition of the victims and their basic needs after a disaster. The true picture of a disaster is communicated through it. It also provides information on the relief and recovery efforts of the Government and other humanitarian organizations. The media highlights the gaps in relief and rehabilitation allowing the Government to prioritize its provision of relief services. The Information department would ensure that the news-items relating to a disaster present an accurate picture of the actual position and do not create undue panic. The department would make sure that media is giving the due air time and attention to the Government of Punjab's remedial measures and response efforts. The Information department would continuously communicate the information about the short and long term measures undertaken by different departments for relief and rehabilitation of affected people.

FOOD DEPARTMENT

The Food Department would ensure the protection of Wheat stocks against all sorts of disasters. The stocks piled in flood prone areas would be protected by the construction of embankments or the deposition of sand/soil bags around the stock. In case a wheat stock has been damaged by flood water or rain / dust storms, the department would drain out the water and cover the stock with polyethylene caps or tarpaulin. The department would coordinate with the operational flour mills in the disaster affected areas to arrange a supply of flour that would then be distributed through mobile ration depots setup in areas suffering from malnutrition. In case the stock is partially damaged or fully threatened, the grain would be moved to a safer location. The food department would keep a watch on the market prices of the wheat and should take all possible steps to prevent an exceptional rise in the prices that could result due to the shortage of food after the disaster.

FEDERAL MINISTRIES & DIVISIONS

NATIONAL DISASTER MANAGEMENT AUTHORITY

National Disaster Management Authority oversees the establishment of early warning system and prepares national contingency and post disaster plans. This department sets up a national emergency operation centre and maintains a state of readiness with all equipments in working order. NDMA coordinates with Nongovernment and UN organizations for

sharing of resources and information. NDMA is also responsible for ensuring these organizations the safety and security that they require to work in disaster affected areas. At the onset of a disaster, this department activates the National Emergency Operation Centre which organizes initial assessment of disaster and coordinates all concerned departments to respond with the right amount of resources. This department coordinates with the federal ministries and international organizations based in Islamabad.

MINISTRY OF INTERIOR

The ministry of interior prepares evacuation guidelines for different types of disasters. The ministry is also responsible for the training of police and other security forces in search and rescue operations. The forces mobilized by this ministry evacuate the affected people by transporting them to the camp sites and maintain law and order in the affected areas. The security forces operating under this ministry are also utilized to manage the traffic in the affected area.

MINISTRY OF INFORMATION TECHNOLOGY

The Ministry of Information Technology provides technological support to the Provincial Disaster Management Authority and ensures that private telecommunication service providers develop Standard Operating Procedures to provide communication support in disaster situations. This ministry would also maintain a spare pool of preferably wireless telecom equipment to establish emergency communication networks that are essential for the close coordination of rescue and relief efforts.

MINISTRY OF RAILWAYS

The Ministry of Railways develops a contingency plan to deal with the degradation of railway's moveable and static assets due to natural or industrial disasters. The ministry must install fire extinguisher in all cars of the different railway routes and Railway's staff should be trained in firefighting, bomb-disposal and search & rescue. The vast rail network of this ministry is also utilized to transport relief material from ports to the disaster affected areas. This rail network can also be utilized to evacuate the affected people.

Pakistan has an elaborate railway network which connects almost all main cities in the Provinces of Pakistan. However, no railway network exists in Gilgit- Baltistan, FATA and Azad Jammu and Kashmir. The existing railway system should be judiciously utilized as it can be quickly mobilized for economical transportation of relief supplies including heavy machinery, fuel, boats, building material and affected people. For this purpose, Railways Authorities should maintain a close liaison with NDMA, PDMA's and NLC for smooth execution of transportation of relief goods in an emergency. NLC shall exercise over all control with regard to transportation through railways.

MINISTRY OF WATER AND POWER

The ministry of Water and Power conducts periodic monitoring and inspection of dams and provides telemetric data from rain gauge stations and flood data from Indus River Basin, to the Flood Forecasting Division of the Pakistan Meteorological Department. This ministry also coordinates with the Indian counterpart to remain informed about the water levels in the shared water channels. The Water and Power Development Authority (WAPDA) collects

and transmits rainfall and flood discharge data. This data is collected by Automatic Flood Telemetry Systems maintained by WAPDA.

MINISTRY OF DEFENCE

The Ministry of Defence mobilizes the Armed Forces to provide immediate rescue and relief through massive air and ground efforts. After the immediate response, the armed forces assist the civil administration in setting up camps and tent villages for the affected population. The ministry is also responsible for enhancing DRM capacities of Cantonment Boards especially for firefighting, casualty, evacuation, search and rescue. The armed forces can also deploy medical doctors to restore the health of victims and professional engineers to restore the communication and infrastructure network in an affected area.

MINISTRY OF FOREIGN AFFAIRS

The Ministry of Foreign Affairs facilitates in the arrival of foreign humanitarian workers and relief goods from the international community. This ministry is responsible for maintaining a list of international experts of disaster response working at embassies or international organizations. This list must be shared with PDMA to ensure the immediate engagement of international experts at the time of a disaster. The ministry would also communicate the assessment of damages and needs to the representatives of foreign countries contemplating the provision of assistance.

FEDERAL FLOOD COMMISSION

FFC is a federal department responsible for coordinating efforts aimed at reducing the risk of floods. This department reviews the capacity of flood protection works such as embankments and overcomes the shortcomings by enhancing the physical structures that preclude an over flow of waters from water channels such as rivers or canals. This department engages various contractors to remove the excessive silt in the canals and strengthen areas where a breach might occur. The department must provide PDMA with regular updates on the flow rates and volumes in different rivers of the Province.

EMERGENCY RELIEF CELL

The Emergency Relief Cell maintains a stock of key items that survivors need to sustain themselves. Examples include tents, medicines, blankets, clothing, plastic sheets and tarpaulins. The stock level in warehouses would be communicated to PDMA on a regular basis to keep them informed of the resources that can be dispatched to the worst affected communities of a disaster stricken area.

SPACE AND UPPER ATMOSPHERE RESEARCH COMMISSION (SUPARCO)

SUPARCO facilitates in the understanding of disaster affected areas by providing satellite imagery and thematic maps of affected areas. SUPARCO can utilize the satellite imagery to visualize the extent of floods and the population centers inundated by them.

PAKISTAN METEOROLOGICAL DEPARTMENT

The primary function of this department is to provide an early warning of a natural hazard. This department continuously monitors various meteorological factors such as rainfall,

temperature, atmospheric pressure, etc. The department issues weather forecasts on a regular basis through electronic and print media.

PAKISTAN TELECOMMUNICATION AUTHORITY

PTA is responsible for the upkeep and maintenance of telephone, cellular and internet connections. This department is also responsible for the restoration of this connectivity in case it is negatively affected by a disaster. PTA would also create uninterrupted and dedicated telephone lines to enable the exchange of information between the disaster stricken area and PDMA or its representatives in the districts. This department can also engage private telecommunication service providers to establish the connectivity required for a well informed emergency response.

FLOOD FIGHTING EQUIPMENT AVAILABLE IN THE DIVISIONS & DISTRICTS OF PUNJAB

Lahore Division

Sr. No	Flood Fighting Equipment	Lahore	Kasur	Sheikhupura	Nankana Sahib	Lahore Division
1	Life Jackets.	0	72	0	48	120
2	Life Rings.	0	16	0	9	25
3	Life Lines	0	0	0	4	4
4	Boats	0	20	0	92	112
5	OBM Engine	0	23	0	8	31
6	First Aid kits	0	0	0	20	20
7	Rescue Bag.	0	0	0	15	15
8	Safety Harnesses	0	0	0	24	24
9	Ambulances	0	4	0	16	20
10	Basket or Floating Stretchers	0	0	0	5	5
11	Fire Brigade	0	2	0	5	7
12	De-Watering Sets	480	0	0	18	498
13	Sucker Machine	0	0	0	1	1
14	Jitter Machine	0	0	0	1	1
15	Water Tanks / Bowzers	0	9	0	11	20
16	Tractors Trolleys	13	43	0	36	92
17	Dumpers	0	0	0	4	4
18	Excavator	0	0	0	1	1
19	Cranes	0	0	0	0	0
20	Bulldozers / Loaders	0	0	0	14	14
21	Jeeps	23	8	0	64	95
22	Pickups	5	0	0	41	46
23	Mini Trucks	20	0	0	0	20
24	Axes / Shovels / Picks	0	0	0	17	17
25	Dry Suits	0	0	0	2	2
26	Electrical Power Generators	0	0	0	5	5
27	Extension ladder	0	0	0	3	3

28	Fogging Machines	0	0	0	24	24
29	Hydraulic Cutter	0	0	0	0	0
30	Jumping Sheet	0	0	0	4	4
31	Megaphones	0	0	0	1	1
32	Rescue Tripod	0	0	0	1	1
33	Rope ladders	0	0	0	0	0
34	Ropes	0	0	0	10	10
35	Rubber Gloves (11000 Watt).	0	0	0	11	11
36	SCBA Cylinders	0	5	0	6	11
37	Search Lights	0	0	0	2	2
38	Tents/Blankets	26	118	0	3	147
39	Toches / Lamps	0	0	0	8	8
40	Dredgers	0	0	0	0	0
41	Sand Bags	0	0	0	0	0

Gujranwala Division

Sr. No	Flood Fighting Equipment	Gujranwala	Hafizabad	Sialkot	Narowal	Mandi Bahaudin	Gujrat	Gujranwala Division
1	Life Jackets.	34	105	47	29	24	0	239
2	Life Rings.	13	4	19	10	4	0	50
3	Life Lines	4	21	0	4	4	0	33
4	Boats	8	9	15	2	1	4	39
5	OBM Engine	6	5	15	3	1	0	30
6	First Aid kits	20	0	0	4	10	0	34
7	Rescue Bag.	0	0	0	12	1	0	13
8	Safety Harnesses	12	0	0	10	12	0	34
9	Ambulances	12	0	12	17	22	20	83
10	Floating Stretchers	12	0	0	0	1	0	13
11	Fire Brigade	10	0	14	4	8	3	39
12	De-Watering Sets	62	0	21	10	18	23	134
13	Sucker Machine	0	0	0	1	1	1	3
14	Jitter Machine	0	0	0	1	1	1	3
15	Water Tanks	6	0	12	4	10	7	39
16	Tractors Trollies	0	111	42	16	32	27	228
17	Dumpers	0	0	0	0	0	0	0
18	Excavator	0	0	0	1	0	0	1
19	Cranes	1	2	1	0	0	1	5
20	Bulldozers / Loaders	9	0	1	1	3	6	20
21	Jeeps	38	0	13	8	18	36	113
22	Pickups	4	0	3	41	53	2	103
23	Mini Trucks	6	0	1	1	2	40	50
24	Axes / Shovels / Picks	6	0	0	10	11	0	27

Punjab Disaster Response Plan

25	Dry Suits	4	2	0	2	4	0	12
26	Electrical Generators	2	0	6	5	6	0	19
27	Extension ladder	8	0	0	3	5	0	16
28	Fogging Machines	0	0	0	19	33	0	52
29	Hydraulic Cutter	1	0	0	0	0	0	1
30	Jumping Sheet	0	0	0	6	2	0	8
31	Megaphones	2	0	1	0	3	0	6
32	Rescue Tripod	1	0	0	1	1	0	3
33	Rope ladders	0	0	0	0	1	0	1
34	Ropes	2	15	0	6	4	0	27
35	Rubber Gloves	0	0	0	4	4	0	8
36	SCBA Cylinders	30	0	0	9	9	0	48
37	Search Lights	0	0	13	2	10	0	25
38	Tents/Blankets	8	68	1,825	1,552	1	0	3,454
39	Toches / Lamps	0	0	0	5	12	0	17
40	Dredgers	0	0	0	0	0	0	0
41	Sand Bags	0	0	5,000	0	0	0	5,000

Rawalpindi Division

Sr. No	Flood Fighting Equipment	Rawalpindi	Chakwal	Attock	Jhelum	Rawalpindi Division
1	Life Jackets.	796	37	0	51	884
2	Life Rings.	11	13	0	3	27
3	Life Lines	10	2	0	4	16
4	Boats	22	1	0	6	29
5	OBM Engine	17	1	0	8	26
6	First Aid kits	50	8	0	5	63
7	Rescue Bag.	0	0	0	6	6
8	Safety Harnesses	30	14	0	4	48
9	Ambulances	37	21	0	17	75
10	Basket or Floating Stretchers	14	1	0	5	20
11	Fire Brigade	20	5	3	5	33
12	De-Watering Sets	12	12	4	34	62
13	Sucker Machine	6	21	2	2	31
14	Jitter Machine	5	1	1	1	8
15	Water Tanks / Bowzers	28	7	13	10	58
16	Tractors Trolleys	10	13	11	23	57
17	Dumpers	10	0	0	0	10
18	Excavator	3	0	0	0	3
19	Cranes	0	0	0	0	0
20	Bulldozers / Loaders	2	0	0	6	8
21	Jeeps	55	13	4	25	97
22	Pickups	38	9	2	10	59

23	Mini Trucks	15	0	0	1	16
24	Axes / Shovels / Picks	40	40	2	20	102
25	Dry Suits	2	2	0	2	6
26	Electrical Power Generators	3	11	1	4	19
27	Extension ladder	0	3	1	4	8
28	Fogging Machines	0	25	11	38	74
29	Hydraulic Cutter	2	1	0	1	4
30	Jumping Sheet	14	5	0	6	25
31	Megaphones	3	1	1	7	12
32	Rescue Tripod	2	0	0	1	3
33	Rope ladders	0	2	0	0	2
34	Ropes	40	3	0	6	49
35	Rubber Gloves	0	7	0	3	10
36	SCBA Cylinders	20	7	0	7	34
37	Search Lights	30	19	0	7	56
38	Tents/Blankets	40	8	0	1,003	1,051
39	Toches / Lamps	30	4	0	12	46
40	Dredgers	0	0	0	0	0
41	Sand Bags	0	0	0	0	0

Sargodha Division

Sr. No	Flood Fighting Equipment	Sargodha	Khushab	Mianwali	Bhakkar	Sargodha Division
1	Life Jackets.	483	120	42	59	704
2	Life Rings.	118	4	5	30	157
3	Life Lines	0	0	2	0	2
4	Boats	17	21	5	28	71
5	OBM Engine	9	21	6	3	39
6	First Aid kits	6	72	0	0	78
7	Rescue Bag.	0	5	7,200	0	7,205
8	Safety Harnesses	2	4	0	0	6
9	Ambulances	16	16	0	3	35
10	Basket or Floating Stretchers	0	1	0	0	1
11	Fire Brigade	7	2	0	2	11
12	De-Watering Sets	20	17	9	13	59
13	Sucker Machine	0	1	0	0	1
14	Jitter Machine	0	0	0	0	0
15	Water Tanks / Bowzers	11	10	6	0	27
16	Tractors Trollies	21	15	19	27	82
17	Dumpers	0	0	0	0	0
18	Excavator	0	2	0	0	2
19	Cranes	0	2	0	0	2
20	Bulldozers / Loaders	0	6	3	9	18
21	Jeeps	13	38	0	0	51

22	Pickups	0	35	0	0	35
23	Mini Trucks	0	3	0	0	3
24	Axes / Shovels / Picks	0	27	50	0	77
25	Dry Suits	3	2	0	0	5
26	Electrical Power Generators	0	2	0	0	2
27	Extension ladder	0	3	0	0	3
28	Fogging Machines	0	2	0	0	2
29	Hydraulic Cutter	0	0	0	0	0
30	Jumping Sheet	0	4	0	0	4
31	Megaphones	3	0	0	0	3
32	Rescue Tripod	0	1	0	0	1
33	Rope ladders	0	0	0	0	0
34	Ropes	0	0	3	0	3
35	Rubber Gloves	0	0	0	0	0
36	SCBA Cylinders	19	42	0	0	61
37	Search Lights	24	74	40	0	138
38	Tents/Blankets	350	100	22	0	472
39	Toches / Lamps	0	0	392	0	392
40	Dredgers	0	0	0	0	0
41	Sand Bags	0	0	0	0	0

Faisalabad Division

Sr. No	Flood Fighting Equipment	Faisalabad	Jhang	Chiniot	Toba Tek Singh	Faisalabad Division
1	Life Jackets.	0	0	17	20	37
2	Life Rings.	0	0	4	12	16
3	Life Lines	0	0	2	1	3
4	Boats	0	0	3	1	4
5	OBM Engine	0	0	0	1	1
6	First Aid kits	0	0	46	14	60
7	Rescue Bag.	0	0	7	0	7
8	Safety Harnesses	0	0	4	10	14
9	Ambulances	0	14	16	4	34
10	Basket or Floating Stretchers	0	0	1	2	3
11	Fire Brigade	4	0	2	5	11
12	De-Watering Sets	18	0	2	15	35
13	Sucker Machine	0	0	43	3	46
14	Jitter Machine	0	0	1	2	3
15	Water Tanks / Bowzers	10	0	1	5	16
16	Tractors Trollies	23	0	4	11	38
17	Dumpers	0	0	4	0	4
18	Excavator	0	0	0	0	0
19	Cranes	0	0	0	0	0
20	Bulldozers / Loaders	0	0	0	0	0
21	Jeeps	7	0	6	45	58

Punjab Disaster Response Plan

22	Pickups	0	0	5	10	15
23	Mini Trucks	2	0	1	0	3
24	Axes / Shovels / Picks	4	0	16	5	9
25	Dry Suits	0	0	2	2	4
26	Electrical Power Generators	1	0	4	7	12
27	Extension ladder	0	0	2	5	7
28	Fogging Machines	11	6	8	18	43
29	Hydraulic Cutter	0	0	0	1	1
30	Jumping Sheet	0	0	5	1	6
31	Megaphones	4	0	0	3	7
32	Rescue Tripod	0	0	1	1	2
33	Rope ladders	0	0	0	0	0
34	Ropes	0	0	6	10	16
35	Rubber Gloves (11000 Watt).	1	0	2	4	7
36	SCBA Cylinders	0	0	2	8	10
37	Search Lights	0	0	8	9	17
38	Tents/Blankets	0	0	0	0	0
39	Toches / Lamps	5	0	2	0	7
40	Dredgers	0	0	0	0	0
41	Sand Bags	0	0	0	0	0

Multan Division

Sr. No	Flood Fighting Equipment	Multan	Lodhran	Vehari	Khanewal	Multan Division
1	Life Jackets.	58	44	39	47	188
2	Life Rings.	28	8	13	12	61
3	Life Lines	4	0	1	12	17
4	Boats	14	1	5	6	26
5	OBM Engine	13	1	5	5	24
6	First Aid kits	44	4	10	34	92
7	Rescue Bag.	0	11	0	0	11
8	Safety Harnesses	26	7	5	20	58
9	Ambulances	13	20	31	18	82
10	Basket or Floating Stretchers	0	4	1	8	13
11	Fire Brigade	10	4	11	6	31
12	De-Watering Sets	199	7	17	23	246
13	Sucker Machine	0	3	0	5	8
14	Jitter Machine	0	2	0	6	8
15	Water Tanks / Bowzers	2	5	12	13	32
16	Tractors Trolleys	48	12	42	20	122
17	Dumpers	0	0	0	0	0
18	Excavator	1	0	0	0	1
19	Cranes	0	0	2	0	2
20	Bulldozers / Loaders	16	0	9	0	25
21	Jeeps	44	12	76	21	153
22	Pickups	21	6	152	8	187
23	Mini Trucks	45	2	22	0	69

24	Axes / Shovels /Picks	50	13	14	206	283
25	Dry Suits	3	2	2	3	10
26	Electrical Power Generators	2	2	0	3	7
27	Extension ladder	10	3	3	5	21
28	Fogging Machines	0	3	7	35	45
29	Hydraulic Cutter	1	0	0	1	2
30	Jumping Sheet	0	5	4	3	12
31	Megaphones	1	1	0	13	15
32	Rescue Tripod	0	1	1	3	5
33	Rope ladders	0	0	0	0	0
34	Ropes	4	15	4	15	38
35	Rubber Gloves (11000 Watt).	0	1	0	3	4
36	SCBA Cylinders	20	10	4	36	70
37	Search Lights	63	4	0	32	99
38	Tents/Blankets	0	0	65	7	72
39	Toches / Lamps	318	11	0	27	356
40	Dredgers	8	0	0	0	8
41	Sand Bags	1,000	0	0	0	1,000

Sahiwal Division

Sr. No	Flood Fighting Equipment	Sahiwal	Okara	Pakpattan	Sahiwal Division
1	Life Jackets.	57	17	0	74
2	Life Rings.	8	4	0	12
3	Life Lines	4	0	0	4
4	Boats	1	2	0	3
5	OBM Engine	1	0	0	1
6	First Aid kits	23	0	0	23
7	Rescue Bag.	2	0	0	2
8	Safety Harnesses	4	0	0	4
9	Ambulances	35	13	0	48
10	Basket or Floating Stretchers	0	0	0	0
11	Fire Brigade	6	6	4	16
12	De-Watering Sets	20	37	14	71
13	Sucker Machine	6	3	2	11
14	Jitter Machine	2	2	6	10
15	Water Tanks / Bowzers	4	5	6	15
16	Tractors Trollies	11	55	15	81
17	Dumpers	0	0	0	0
18	Excavator	1	0	0	1
19	Cranes	0	0	0	0
20	Bulldozers / Loaders	1	0	6	7
21	Jeeps	9	8	4	21
22	Pickups	16	0	0	16
23	Mini Trucks	0	1	0	1
24	Axes / Shovels /Picks	6	110	0	116

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25	Dry Suits	3	0	0	3
26	Electrical Power Generators	3	3	0	6
27	Extension ladder	5	0	0	5
28	Fogging Machines	21	30	19	70
29	Hydraulic Cutter	1	0	0	1
30	Jumping Sheet	3	0	0	3
31	Megaphones	0	0	0	0
32	Rescue Tripod	3	0	0	3
33	Rope ladders	0	0	0	0
34	Ropes	6	6	0	12
35	Rubber Gloves (11000 Watt).	10	0	0	10
36	SCBA Cylinders	9	0	0	9
37	Search Lights	4	0	0	4
38	Tents/Blankets	52	150	0	202
39	Toches / Lamps	9	0	0	9
40	Dredgers	0	0	0	0
41	Sand Bags	0	0	0	0

Dera Ghazi Khan Division

Sr. No	Flood Fighting Equipment	D.G.Khan	Rajanpur	Muzzafargarh	Layyah	D.G.Khan Division
1	Life Jackets.	144	0	22	48	214
2	Life Rings.	33	0	8	9	50
3	Life Lines	24	0	3	4	31
4	Boats	15	14	25	92	146
5	OBM Engine	14	13	2	8	37
6	First Aid kits	72	0	0	20	92
7	Rescue Bag.	3	0	0	15	18
8	Safety Harnesses	14	0	60	24	98
9	Ambulances	8	0	24	16	48
10	Basket or Floating Stretchers	0	0	0	5	5
11	Fire Brigade	8	0	4	5	17
12	De-Watering Sets	44	67	52	20	183
13	Sucker Machine	4	0	4	1	9
14	Jitter Machine	3	0	4	1	8
15	Water Tanks / Bowzers	10	0	6	11	27
16	Tractors Trollies	24	59	27	36	146
17	Dumpers	0	0	0	4	4
18	Excavator	0	0	0	1	1
19	Cranes	0	0	0	0	0
20	Bulldozers / Loaders	16	0	11	14	41
21	Jeeps	10	40	0	64	114
22	Pickups	4	43	0	41	88
23	Mini Trucks	0	11	0	0	11
24	Axes / Shovels /Picks	80	0	50	17	147
25	Dry Suits	2	0	0	2	4
26	Electrical Power Generators	2	0	0	5	7

27	Extension ladder	17	0	0	3	20
28	Fogging Machines	7	0	14	24	45
29	Hydraulic Cutter	20	0	0	0	20
30	Jumping Sheet	1	0	0	4	5
31	Megaphones	9	0	0	1	10
32	Rescue Tripod	1	0	2	1	4
33	Rope ladders	0	0	0	0	0
34	Ropes	9	0	100	10	119
35	Rubber Gloves (11000 Watt).	11	0	0	19	30
36	SCBA Cylinders	21	0	0	6	27
37	Search Lights	8	0	0	2	10
38	Tents/Blankets	436	0	16	3	455
39	Toches / Lamps	12	0	0	8	20
40	Dredgers	0	0	0	0	0
41	Sand Bags	0	0	0	0	0

Bahawalpur Division

Sr. No	Flood Fighting Equipment	Bahawalpur	Bahawalnagar	Rahim Yar Khan	Bahawalpur Division
1	Life Jackets.	20	22	0	42
2	Life Rings.	6	9	0	15
3	Life Lines	6	0	0	6
4	Boats	2	2	0	4
5	OBM Engine	2	2	0	4
6	First Aid kits	10	10	0	20
7	Rescue Bag.	0	10	0	10
8	Safety Harnesses	10	12	0	22
9	Ambulances	7	19	0	26
10	Basket or Floating Stretchers	1	0	0	1
11	Fire Brigade	12	6	3	21
12	De-Watering Sets	35	21	22	78
13	Sucker Machine	5	1	1	7
14	Jitter Machine	5	1	1	7
15	Water Tanks / Bowzers	16	6	2	24
16	Tractors Trollies	32	19	9	60
17	Dumpers	0	0	0	0
18	Excavator	0	0	0	0
19	Cranes	0	0	0	0
20	Bulldozers / Loaders	5	6	4	15
21	Jeeps	9	9	5	23
22	Pickups	1	6	2	9
23	Mini Trucks	0	2	0	2
24	Axes / Shovels / Picks	7	6	0	13
25	Dry Suits	2	3	0	5
26	Electrical Power Generators	2	2	13	17

27	Extension ladder	4	1	0	5
28	Fogging Machines	47	33	17	97
29	Hydraulic Cutter	1	1	0	2
30	Jumping Sheet	1	0	0	1
31	Megaphones	1	3	1	5
32	Rescue Tripod	0	1	0	1
33	Rope ladders	0	0	0	0
34	Ropes	0	5	0	5
35	Rubber Gloves (11000 Watt).	0	1	0	1
36	SCBA Cylinders	10	3	0	13
37	Search Lights	0	4	0	4
38	Tents/Blankets	0	0	0	0
39	Toches / Lamps	10	10	0	20
40	Dredgers	0	0	0	0
41	Sand Bags	0	50	0	50

TEMPLATES

All collection points for relief goods should be documented at PDMA's website to track the availability of relief goods at various collection points:

Collection Point Identification

Sr. No	District	City	Location (Addresses of Proposed Collection Point)	Contact Person's Mobile No.

Table 13: Template for collection points of relief goods

The inventory at all collection points should also be updated for the above mentioned reasons:

COLLECTION POINT INVENTORY/DONATION

(To be filled on a Daily basis)

Date: _____

Collection Point Name: _____

District: _____

Sr. No	Item Description	Quantity	Donor Name	Donor's Mobile No.	Received By (Initials)

Table 14: Template for Inventory management at collection points

All relief trucks dispatched to the affected areas should be documented to keep a track of the relief in transit:

Truck Dispatch

Collection Point:

Name: _____

Date: _____

District: _____

Sr. No	Destination District	Vehicle Registration No.	Type of Items	Quantity	Departure Time	Diver Name	Driver Mobil No.	Built Signed By

Table 15: Template for record keeping of the dispatched relief trucks

In case a dearth of livable accommodation is observed in the face of increasing numbers of displaced people; the accommodations available in the neighboring districts should be documented in order to plan the redirection of victims to the neighboring districts.

Neighboring District Accommodation

City	Type of Accommodation (Hostel/Hotel/Mess, etc)	Address	Capacity (No. of Bedrooms)	Condition (Good/Average)	Contact Person's Name & Number	Pick & Drop Vehicle	Pick & drop vehicle Seating Capacity

Table 16: Template for accommodation available in neighboring districts

A template has also been designed to document the names and departments of all Governmental staff present at the site of a disaster. Their respective skills can be utilized in an effective manner if PDMA is able to collect the information on their presence at the affected site.

RELIEF & REHAB SECTOR

Date:

District:

Tehsil:

SECTOR:

Names of Revenue States:

Name of Sector In-Charge (Revenue Officer):	
Name of Qanungo:	
Names of Patwaris:	
Name of UC Secretaries / Name of UCs:	
Agriculture Field Assistant Name:	
Names of All Irrigation Patwaris in Sector:	
Name of Veterinary Officer:	
Name of BHU In-Charge:	

Table 17: Template for human resource available in the affected area

All relief trucks arriving at camps or other relief disbursement points should be documented to track the progress in relief disbursement:

TRUCKS ARRIVAL AT ENTRY RECEPTION POINTS

(To be filled in on a Daily Basis)

District : _____

Date: _____

Location: _____

Highway: _____

Vehicle Reg No.	Items Description	Qty of Items	Arrival Time	Destination(Relief Camp/ Distribution Area Name)	Sent By (Name of Donors/ NGO/Govt.)	Donor Mobile No	Driver Name	Driver Mobile No.	Received By (Initials)

Table 18: Template for the record keeping of relief trucks arrived at camps

A template has also been developed to document the relief camps along with facilities available there in

RELIEF CAMPS

District: _____

Date: _____

Sr. No	Name of Camp	Address	Mauza/UC	Tehsil	Facilities Available (Food Blankets, Medicines)	Camp Adopted by (NGO/Donor Names)	Camp in-Charge Name	In-Charge's Mobile No.

Table 19: Template for relief camps

PDMA requires all districts to setup a control room at the incidence of a disaster. This control room would plan and execute a well-knit Governmental disaster response by bringing together all representatives of the various Governmental departments. This control room would be operational around the clock and PDMA must be informed about its operation and in-charge by filling the following template:

CONTROL ROOM

District: _____

Sr. No	Type (District/Tehsil)	Location	Phone Numbers	Shift 1 In-charge Name	Shift 2 In-charge Name	Computer Available (Y/N)	Internet Available (Y/N)
1							
2							
3							

Table 20: Template for the status of facilities at Control Rooms established in the districts

All the Non-Governmental Organizations operating in the disaster affected areas should register themselves at PDMA's website. The following template has been developed for NGOs assisting the Government in disaster response.

Registration of N.G.Os

District: _____

Date: _____

Sr. No	Name of NGO	Local or International	Relief Camps/ Distribution Areas	Relief Activities	Names of Persons In-Charge	Mobile Nos.	Email Address
1							
2							
3							

Table 21: Template for the registration of NGOs

New entrants in the relief camps should be documented on a weekly basis by utilizing the following template:

RELIEF CAMP'S WEEKLY VICTIMS REGISTRATION UPDATE

Relief Camp: _____ District: _____ Tehsil: _____

Sub Building

Tehsil: _____ Type: _____ Date From: _____ Date to: _____

Date	Men	Women	Children (Under 12)	Infants (Under 2 Years)	Old Aged (50+)	Infected	Expired	Total No. of Victims Registered	Victims in Tents	No of Tents

Table 22: Template for the demographic information of the population at a relief camp

A daily camp service report must also be prepared along the following lines

DAILY CAMP SERVICE REPORT

Authority (Full Address): e.g. District/Tehsil/Union Council: _____

Date: _____

Date	No. of Affectees Present	Joined Today	Total	Victims	Treated	Shifted To/Referred To	Left Camp Today

Table 23: Template for the daily management of relief camps

All fatalities should also be documented along similar lines:

DEATH CASES

Authority (Full Address): e.g. District/Tehsil/Union Council:

Date:

S. No	Name & Father's/Husband's Name	Address/contact	CNIC No	Date of Birth	Date of Death	Cause of Death	Time and Location of death	Dead body Handed over to	Contact	Signature

Table 24: Template for the record keeping of fatalities

In case of excessive flooding that overwhelms the boating resources of the Government in certain area, the boats of private owners are engaged to continue with evacuation, rescue or relief services. The following template is filled to maintain a record of boat owners that might be engaged at the time of a disaster.

Private Boat Owners

Name/Father Name	Address	# of Boats	Location of Boat	Size of Boat	# of Engines	Functional/Non Functional	# of Operators	Contact #

Table 25: Template for the record keeping of private boat owners

All volunteers assisting the Government in its rescue and relief operations should also be registered with the PDMA:

Registration of Volunteers

Name	Father's Name	CNIC	Occupation	Contact #	Address	Location Interested In	Skills	Equipment	Transport Available

Table 26: Template for the registration of volunteers

Annex (A): Draft SOPs on Child Protection during Disasters

STANDARD OPERATING PROCEDURES (SOPS) FOR CHILD PROTECTION DURING DISASTERS

The Standard Operating Procedures have been devised to articulate clear procedures for protecting children during and after disasters. These SOPs seek to mainstream Child Protection in various sectors of disaster response and have been developed in consultation with key stakeholders.

The objective of the SOPs is to:

- Standardize procedures for protection and rehabilitation of children affected by disasters
- Identify key actors dealing directly or indirectly with child protection during disasters, and delegate responsibilities.
- Establish and clarify communication and coordination mechanisms among key stakeholders on child protection issues in disasters.

Child Protection will be mainstreamed into disaster response at the provincial and district level by instating personnel from relevant line departments in the Command, Communications and Control Centre (3C). The work of I/NGOs, UN Agencies and Community Based Organizations (CBOs) working in the area of child protection during disasters will be aligned with that of the Government. The PDMA Helpline 1129 will also act as a complaints redressal mechanism for complaints relating to child protection issues.

The SOPs are divided into two parts: Part 1 addresses SOPs to be followed for protecting separated, unaccompanied / missing children and children who are victims of gender based violence, psychological trauma or physical harm. Part 2 outlines SOPs for mainstreaming child protection across the Health, Education, Water, Sanitation and Hygiene sector.

SOPS FOR SEPARATED, UNACCOMPANIED, AND MISSING CHILDREN IDENTIFIED DURING DISASTERS

In the event of a disaster, PDMA would generate a warning to all departments and humanitarian agencies working in child protection. The Child Protection and Welfare Bureau (CPWB), being the chief Child Protection Agency of the Government of Punjab, would designate a representative to the 3Cs. The CPWB would establish Child Protection Centers (CPCs) in all affected areas.

The CPWB will be responsible for mobilizing the community around child protection issues and building momentum within the community to report separated, unaccompanied and missing children. They will also appoint patrolling shifts of CPWB personnel in disaster affected areas to identify separated, unaccompanied and missing children. Any Government official coming across a separated or unaccompanied child will be required to make a report to either the PDMA Helpline 1129 or approach the nearest Child Protection Center through their helpline 1121. PDMA's call center team upon receiving the call will tally the information provided with its online database records of reports of missing/found children and contact the CPWB focal point at the 3C. The CPWB's focal person would follow existing intra-department procedures for child rescue, rehabilitation, establishing identity, verification of birth

certificates, compiling emergency documentation, tracing and reunification. In areas, where the CPWB does not have a center during an emergency, PDMA would seek the assistance of the Social Welfare Department or NGOs licensed by the CPWB.

PDMA's online database of Separated and Unaccompanied children would be activated during a disaster and would serve as a databank accessible to key stakeholders. The CPWB, the Social Welfare Department, Women Development Department (WDD), Rescue 1122 and DDMA's/DCO offices would have access to PDMA's online database through a pre shared username and password. The DEO Rescue 1122 under the leadership of the DCO will be given chief responsibility for ensuring that the data regarding separated and unaccompanied children is uploaded at the online database on a regular basis.

SOPs for Gender based Violence, Exploitation, Psychosocial distress and Physical Harm

PDMA's Helpline, Open Reception Centers of the CPWB, and the Child Welfare Units of Social Welfare Department would be key points of assistance for women and children suffering from intra family violence, psychological distress or mistreatment. The CPWB would operate Open Reception Centers (ORCs) in the disaster affected districts. The ORCs would serve as reporting centers where locals can bring cases of suspected or confirmed child abuse or exploitation. The management of the ORCs will be required to investigate the reports and provide counseling services if required.

The Child Welfare Units (CWUs) of the Social Welfare Department would also be established in the affected areas. The CWUs would function as a hub for addressing child welfare issues. The ORCs and the CWUs would also handle cases relating to psychological trauma and physical harm. Institutionalization of the child will only be undertaken as a last resort.

SOPs for Mainstreaming Child Protection across Disaster Management and Response: Integrating Child Protection into Child Health Services:

The Gender & Child Cell will coordinate with the health department and the Health cluster to arrange child friendly and gender specific safe services for child victims of gender based violence, abuse and exploitation. GCC would also ensure the Health department's assistance in the training of Health service providers (Male and Female) on gender appropriate clinical management of post sexual violence care. These providers should be able to help with the screening and referral of children requiring focused psychological support or clinical mental health support. The GCC-PDMA will work with the Health department and the Child Protection Sub Cluster to ensure:

- Dissemination of IEC material on 'child protection in disasters' with the help of health workers
- Community awareness of child health services including mental health, psychosocial support, immunization and post violence treatment services.

Integrating Child Protection in Education

The GCC will coordinate with the education department and the education sub cluster to:

- Provide temporary learning facilities and Child Friendly Spaces

- Select teachers for training and conduct teacher training on child centered and age specific activities for temporary learning spaces.
- Assist in rehabilitation/reconstruction of schools damaged or destroyed in disasters or damaged as a result of being used as shelters

The education cluster will work with the child protection sub cluster and the GCC-PDMA to mainstream child protection in education service delivery through the following actions:

- Train teachers and children to identify threats in the educational environment
- Train students on how to follow up, and report protection threats in the educational environment
- Training teachers on varied impacts of disasters on children, their needs and teaching methodologies to address the impact of disasters on children

Integrating Child Protection in Water, Sanitation and Hygiene arrangements

The Public Health Engineering Department (PHED) and the DDMA's will mainstream child protection in provision of water, sanitation and hygiene in camps, shelters and public buildings being used as shelters by ensuring that water collection points are in accordance with physical capabilities of children and are safe and easy to use. They will also ensure that separate latrines and showers are available for men and women. These facilities should be lockable, well lit and surrounded by secondary enclosures for privacy if possible. A greater number of toilets should be available for women due to their use by both women and children.

The Community development department of the PHED, UNICEF and the WASH cluster will involve community stakeholders and local beneficiaries in implementing hygiene promotion campaigns and printing and distribution of IEC materials.

Annex (B): Minutes of the Meeting held under the chairmanship of Chief Secretary Punjab on 30.04.2014

Decision	Action BY
<p>Early warning is very important in flood management, so all concerned departments/agencies were required to timely share the weather forecast and river flow data.</p> <p>All the concerned agencies should start cleansing the blockage and removing the encroachment at the earliest.</p> <p>Short and medium term measures should be taken to avoid loss of life and livelihoods.</p> <p>Long term intensive measures should also be adopted to avoid the damages permanently, occurring due to flash and urban flooding.</p>	<p>All Line Departments All Commissioners All concerned DCOs Met Department</p>
<p>Adequate quantity of reserve stock of stone must be arranged and placed at strategic locations as per SOPs before onset of the flood season.</p> <p>A detailed study to control the river erosion at Alluwalli, district Mianwali should be carried out.</p> <p>Priority should be assigned to remove encroachments along irrigation system/structures/water bodies.</p> <p>Urban centers of Gujranwala Division should be assigned high priority, as majority of these areas are marred by poor/insufficient drainage systems. Necessary measures to control likely damage from sudden inundation from nallahs should also be undertaken.</p> <p>The Secretary Finance and Chairman P&D Board to may release necessary funds to irrigation immediately.</p> <p>Existing laws of encroachments in the natural passage of water should be implemented in letter and spirit, and DCOs should take lead in this regard.</p> <p>NOCs for construction of new bridges should be conditioned with completion of flood works, and where any lapse is identified, NHA may be restrained from continuing its work.</p>	<p>Finance Secretary Secretary Irrigation All District Administrations</p>
<p>Procurement and availability of medicines and other related stocks shall be ensured prior to onset of flooding season.</p>	<p>Secretary Health All Commissioners All DCOs</p>
<p>C&W should prepare Communication Contingency Plan to keep road / bridge links functional in flood season.</p>	<p>Secretary C&W Pak Army</p>
<p>Food Department should identify places for safe storage of stock. He further directed that sufficient stock of Atta is made available to meet any emergency.</p>	<p>Secretary Food</p>
<p>Provision of medicines & vaccines for livestock in flood prone areas / camps should be ensured.</p>	<p>Secretary Livestock</p>
<p>Pak Army, PDMA and PES shall maintain close liaison with all stakeholders, so that in case any unusual situation arises from monsoon and flooding, the same is handled timely in an effective manner.</p>	<p>DG, Punjab Emergency Services Secretary C & W SMBR/PDMA PAK Army, NDMA</p>
<p>All necessary measures in the light of past experiences need to be put in place for handling any eventuality in forthcoming monsoon/flood season.</p>	<p>MD WASA</p>
<p>The Chair stressed that concerned army corps must remain prepared and vigilant to respond to any catastrophe in time.</p>	<p>Army Headquarters 4-Corps</p>

Annex (C): Checklist for Disaster Action Plan / Response

Frequent District Emergency Board /DDMA's Coordination Meetings	<input type="checkbox"/>	<input type="checkbox"/>
Preparation of map (mandatory) showing	<input type="checkbox"/>	<input type="checkbox"/>
Areas likely to be affected	<input type="checkbox"/>	<input type="checkbox"/>
Safe places	<input type="checkbox"/>	<input type="checkbox"/>
Flow of water	<input type="checkbox"/>	<input type="checkbox"/>
Bunds and encroachments	<input type="checkbox"/>	<input type="checkbox"/>
Canals, distributaries and drains	<input type="checkbox"/>	<input type="checkbox"/>
Site selected for relief camps	<input type="checkbox"/>	<input type="checkbox"/>
Evacuation routes	<input type="checkbox"/>	<input type="checkbox"/>
Safe custody of Govt records and essential equipment and their shifting to safer areas on receipt of flood warning	<input type="checkbox"/>	<input type="checkbox"/>
Enlistment and tapping of department wise available resources	<input type="checkbox"/>	<input type="checkbox"/>
Pooling of resources – District Comprehensive list	<input type="checkbox"/>	<input type="checkbox"/>
Required resources – Resource Gap identification	<input type="checkbox"/>	<input type="checkbox"/>
Preparation of list of required relief goods/ items	<input type="checkbox"/>	<input type="checkbox"/>
Involvement of Volunteers, NGOs and other CSOs with their contacts and availability points for gap bridging	<input type="checkbox"/>	<input type="checkbox"/>
Designation of Focal Person	<input type="checkbox"/>	<input type="checkbox"/>
Deployment of resources as per need well in advance	<input type="checkbox"/>	<input type="checkbox"/>
Preparation of District level vulnerability map with varying degrees of floods	<input type="checkbox"/>	<input type="checkbox"/>
Forced evacuation well in time from low lying areas & from abandoned buildings before monsoon season	<input type="checkbox"/>	<input type="checkbox"/>
Establishment of Camps – All service provider under one roof	<input type="checkbox"/>	<input type="checkbox"/>
SOPs for communication – Reporting Channels	<input type="checkbox"/>	<input type="checkbox"/>
Flood warning and weather forecast: Loudspeakers announcements on daily basis	<input type="checkbox"/>	<input type="checkbox"/>
Recording and reporting of all emergency calls with action taken on daily basis (Format for uniform reporting)	<input type="checkbox"/>	<input type="checkbox"/>
All relief and ration supply through one hand – Record purpose (for internal and external checks, modality would be chalked out as per their demand)	<input type="checkbox"/>	<input type="checkbox"/>
Avoid duplication	<input type="checkbox"/>	<input type="checkbox"/>

NOTE:

- Dry Tehsils and Districts will prepare their plan to extend support to their neighboring wet Tehsil and Districts. They will establish collection points, provide human power and other resources required for rescue and relief operations in wet dist.
- All wet Districts will prepare list of resources needed for rescue and relief operations in addition to available at hand.

General Protocols:

Staff status must remain updated with contact numbers	<input type="checkbox"/>	<input type="checkbox"/>
Resources list must also be updated regularly	<input type="checkbox"/>	<input type="checkbox"/>
Preparation of Flood plans	<input type="checkbox"/>	<input type="checkbox"/>
Cancellation of all type of leaves of all employees	<input type="checkbox"/>	<input type="checkbox"/>
Designation of Focal Persons	<input type="checkbox"/>	<input type="checkbox"/>
Ready availability of Roles and responsibilities of all tiers for flood emergency response in writing	<input type="checkbox"/>	<input type="checkbox"/>
Normal and Emergency communication system must be in place well in advance	<input type="checkbox"/>	<input type="checkbox"/>

Flood Code of Conduct for Employees

Functioning of Cell phones be ensured	<input type="checkbox"/>	<input type="checkbox"/>
No leave during flood days	<input type="checkbox"/>	<input type="checkbox"/>
No official will leave station	<input type="checkbox"/>	<input type="checkbox"/>
No call will go unattended – If not attended then official will contact caller himself	<input type="checkbox"/>	<input type="checkbox"/>
No complaint shall go unattended and unresolved	<input type="checkbox"/>	<input type="checkbox"/>
Handling of SMS or any other means of communication be ensured	<input type="checkbox"/>	<input type="checkbox"/>
Zero tolerance to pass the buck attitude	<input type="checkbox"/>	<input type="checkbox"/>
Soothing and consoling behavior by all service providers towards affectees	<input type="checkbox"/>	<input type="checkbox"/>
Preparation of Telephone Directories with the cell numbers of all the members of DDMA's and volunteers	<input type="checkbox"/>	<input type="checkbox"/>

Evacuation:

Announcements: Contents

Why there is need for evacuation?	<input type="checkbox"/>	<input type="checkbox"/>
When to leave (deadline)?	<input type="checkbox"/>	<input type="checkbox"/>
Where to go?	<input type="checkbox"/>	<input type="checkbox"/>
How long for?	<input type="checkbox"/>	<input type="checkbox"/>
What to do for further information (Control room and sector incharge number)	<input type="checkbox"/>	<input type="checkbox"/>
Responsibility: Police and Revenue	<input type="checkbox"/>	<input type="checkbox"/>

Emergency Response Centre:

List of staff displayed with name and department	<input type="checkbox"/>	<input type="checkbox"/>
Teams will work in shifts	<input type="checkbox"/>	<input type="checkbox"/>
Presence of representatives of all service providers i.e. Health, livestock, Rescue 1122, Civil Defence etc.	<input type="checkbox"/>	<input type="checkbox"/>
No movement without the permission of Centre Incharge	<input type="checkbox"/>	<input type="checkbox"/>
Each shift Incharge contact District Control Room on arrival and then on departure	<input type="checkbox"/>	<input type="checkbox"/>
Responsible for follow up of pending issues with concerned persons and departments	<input type="checkbox"/>	<input type="checkbox"/>
Centre Incharge will keep close liaison with SHO of the respective area for law and order situation	<input type="checkbox"/>	<input type="checkbox"/>
Centre Incharge to prepare list of required items and communicate to Tehsil	<input type="checkbox"/>	<input type="checkbox"/>

and District Incharge		
Centre Incharge will submit progress report to Tehsil and Dist Incharges on Daily basis	<input type="checkbox"/>	<input type="checkbox"/>
No of affectees in camp(sick, aged and children) shall be communicated on daily basis	<input type="checkbox"/>	<input type="checkbox"/>
Availability of at least one emergency vehicle at center be ensured	<input type="checkbox"/>	<input type="checkbox"/>
Keep record of private boat owners and their contacts details	<input type="checkbox"/>	<input type="checkbox"/>
List of Doctors and private hospital in the vicinity	<input type="checkbox"/>	<input type="checkbox"/>
List and contact of philanthropists in the vicinity	<input type="checkbox"/>	<input type="checkbox"/>
Keeping record of donations coming directly to Centre and report the same to Tehsil and District Incharge.	<input type="checkbox"/>	<input type="checkbox"/>
Centre Incharge will ensure presence of all service providers at centre	<input type="checkbox"/>	<input type="checkbox"/>
Centre Incharge shall prepare movement plan of all outreach teams and ration distribution activities in his respective areas	<input type="checkbox"/>	<input type="checkbox"/>
Centre Incharge shall ensure vaccination of animals and humans against communicable diseases	<input type="checkbox"/>	<input type="checkbox"/>
Centre Incharge will arrange transport for affectees when water recedes	<input type="checkbox"/>	<input type="checkbox"/>
Centre Incharge will be responsible for overall performance of the centre	<input type="checkbox"/>	<input type="checkbox"/>
Ensure availability of UPS at Relief Camp	<input type="checkbox"/>	<input type="checkbox"/>
Display of list of IDPs at all camps	<input type="checkbox"/>	<input type="checkbox"/>
List of missing persons must be displayed at all Relief Camps	<input type="checkbox"/>	<input type="checkbox"/>

Health Department:

Mark areas in the light of previous experience which river flood can inundate	<input type="checkbox"/>	<input type="checkbox"/>
See the staff status at facility level	<input type="checkbox"/>	<input type="checkbox"/>
See outreach team status (LHW, LHS, CMWs and Vaccinators etc)	<input type="checkbox"/>	<input type="checkbox"/>
Filling of vacant positions – prior to flood	<input type="checkbox"/>	<input type="checkbox"/>
Training of entire staff posted near river bank in precautionary measure with specific reference to flood situation, flood water born disease, vector spread ailments and snake bite etc.	<input type="checkbox"/>	<input type="checkbox"/>
Emphasis on Emergency handling, delivery cases etc. shifting, coordination	<input type="checkbox"/>	<input type="checkbox"/>
Design system to track each pregnant women of flood prone area especially whose EDD has fallen in flood period	<input type="checkbox"/>	<input type="checkbox"/>
Ensure availability of all paramedic and Doctors at facilities in flood prone areas	<input type="checkbox"/>	<input type="checkbox"/>
Provision of necessary medicines / equipments to service providers posted at vulnerable locations on priority basis	<input type="checkbox"/>	<input type="checkbox"/>
Replenishment of stocks of medicines immediately after consumption starts at camps	<input type="checkbox"/>	<input type="checkbox"/>
Ensure presence of all technical staff at DHQ to fight any kind of emergency referred from camps	<input type="checkbox"/>	<input type="checkbox"/>
Ensure availability of “Anti snake venom” with maintained cold chain at nearby health facility	<input type="checkbox"/>	<input type="checkbox"/>
Provision of Aqua Tab and ORS for flood affected areas	<input type="checkbox"/>	<input type="checkbox"/>
Routine vaccination prior to flood and monsoon	<input type="checkbox"/>	<input type="checkbox"/>
Keep List of area wise blood donors with their blood groups and their contacts	<input type="checkbox"/>	<input type="checkbox"/>

Camp establishment: Placement of doctors and paramedics trained in client dealing in trauma with cool temperament for smooth camp running	<input type="checkbox"/>	<input type="checkbox"/>
Ensure availability of insecticides and execute spray at vulnerable places just after flood	<input type="checkbox"/>	<input type="checkbox"/>
Fogging to eradicate insects & pest from rural areas	<input type="checkbox"/>	<input type="checkbox"/>

Livestock Department:

See the staff status at facility level	<input type="checkbox"/>	<input type="checkbox"/>
See outreach team status Vet Assistants	<input type="checkbox"/>	<input type="checkbox"/>
Filling of vacant positions	<input type="checkbox"/>	<input type="checkbox"/>
Training of entire staff posted near river bank in precautionary measure with specific reference to flood situation, flood water born disease, vector spread ailments and snake bite etc	<input type="checkbox"/>	<input type="checkbox"/>
Provision of necessary medicines / equipments to service providers posted at vulnerable locations on priority basis	<input type="checkbox"/>	<input type="checkbox"/>
Complete Routine vaccination prior to flood and monsoon	<input type="checkbox"/>	<input type="checkbox"/>
Maintain an appropriate stock of essential medicines and equipment in hand	<input type="checkbox"/>	<input type="checkbox"/>
Constitute special outreach teams and place them under Camp Incharge	<input type="checkbox"/>	<input type="checkbox"/>
Provision of adequate quantity of Animal Feed and medicines at camps	<input type="checkbox"/>	<input type="checkbox"/>
Camp establishment: All service providers under one roof will bring better results as experienced last year	<input type="checkbox"/>	<input type="checkbox"/>
Survey and investigate extent of damage to the livestock in collaboration with Revenue Department	<input type="checkbox"/>	<input type="checkbox"/>

Agriculture Department (including Agri Engineering & Extension):

Agri Engineer will provide list of earth moving machinery	<input type="checkbox"/>	<input type="checkbox"/>
Maintain all machinery in order and provide where ever required	<input type="checkbox"/>	<input type="checkbox"/>
Put all the staff and other resources at the disposal of District Flood Incharge for relief activities	<input type="checkbox"/>	<input type="checkbox"/>
Survey of flood affected areas to assess damage to crops in collaboration with revenue	<input type="checkbox"/>	<input type="checkbox"/>

District Food Department:

Ensure adequate stores of food grain available with him	<input type="checkbox"/>	<input type="checkbox"/>
Responsible for the supply of the same to flood relief camps and affected areas on priority	<input type="checkbox"/>	<input type="checkbox"/>
Replenishment of stocks consumed immediately through department	<input type="checkbox"/>	<input type="checkbox"/>
Prepare small bags of wheat flour as advised by District Administration and ensure their supply at desired places	<input type="checkbox"/>	<input type="checkbox"/>
Ensure protection of storage godowns from flood and law breakers	<input type="checkbox"/>	<input type="checkbox"/>
Remove stocks from vulnerable points to safer zones	<input type="checkbox"/>	<input type="checkbox"/>
Organize special mobile ration depots during flood at points as advised by District Administration	<input type="checkbox"/>	<input type="checkbox"/>

WAPDA:

Complete survey of the area	<input type="checkbox"/>	<input type="checkbox"/>
Replacement of dangerous, damaged and bent poles	<input type="checkbox"/>	<input type="checkbox"/>
Round the clock functional complaint cell and senior official as focal person	<input type="checkbox"/>	<input type="checkbox"/>
Ready to move vehicle with technical staff at complaint cell	<input type="checkbox"/>	<input type="checkbox"/>
Dividing main lines into small units to keep light intact where flood has not reached instead breaking main feeder. Only those areas which are inundated should be cut off	<input type="checkbox"/>	<input type="checkbox"/>
Emergency land line and mobile must be kept working	<input type="checkbox"/>	<input type="checkbox"/>
Availability of reserve transformers and other required material for immediate restoration of electricity	<input type="checkbox"/>	<input type="checkbox"/>
Ensure supply of electricity to relief camps(provision of generators etc)	<input type="checkbox"/>	<input type="checkbox"/>
Prepare Sector wise duty roster and supply the same to ACs concerned and Tehsil and District Flood Room Incharge	<input type="checkbox"/>	<input type="checkbox"/>
Ensure supply of electricity at sensitive places i.e. bunds, bridges at nights	<input type="checkbox"/>	<input type="checkbox"/>
Restoration of electricity to flood affected areas soon after floods especially to water supply schemes and sewer pumps	<input type="checkbox"/>	<input type="checkbox"/>
Ensure proper electrocution of poles and others of inundated areas	<input type="checkbox"/>	<input type="checkbox"/>

Education:

Prepare list of school and colleges which come in flood prone areas	<input type="checkbox"/>	<input type="checkbox"/>
Closure of school and colleges during flood	<input type="checkbox"/>	<input type="checkbox"/>
List of schools which can be used as relief camps during flood emergency	<input type="checkbox"/>	<input type="checkbox"/>
All facilities in functioning condition: Hand pumps, Motors, Electricity, Toilets etc	<input type="checkbox"/>	<input type="checkbox"/>
List of schools with teachers and their contact be prepared well before flood	<input type="checkbox"/>	<input type="checkbox"/>
Letter to all staff of those schools selected for relief camp	<input type="checkbox"/>	<input type="checkbox"/>
Teachers should be imparted training in camp handling, coordination, motivation, loss assessment and ration distribution etc. so that they can run camp during flood situations	<input type="checkbox"/>	<input type="checkbox"/>
Shifting of furniture and record in one room for safer custody before handing schools to Relief Camp Incharge	<input type="checkbox"/>	<input type="checkbox"/>
Ensure presence of school team member round the clock at camp	<input type="checkbox"/>	<input type="checkbox"/>

College:

Prepare list of members of Youth Council of the District	<input type="checkbox"/>	<input type="checkbox"/>
List of volunteers and blood Donors	<input type="checkbox"/>	<input type="checkbox"/>
Training of volunteers students in flood emergency handling in association with Administration staff	<input type="checkbox"/>	<input type="checkbox"/>

Revenue:

Survey of entire District (Preparation of Village level information by Patwari.)	<input type="checkbox"/>	<input type="checkbox"/>
Identification of Low lying, medium and high: vulnerability levels with flood level	<input type="checkbox"/>	<input type="checkbox"/>
Marking low lying locations	<input type="checkbox"/>	<input type="checkbox"/>
Liaison of Patwari with Numberdars of their respective villages	<input type="checkbox"/>	<input type="checkbox"/>
Contacts of all revenue staff posted near river belts and their output in flood	<input type="checkbox"/>	<input type="checkbox"/>

prone areas

List of Numberdars with their contacts, volunteer from low lying settlements with contact numbers	<input type="checkbox"/>	<input type="checkbox"/>
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Prepare list of vulnerable villages and make an estimate of likely affected population in such villages in the event of flood	<input type="checkbox"/>	<input type="checkbox"/>
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ACs shall brief all revenue staff and Numberdars of their areas about flood and fix their responsibility	<input type="checkbox"/>	<input type="checkbox"/>
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Name and contact numbers of private boat owners and operators	<input type="checkbox"/>	<input type="checkbox"/>
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Announcement of Flood Warning at settlement level – Patwari responsible	<input type="checkbox"/>	<input type="checkbox"/>
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Forced evacuation with police	<input type="checkbox"/>	<input type="checkbox"/>
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SOP, emergency calling, flood control room number, sector incharge numbers	<input type="checkbox"/>	<input type="checkbox"/>
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Arrange boarding and lodging of service providers and other officials at camp	<input type="checkbox"/>	<input type="checkbox"/>
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Rapid assessment for relief goods and ration provision	<input type="checkbox"/>	<input type="checkbox"/>
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Coordination and reporting	<input type="checkbox"/>	<input type="checkbox"/>
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Develop a map of course of water in case of planned breach and intimate public and evacuate beforehand	<input type="checkbox"/>	<input type="checkbox"/>
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Carry out survey of entire flood affected areas to assess losses in collaboration with Agriculture , Livestock and Irrigation Department	<input type="checkbox"/>	<input type="checkbox"/>
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Prepare rehabilitation plan for flood affected people in collaboration with community development department	<input type="checkbox"/>	<input type="checkbox"/>
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C& W Deptt:

Comprehensive list of essential equipment and staff	<input type="checkbox"/>	<input type="checkbox"/>
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All equipment is in functional condition	<input type="checkbox"/>	<input type="checkbox"/>
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Mark and prepare list of vulnerable points, sensitive areas / infrastructure / installation etc	<input type="checkbox"/>	<input type="checkbox"/>
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Deployment of staff at sensitive / vulnerable points with essential machinery / equipment	<input type="checkbox"/>	<input type="checkbox"/>
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De-siltation & Cleaning of drains, nullahs and culverts before rainy season	<input type="checkbox"/>	<input type="checkbox"/>
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Daily Situation Report to Tehsil and District Flood Incharge on regular basis	<input type="checkbox"/>	<input type="checkbox"/>
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Restoration of roads immediately after flood	<input type="checkbox"/>	<input type="checkbox"/>
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Irrigation:

Enlistment of all available resources at district level, machinery, human and financial resources	<input type="checkbox"/>	<input type="checkbox"/>
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Chart out required resources keeping in mind the infrastructure and other requirement	<input type="checkbox"/>	<input type="checkbox"/>
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Share the same with district administration well in advance and get funds and resources	<input type="checkbox"/>	<input type="checkbox"/>
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Keep list of Earth moving machinery available with private owners in the district with their name and contact numbers	<input type="checkbox"/>	<input type="checkbox"/>
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Prepare for each headwork and flood protection structure an inventory of equipment, material with locations	<input type="checkbox"/>	<input type="checkbox"/>
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Organize and setup the Flood Emergency Cell in the Department	<input type="checkbox"/>	<input type="checkbox"/>
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Nominate officers to the Provincial Flood Warning Centre by 1 st June	<input type="checkbox"/>	<input type="checkbox"/>
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Operate gauge stations and provide information and data to authorities	<input type="checkbox"/>	<input type="checkbox"/>
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concerned for issuance of Alert and Warning Messages		
Supervise and co-ordinate actions to save stocks, equipment, machinery etc. from damage	<input type="checkbox"/>	<input type="checkbox"/>
Review of structural integrity of flood protection infrastructure and share their observations with District Administration, well before onset of Flood season	<input type="checkbox"/>	<input type="checkbox"/>
Identification of vulnerable points on protective embankments (bunds) where breach could occur and specification of location for positioning of requisite machinery/material near the vulnerable points	<input type="checkbox"/>	<input type="checkbox"/>
Maintenance and repair of protective bunds/embankments, well before the commencement of flood season	<input type="checkbox"/>	<input type="checkbox"/>
Joint inspection of flood protection infrastructure with District Administration	<input type="checkbox"/>	<input type="checkbox"/>
Collection and sharing of information on discharge of water from Dam, Barrages and headwork on river system fall upstream on daily basis	<input type="checkbox"/>	<input type="checkbox"/>
Improvement of existing instruments/gauges used for determination of water discharge (cusecs) in Rivers and tributaries	<input type="checkbox"/>	<input type="checkbox"/>
Development of more effective Early Warning System	<input type="checkbox"/>	<input type="checkbox"/>
Liaison with IRSA authorities, ministry of Water & power as well as Flood Forecasting Centre Lahore, for collection of flood related information	<input type="checkbox"/>	<input type="checkbox"/>
Briefing to authorities concerned on flood protection arrangements and development of an integrated departmental strategy, to be able to combat any situation during floods	<input type="checkbox"/>	<input type="checkbox"/>
Stock piling of essential articles (Stones etc.) to combat any flood related contingency and arrangement of sufficient funds beforehand, for such purposes	<input type="checkbox"/>	<input type="checkbox"/>
Arrangement of Labour along with machinery / equipment for proper maintenance of the vulnerable points, on flood protection arrangements	<input type="checkbox"/>	<input type="checkbox"/>
Identification of points on roads or otherwise, where breaches/cuts are required to be made, to further facilitate discharge of water, in order to avert larger catastrophe	<input type="checkbox"/>	<input type="checkbox"/>
Ascertainment of extent of damage caused to the protection bunds and other installations, after flood water subsides	<input type="checkbox"/>	<input type="checkbox"/>
Initiations of criminal proceedings against elements involved in willful breach in flood protection arrangements without consent of competent authority	<input type="checkbox"/>	<input type="checkbox"/>
Assistance and Coordination in emergency repairs of public services	<input type="checkbox"/>	<input type="checkbox"/>
PTCL:		
Designate focal person for flood emergency response duty	<input type="checkbox"/>	<input type="checkbox"/>
Keep all important phone numbers live and in proper order	<input type="checkbox"/>	<input type="checkbox"/>
Keep adequate stock of the repairing material in emergency scenario	<input type="checkbox"/>	<input type="checkbox"/>
Install new phone line on the instruction of District Administration during emergency period	<input type="checkbox"/>	<input type="checkbox"/>
Community Development and Social Welfare Deptt		
Enlist / register all NGOs within and outside District along with their contact numbers and specialty	<input type="checkbox"/>	<input type="checkbox"/>
Enlistment of all philanthropist of the District with all required details	<input type="checkbox"/>	<input type="checkbox"/>
Work as bridge between Flood Incharge, NGOs and philanthropists	<input type="checkbox"/>	<input type="checkbox"/>

Prepare flood plan for NGOs contributions in collaboration with District level NGOs and also with External NGOs	<input type="checkbox"/>	<input type="checkbox"/>
Keep record of all sorts of donations in kind, goods as well as monetary donations	<input type="checkbox"/>	<input type="checkbox"/>
Will provide officer for District Flood Control Room	<input type="checkbox"/>	<input type="checkbox"/>
Establish relief goods collection points in dry areas especially in dry districts	<input type="checkbox"/>	<input type="checkbox"/>
Distribution of relief goods in collaboration with District Administration	<input type="checkbox"/>	<input type="checkbox"/>
Maintain proper record of all donations and relief goods collected and distributed throughout the District	<input type="checkbox"/>	<input type="checkbox"/>
Provide volunteers for flood emergency operations	<input type="checkbox"/>	<input type="checkbox"/>

Police Department:

Cancellation of all type of leaves after flood alert	<input type="checkbox"/>	<input type="checkbox"/>
No vacant position in flood prone areas	<input type="checkbox"/>	<input type="checkbox"/>
Training of police officials in flood emergency response	<input type="checkbox"/>	<input type="checkbox"/>
Communication equipment in order, Walky Talky, Vehicle wireless sets and stationed wireless room with control room fully operative	<input type="checkbox"/>	<input type="checkbox"/>
DPO shall instruct all SHOs and other officials of flood prone areas to extend full cooperation to Camp Incharge	<input type="checkbox"/>	<input type="checkbox"/>
Provide private boats and divers to Camp Incharge where and whenever required	<input type="checkbox"/>	<input type="checkbox"/>
Facilitate Camp Incharge in communication with Tehsil and District Control room during emergencies	<input type="checkbox"/>	<input type="checkbox"/>
Establish a temporary base in District Flood Control Room and stations in remote areas to facilitate District Govt in communication	<input type="checkbox"/>	<input type="checkbox"/>
Assist camp incharge in timely evacuation of people from low lying areas	<input type="checkbox"/>	<input type="checkbox"/>
Ensure that the looting doesn't happen after evacuation when houses are left unsupervised	<input type="checkbox"/>	<input type="checkbox"/>
Assist camp incharge in arranging transport for relief goods and flood victims at local level	<input type="checkbox"/>	<input type="checkbox"/>
Guide commuters on flood situations, provide alternate routes during flood and control traffic smoothly	<input type="checkbox"/>	<input type="checkbox"/>
Assist flood incharge to keep law and order situation in control	<input type="checkbox"/>	<input type="checkbox"/>
Organize teams in collaboration with Civil Defence and Rescue 1122 to find / search missing persons and dead bodies during flood	<input type="checkbox"/>	<input type="checkbox"/>
Provisionally identify dead people	<input type="checkbox"/>	<input type="checkbox"/>
Burial of unidentified dead bodies	<input type="checkbox"/>	<input type="checkbox"/>
Designate one senior official with cool temperament, as focal person	<input type="checkbox"/>	<input type="checkbox"/>
Focal person will attend all district level flood related emergency meetings	<input type="checkbox"/>	<input type="checkbox"/>
Presence of at least 2 constables with weapon and Walky talky set at camp	<input type="checkbox"/>	<input type="checkbox"/>
Secure key points by deploying forces at such places e.g. bridges, protection bunds etc	<input type="checkbox"/>	<input type="checkbox"/>
During flood VIP movement is frequent therefore DPO would make extra ordinary arrangement to cope up with the situation	<input type="checkbox"/>	<input type="checkbox"/>

SUI Gas:

Presence and availability of stock and position adequate repair material and equipment at strategic location near vulnerable points and river	<input type="checkbox"/>	<input type="checkbox"/>
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crossings

Arrange mobile inspection teams to survey during and after flood ☐ ☐

Maintain supply of gas during floods by ensuring protection of gas supply lines ☐ ☐

Disconnect gas line at locations which have been inundated ☐ ☐

Restoration of GAS immediate after flood ☐ ☐

Information Department:

Coordination and close liaison with print and electronic media ☐ ☐

Public message on local cable for flood warning, print and electronic media ☐ ☐

Issue handouts regarding flood losses without creating panic while working in collaboration with District Flood Incharge ☐ ☐

Issue handout to counter disinformation / wrong report to TV/Radio /Press and clarify the situation ☐ ☐

Assist District Flood coordinator in holding press conference on daily flood situation ☐ ☐

After declaration of flood alert, furnish the press cuttings of flood related news to the District Flood coordinator at 9 am on daily basis ☐ ☐

Projection and dissemination of Government's Rescue, Relocation, Relief, Rehabilitation and Reconstruction efforts ☐ ☐

Close liaison and coordination with all Govt. Departments / Offices ☐ ☐

Establishment of Media Desk during emergencies ☐ ☐

District Flood Control Room:

Declare one number as control room phone permanently forever (Every year the number will be used as control room). This number will only be used to receive calls, no dialing will be allowed during disaster ☐ ☐

One land line and one mobile are made available for dialing and messaging purpose ☐ ☐

Computer with internet be placed for speedy correspondence and delivery of SMS ☐ ☐

At least One cell phone be kept at Control and the number should be conveyed to all concerned ☐ ☐

Add this number in Loudspeaker Announcements during flood warnings and evacuation program ☐ ☐

Shift incharge must be DDO level officers with cool temperament ☐ ☐

Call register, writing pad and pen are essential ☐ ☐

Availability of all numbers of important institutions and persons, landlines as well as mobile ☐ ☐

Every call must be registered ☐ ☐

All complaint must reach logical end i.e. resolution ☐ ☐

Control Room will remain operative 24/7 in Shifts. (Three shifts) ☐ ☐

Shift Incharge will get flood report on hourly basis from head works, barrages and dams on their system ☐ ☐

Keep list of all focal persons from various departments along with their landlines and cells ☐ ☐

Shift incharge to contact each relief camp on resumption of duty and before leaving ☐ ☐

Follow up to all pending issues, problems and complaints ☐ ☐

Rescue 1122:

Rescue and Evacuation	<input type="checkbox"/>	<input type="checkbox"/>
Ensure safety of rescued personnel	<input type="checkbox"/>	<input type="checkbox"/>
Liaison with ambulance services and medical services	<input type="checkbox"/>	<input type="checkbox"/>
Stand by during recovery	<input type="checkbox"/>	<input type="checkbox"/>

Motorboat operation:

Provide list of boats, jackets and other flood emergency related equipment.	<input type="checkbox"/>	<input type="checkbox"/>
Keep and maintain them in working order		
Shift boats and their accessories, on the instructions of District Govt, to desired location well in time after the flood after receiving flood warning	<input type="checkbox"/>	<input type="checkbox"/>
Operate boats, rescue stranded people and facilitate District Govt. in the provision of relief goods and services to stranded people	<input type="checkbox"/>	<input type="checkbox"/>
Recover dead in conjunction with the police	<input type="checkbox"/>	<input type="checkbox"/>
Save lives in conjunction with other emergency services	<input type="checkbox"/>	<input type="checkbox"/>
Extricate, assist and stabilize injured people	<input type="checkbox"/>	<input type="checkbox"/>
Provide ambulances, medical staff, equipment and resources for rescued persons and shift to nearby hospital	<input type="checkbox"/>	<input type="checkbox"/>
Provide communication facilities	<input type="checkbox"/>	<input type="checkbox"/>
Alert receiving hospitals	<input type="checkbox"/>	<input type="checkbox"/>
Arrange transport for injured people	<input type="checkbox"/>	<input type="checkbox"/>
Maintain emergency cover	<input type="checkbox"/>	<input type="checkbox"/>
Register, train and maintain a pool of volunteers for flood emergency	<input type="checkbox"/>	<input type="checkbox"/>
Volunteers from dry UC for support in relief activities accomplish all tasks assigned by DCO / District Flood Coordinator	<input type="checkbox"/>	<input type="checkbox"/>

Tehsil Municipal Administration:

Enlist all available human resources and machinery at the strength of the department	<input type="checkbox"/>	<input type="checkbox"/>
All resources go under the control / custody of AC of the concerned Tehsil	<input type="checkbox"/>	<input type="checkbox"/>
Designate focal person with contact of all staff and resources to coordinate with District Flood Control Room	<input type="checkbox"/>	<input type="checkbox"/>
Ensure insecticide spray at relief camps and inundated areas under their jurisdiction	<input type="checkbox"/>	<input type="checkbox"/>
De-silting, de-clogging and cleaning of sewer lines before the start of monsoon season	<input type="checkbox"/>	<input type="checkbox"/>
Provision of temporary latrines at the safe distance at relief camps	<input type="checkbox"/>	<input type="checkbox"/>
Enlistment of dangerous buildings and declaration of the same as dangerous through local electronic and print media as well as in national print media	<input type="checkbox"/>	<input type="checkbox"/>
Evacuation from dangerous buildings	<input type="checkbox"/>	<input type="checkbox"/>
Provide human resource to keep the relief camps neat and clean	<input type="checkbox"/>	<input type="checkbox"/>
Provide clean drinking water to all camps in their jurisdiction	<input type="checkbox"/>	<input type="checkbox"/>
Restore urban water supply line and sewer lines after flood recedes	<input type="checkbox"/>	<input type="checkbox"/>
Fogging against insecticides in Urban areas	<input type="checkbox"/>	<input type="checkbox"/>
Dewatering of important points	<input type="checkbox"/>	<input type="checkbox"/>

Ensure functioning of disposal station and provision of primary generator and back up electricity supply during monsoon season	<input type="checkbox"/>	<input type="checkbox"/>
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General Public in Flood Prone Areas:

Keep watching TV and Radio regarding flood alerts and warning	<input type="checkbox"/>	<input type="checkbox"/>
Keep liaison with local Numberdars and listen to District Govt. Announcements regarding flood warning	<input type="checkbox"/>	<input type="checkbox"/>
Keep list of useful number, flood control room, Relief Camp, nearest Police station and hospital	<input type="checkbox"/>	<input type="checkbox"/>
Ensure that neighbor know of the warning and be prepare to help them	<input type="checkbox"/>	<input type="checkbox"/>
Discuss a plan with family members, friends and neighbors	<input type="checkbox"/>	<input type="checkbox"/>
Follow the instructions of district Govt for flood emergency	<input type="checkbox"/>	<input type="checkbox"/>
Avoid wet electrical equipment	<input type="checkbox"/>	<input type="checkbox"/>
Untie pets and other livestock before leaving your place	<input type="checkbox"/>	<input type="checkbox"/>
Take out your valuables, personal documents and evacuate the area as advised by the Govt	<input type="checkbox"/>	<input type="checkbox"/>
Store rest of the valuables and property in a raised secure location	<input type="checkbox"/>	<input type="checkbox"/>
Get yourself register with nearest Relief Camp	<input type="checkbox"/>	<input type="checkbox"/>
Or shift to some safer place and stay with your relatives	<input type="checkbox"/>	<input type="checkbox"/>
Avoid using flood water	<input type="checkbox"/>	<input type="checkbox"/>

Annex (D): Contact Details of District / Departmental Flood Emergency Cell & Focal Person

Sr. No.	District	Flood Focal Person	Contact Number
1	Nankana Sab	AC Nankana Sab	056-2824248
		AC Shahkot	056-3711251
		AC Shangla Hill	056-3701279
2	Sialkot	Flood Control Room	052-9250011
		Flood Relief Officer	052-9250456
3	Okara	ADC	044-9200251
		AC Okara	044-9200252
		AC Depalpur	0444-540425-26
		AC Renala	0442-636089, 636146
4	Khusab	ADC	0454-920120
5	Sahiwal	ADC Office	040-9200078
		Divisional Irrigation Office	040-9200222
		Sheikh Nawaz SE LBDC Circle	0345-4667777
6	Gujranwala	District Flood Officer / DCO	055-9200051-52
7	Rahim Yar Khan	AC Rahim Yar Khan	0333-7536576, 068-9230271
		AC Sadiqabad	0300-6769869, 068-5705533
		AC Khanpur	0300-7383025, 068-5571383
		AC Liaquatpur	0345-7308916, 068-5795625
8	Hafizabad	ADC Officer	0547-523536
		AC Hafizabad	0547-523536
		AC Pindi	0547-531294
9	Sheikhupura	DRTA	056-9239009, 0315-4926772
		Mr. Ehsaan (Assistant	0334-4173097
		Mr. David (Jonier Clerk)	0315-4926722
		Sehar Iqbal (Internee)	056-9239009
10	Gujrat	District Flood Officer	053-9260463, 9260010 9260100
11	Pakpattan	Syed Muhammad Masood Numan (ADC Pakpattan)	0321-6619133, 0457-371273
		Mr. Muhammad Aslam Javed (TMO Pakpattan)	0300-6969121, 0457-352415
		Mr. Nasir Noman (TMO, TMA, Arifwala)	0345-6256666, 0457-830266
12	Muzaffargarh	ADC Office	066-9200260
13	Chiniot	DCO Office	047-6330057
14	Bhakkar	DCO Office	0453-9200082
		AC Bhakkar	0453-9200299
		AC Darya Khan	0453-252974
		AC Kallurkot	0453-200909
15	Kasur	Mr. M. Rafique (DOC Kasur)	0300-6901994, 049-9250218
16	Lahore	District Courts Lahore	042-99210630
		ADC Lahore	042-99210614

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17	Sargodha	District Flood Control DCO	048-9230025-26
		ADC	048-9030255-56
		Colony Assistant Sargodha	048-9230267
19	Narowal	Malik Kaleem Ahmad, SDO Shakargarh	0341-6294910
		Divisional Irrigation Office Narowal	0542-412374
		Muhammd younas, SDO Sub Division Narowal	0334-9986282
20	Mianwali	ADC	0459-235005, 234861
21	Attock	ADC Office	057-9316013
22	Multan	District Emergency Officer	061-9200306 061-9220309
23	Lodhran	ADC	0608-9200070
24	Khanewal	ADC	065-9200069
		DOC Khanewal	065-9200030
		TMO, Khanewal	065-9200055
25	M.B.Din	ADC	0546-571288
26	Chakwal	ADC	0543-660102
27	Rajanpur	District Flood Control Room Officer/ District Health Officer	0333-6460769
28	Rawalpindi	District Officer Emergency	0333-4471122, 051-9201218
29	Faisalabad	ADC	0302-8666333
30	Jhang	ADC	0333-6731989, 047-9200107
31	T.T.Singh	ADC	0300-6676621
32	Layyah	ADC	0321-7773535
33	D.G khan	ADC	064-9260334
34	Bahawalpur	ADC	0345-8744144
35	Bahawalnagar	District Flood Control Room	0334-7004340

Annex (E): Contact Details of District Emergency Officers

Sr. No.	Name	Designation	Official Email Address	Contact Numbers
1	Dr. Ahmed Raza	DEO (Lahore)	DEO.LHR@rescue.gov.pk deolahore@gmail.com deolahore@hotmail.com	0332-4441122
2	Dr. Abdur Rehman	DEO (Rawalpindi)	DEO.RWP@rescue.gov.pk	0333-4471122
3	Engr.Ahtsham	DEO (Faisalabad)	DEO.FSD@rescue.gov.pk	0333-8881122
4	Dr. Kaleem	DEO (Multan)	DEO.MUL@rescue.gov.pk	0323-4018426
5	Mr, Ayaz Aslam	DEO (Gujranwala)	DEO.GUJ@rescue.gov.pk	0323-6343900
6	Mr. Mazhar Shah	DEO (Sargodha)	DEO.SGD@rescue.gov.pk	0333-7861122
7	Dr. Natiq Hayat	DEO (DG. Khan)	DEO.DGK@rescue.gov.pk	0333-6475473
8	Dr. Asif Rahim	DEO (Bahawalpur)	DEO.BWP@rescue.gov.pk	0333-9991122 0321-6807001
9	Dr. Abdul Sattar	DEO (RY. Khan)	DEO.RYK@rescue.gov.pk	0332-4321122
10	Dr. Khalid Abdullah	DEO (Sahiwal)	drsect@rescue.gov.pk	0300-9443288
11	Mr. Syed Kamal Abid	DEO (Sialkot)	DEO.SKT@rescue.gov.pk	0301-8616077
12	Dr. Asfahq Mian	DEO(Attock)	DEO.ATK@rescue.gov.pk	0300-5124877 0334-5067431
13	Dr. M Aslam	DEO(Rajanpur)	DEO.RJP@rescue.gov.pk	0300-7627166
14	Dr. Faisal	DEO(Jhelum)	DEO.JLM@rescue.gov.pk	0345-7308299 0313-7308299
15	Dr. M Ijaz	DEO(Khanewal)	DEO.KNW@rescue.gov.pk	0333-7621122
16	Dr. Irshad	DEO(Muzaffargarh)	DEO.MFG@rescue.gov.pk	0321-6871122
17	Dr. Sohail	DEO(Bahawalnagar)	DEO.BWN@rescue.gov.pk	0300-4400232
18	Dr. Tariq	DEO(Jhang)	DEO.JHN@rescue.gov.pk	0300-6500903
19	Mr. Ch. Aziz	DEO(Gujrat)	DEO.GJT@rescue.gov.pk	0300-5149143 0321-8666993
20	Dr. Ehtisham	DEO(Kasur)	DEO.KSR@rescue.gov.pk	0323-3339401
21	Engr. Faraz Munir	DEO(TT. Singh)	DEO.TTS@rescue.gov.pk	0331-7771122
22	Engr. Adnan Nawaz	DEO(Mianwali)	DEO.MNW@rescue.gov.pk	0333-8646254
23	Dr. Tahir	DEO(Pakpattan)	DEO.PKP@rescue.gov.pk	0344-6730994
24	Dr. Farzand Ali	DEO(Sheikhupura)	DEO.SKP@rescue.gov.pk	0300-4355396
25	Muhammad Akram	DEO(Vehari)	DEO.VHR@rescue.gov.pk	0333-8641122
26	Dr. M. Tasleem	DEO(Layyah)	DEO.LYH@rescue.gov.pk	0300-4300693
27	Dr. Majid Ahmed	DEO(Lodhran)	DEO.LDN@rescue.gov.pk	0321-6807524
28	Mr. Naveed Iqbal	EO(Bhakkar)	DEO.BKR@rescue.gov.pk	0300-4434543
29	Dr. Attiq	EO(Chakwal)	DEO.CHK@rescue.gov.pk	0336-0001188
30	Engr. Sibghat Ullah	EO(Hafizabad)	DEO.HFZ@rescue.gov.pk	0333-4175110
31	Engr. Toheed Ullah	EO(Khushab)	DEO.KSB@rescue.gov.pk	0333-6792529
32	Engr. Imran Khan	EO(MB Din)	DEO.MBD@rescue.gov.pk	0321-5141122
33	Dr. M. Azam	DEO(Nankana Sb)	DEO.NKS@rescue.gov.pk	0300-4437996
34	Dr. Munawar	EO(Narowal)	DEO.NRW@rescue.gov.pk	0300-6784589
35	Dr. Zafar	EO(Okara)	DEO.OKR@rescue.gov.pk	
36	Muhammad Farooq	EO(Murree)	Murree@rescue.gov.pk Murree.1122@gmail.com	0321-4260579
37	Ms. Tahira Khan	EO (Chiniot)	tahirabbaskh@yahoo.com	0300-4179020