

# DISTRICT DISASTER MANAGEMENT PLAN 2021

Division: SAHIWAL  
District: PAKPATTAN



Flood Relief Camp



Incident of House collapse Pakpattan 2015



کپتن۔ ڈی پی کوشنر رانا نگیل اسلم ڈسٹرکٹ ایمرجنسی ریسپانس کمیٹی کے جائزہ اجلاس کی صدارت کر رہے ہیں۔



Gas Cylinder Blast & Fire at Pakpattan April 2020

Prepared by: District Administration Pakpattan



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## XX

Estimated number of people at risk of **floods** in 2021



of total population

Risk: Low

## XX

Estimated number of people at risk of Hill Torrent in 2021



of total population

Risk: Medium

## XX

Estimated number of people at risk of earthquake in 2021



of total population

Risk: Low

## XX

Estimated number of people at risk of epidemic in 2021



of total population

Risk: Medium

## EXECUTIVE SUMMARY

The district is bounded to the northwest by Sahiwal District, to the north by Okara District, to the south by the Sutlej River and Bahawalnagar District, and to the southwest by Vehari District. There are 02 Tehsils (Pakpattan and Arifwala).

The district is linked with Okara, Sahiwal and Bahawalnagar districts through metalled roads. The district Pakpattan is linked with Kasur and Vehari districts through railway network.

The source of livelihood in the district is mainly Cotton Ginning & Pressing, Fertilizer, Flour Mills, Oil Mills, Poultry Feed, Rice Mills, Sugar and Textile Weaving Wheat, Cotton, Sugarcane, Maize and Rice. The Pakpattan District is known for the fertility of its soil and most of the population of Pakpattan district makes a living on agriculture.

## AIM AND OBJECTIVES

The plan is aimed to manage emergencies by putting in place requisite mitigation measures and a well-coordinated and integrated response at district level.

The main objectives of the plan include:

- To develop a plan of action for the District Disaster Management Authority and other district stakeholders to set priorities and provide directions for disaster management;
- To define the roles of various stakeholders in disaster management in all the phases pre, during and after disaster;
- To raise awareness of stakeholders about disaster risks and the requirements for disaster management;
- To introduce coordination mechanism for immediate response and rehabilitation at district level;
- To enhance the effectiveness and timeliness of emergency response through the clarification of goals, strategies, roles and responsibilities;
- To strengthen response coordination between government departments and humanitarian organizations (UN agencies, I/NGOs);

# DISTRICT PROFILE

## Socio-Economic Indicators (Average)

S.No.	Particulars	Numbers
1.	Population	18,23,687
2.	No. of Tehsils	2
3.	No. of UCs	54
4.	No. of Revenue Estates	16
5.	Population Density (people per km <sup>2</sup> )	644
6.	Family Size	6
7.	Pop Growth Rate	1.86
8.	PCI	
9.	District GDP/Annual Income	
10.	Poverty Rate	50
11.	Patient/Doctor Ratio	7,000:1
12.	AMR	
13.	IMR	50
14.	MMR	171
15.	Literacy Rate	45%
16.	Global Acute Malnutrition (GAM) rate	
17.	Severe Acute Malnutrition (SAM) rate	5
18.	Percentage of population having access to clean drinking water	35
19.	Annual Crime	5730

### Population

Total	Male (above 18)	Female (above 18)	Transgender
18,23,687	927,881	895656	150

Source/Note: Census 2017

Number of Dwelling Units	Kaccha (Mud/clay)	Pakka (Bricks& Morter)
304405	0	0

Source/Note: Census 2017

### Area (in acres)

Total Area of District in Km <sup>2</sup>	Area under cultivation	Cultivation in Settled Area	Cultivation in Baid Area
2728	611545 Acres		

## Literacy Rate

Overall	Rural		Urban		Total	
	Male	Female	Male	Female	Male	Female
53%	62%	35%	77%	72%	64%	41%

Source/Note: PSLM Survey 2013

## Government Schools

		Number of Functional Schools	Enrollment
Total/ Overall		856	
Boys	Primary	326	50336
	Middle	70	23801
	High/Higher	60	50231
Girls	Primary	278	43597
	Middle	84	28206
	High/Higher	38	34801
Co-Schools	Primary	0	
	Middle	0	
	High	0	

## Private Schools

		Number of Functional Schools	Enrollment
Total/ Overall		539	
Boys	Primary	10	336
	Middle	356	96612
	High/Higher	136	54144
Girls	Primary	0	
	Middle	0	
	High/Higher	37	9073
Co-Schools	Primary	0	0
	Middle	0	0
	High	0	0

## Higher/Technical/Professional Education (Public &amp; Private)

Particulars	College	College (Private)	Universities	Professional	Technical	Commerce	Total
No of Institution	05	31	0	0	02	02	40

## Health Facilities

Particulars	Primary	Secondary	Tertiary	Private Hospital	Total
No. of Facilities	72	2	0	19	93
Annual OPDs	1028583	599696	0	0	1628279
No of beds	210	185	0	151	546
Doctors Available	79	178	0	0	257
Paramedical staff	330	50	0	60	440
Ambulances available	0	0	0	0	13
Mobile Medical Units					

**Livestock:** Small Animals (goats, sheep etc.) **297,638**

Big Animals (cows, buffalos, camel etc) **910,000**

## Main source of livelihood of the community? (in percentage)

Agriculture	Livestock	Poultry	Fish Farming	Services (Public & Pvt)	Business	Expatriates	Industrial Labor	Skilled Labor	Unskilled Daily Labor	General Labor
55%	10%		01%							

## Disaster History - Floods (since 1970)

S#	Year	No. of people affected	No. of deaths	No. of Revenue Estates affected	Houses Damaged (Partially)	Houses Damaged (Fully)	Compensation Paid (Rs.)	Financial Impact (including infrastructure damaged)
1	1988 (500000 Cusecs)							
2	1995 (302000 Cusecs)							
3	2008 (102000 Cusecs)							

## Disaster History – Other disasters (since 1970)

S#	Year	Disaster Type	No. of people affected	No. of deaths	Remarks
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					

## General Information

Particulars	Detail
Neighboring districts and their vulnerabilities	Okara, Sahiwal, Bahawalnagar,
Topographical Features	Nil
Weather/Climate pattern	Rainy season / Temperature 32-47 centigrade / heat waves occurred during the month May, June / Snowfall NIL / weather Winter, Summer, Spring, Autumn
Major Rivers	Sutlej River and across through Suleimanki Headworks at a distance of 20 KM east Haveli Lakha town. Exceptionally High Flood passed through Suleimanki Headworks during 1988 & 1995 Highest Flood level 1988 i.e. 572.50. A length of River Sutlej in District Kasur 60-KM, District Okara 40-KM, District Pakpattan 35-KM, District Bahawalnagar 80-KM.
Major Nullahs / Streams	Nil
Motorway/Highway	Dehli Multan road, Pakpattan to Sahiwal road, Arifwala to Sahiwal road Vulnerable points of motorway/highway
Railways	<b>Between Vehari Kasur Section</b>

	<b>Vulnerable points of Railway</b>
Geological features	<b>Plane land / Tropical Area</b>

**Dams (including small dams)**

Name of Dam	Location	GPS Coordinates	Capacity	High Flood Level	Critical Points, if any	Remarks
There is no Dam in District Pakpattan		X: Y:				

**Major Embankments/Bunds**

Name of Embankment	Length (km)	Starting Point (Revenue Estate /Tehsil Name)	Ending Point (Revenue Estate /Tehsil Name)	Name of Critical/ vulnerable Points	GPS Location of Critical/ Vulnerable Points	Remarks
Ferozpur Flood Protection Bund	8.87	Ferozpur / Pakpattan	Ferozpur / Pakpattan	-	Latitude: 30.237803 Longitude 73.34021	Satisfactory
New Mari Amb Flood Protection Bund	4.89	Mari Amb / Pakpattan	Mari Amb / Pakpattan	-	Latitude: 30.19368 Longitude: 73.305733	Satisfactory
Jamlera Flood Protection Bund	12.65	Jamlera / Arifwala	Jamlera / Arifwala	-	Latitude: 30.077784 Longitude: 72.958397	Satisfactory
Noora Rath Bund	7.5 KM 50% in District Pakpattan 50% in District Bahawalnagar	Noora Rath/Arifwala	Noora Rath/Arifwala	-	Latitude: 30.119819 Longitude:73.165076	Satisfactory

**Breaching Section**

Name of Bund/ Embankment	Name of Breaching Section	Location with GPS Coordinates	Likely Affected Population			Likely Affected Revenue Estate	Remarks
			Male	Female	Children		
There is no Breaching Section in the District Pakpattan							

**Power Houses/Grid Station/Oil Depot/other sensitive installations**

Name	Capacity	GPS Coordinates	Name	Capacity	GPS Coordinates
Pakpattan	132KVA	X: Y:			X: Y:
Noor Pur	132KVA	X: Y:			X: Y:
Bonga Hayat	132KVA	X:			X:

		Y:			Y:
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## Airport / Landing Strips

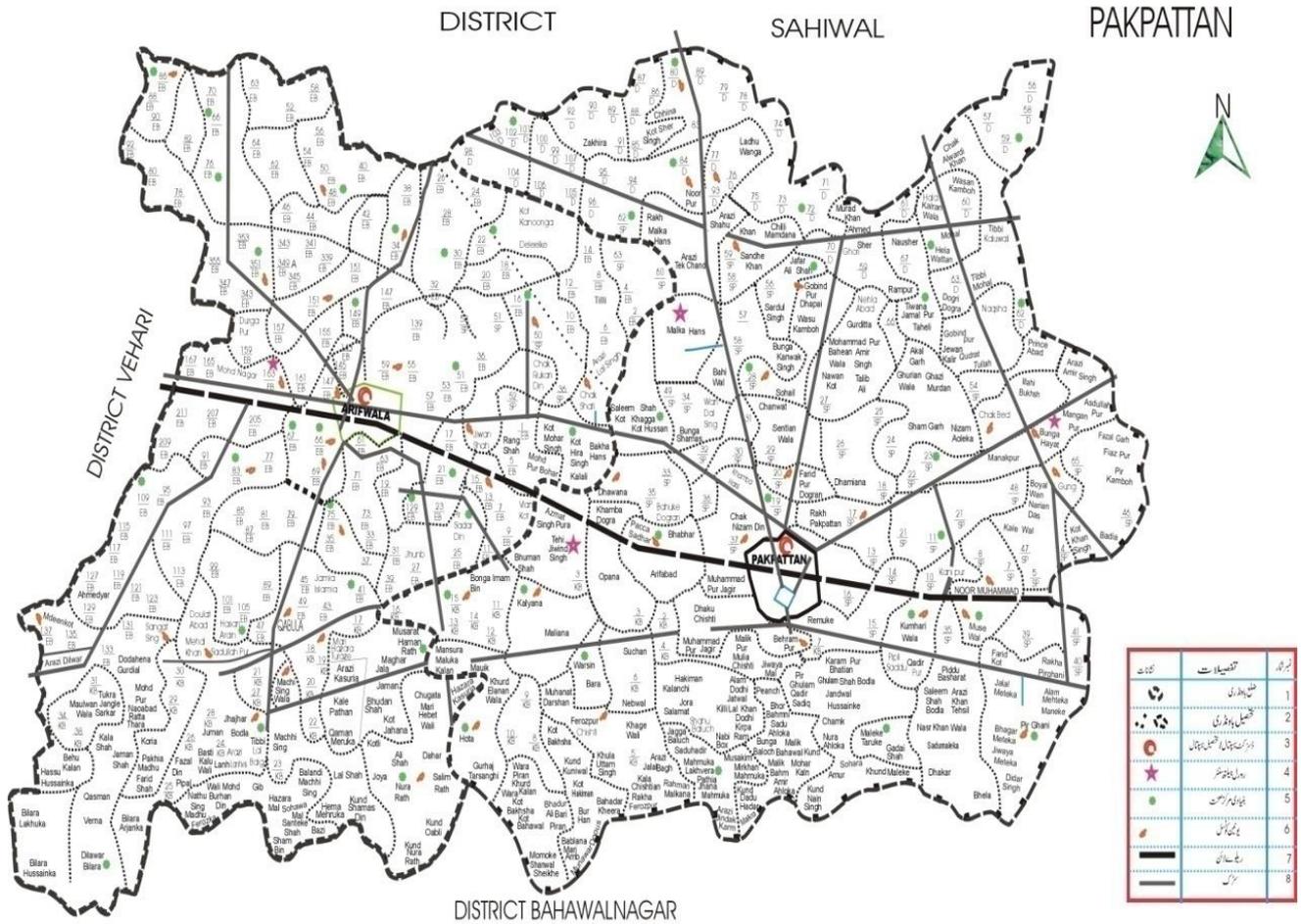
Type	Area Name	GPS Coordinates	Type	Area Name	GPS Coordinates
No Airport in District Pakpattan		X: Y:			X: Y:
		X: Y:			X: Y:
		X: Y:			X: Y:
		X: Y:			X: Y:

## Govt. storage facilities/warehouses in the district

Facility Type	Capacity (M.Tons)	Location with GPS Coordinates	Facility Type	Capacity	Location with GPS Coordinates
BS Arifwala	17082.100	X: Y:			X: Y:
PR Ahmad Yar	8967.00	X: Y:			X: Y:
FC Chowk Marlay	11657.00				
FC Trikhni	12063.00				
PR Pakpattan (Kutchery Godowns)	5658.000				
PR Pakpattan (Ghalla Mandi Godowns)	857.000				
PR Noor Pur Godowns	1602.700				
PR Bunga Hayat Godwns	855.000				
FC Adda Jhanb	4629.000				
Ittfaq Rice Mills Qaboola Pvt. Godowns	4210.200				

District baseline/reference map

DISTRICT  
PAKPATTAN



شماره	تفصیلات	نمبر
☆	ضلعی صدر	1
○	تھسیل صدر	2
●	تھسیل صدر کے صدر	3
☆	ضلعی صدر	4
●	تھسیل صدر	5
○	تھسیل صدر	6
—	رہ سرائے	7
—	سڑک	8

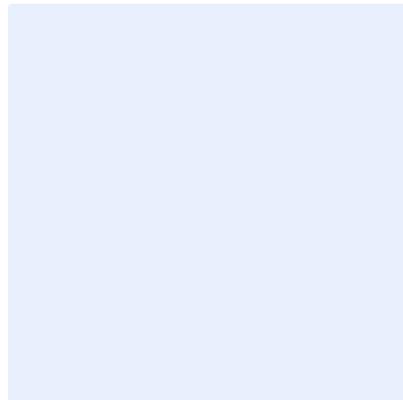
Source:

## COORDINATION MECHANISM

Coordination Organogram (including Sector lead agencies/departments, Military, NGOs and Volunteers)

District Flood Control room has been established in the office of Deputy Commissioner Pakpattan with Telephone number 0457-921020, it remains operational round the clock and one official and naib qasid remain present round the clock. All flood situation reports received in this control room and conveyed to the concerned Assistant commissioner / sub Divisional Control Officer. The daily situation report exchanged on telephone and in case of emergency, police wireless systems also used.

Sr. No	Flood warning centre	Source of information
01	District Flood control Room Deputy Commissioner Office 0457-921011	1. Lahore 042-99200139,99201238 2. Divisional Irrigation office at 040-9200217 3. Police Wireless control Dist. Pakpattan 0457-921060, 15 4. Sector Incharge (NT's /RO's) 5. Patwaris 6. General Public
02	District Irrigation Office Pakpattan XEN-044-2018657 0304-0826776	Pakpattan Subdivision Mian Muhammad Hanif 0300-6869519



**Powers and functions of District Disaster Management Authority under NDM Act 2010:**

The District Authority shall be as the district planning, coordinating and implementing body for disaster management and take all measures for the purposes of disaster management in the district in accordance with the guidelines laid down by the National Authority and the Provincial Authority.

Without prejudice to the generality of the foregoing provisions, the District Authority may:

- a) prepare a disaster management plan including district response plan for the district;
- b) coordinate and monitor the implementation of the National Policy, Provincial Policy, National plan, Provincial Plan and District Plan;
- c) ensure that the areas in the district vulnerable to disasters are identified and measures for the prevention of disasters and the mitigation of its effects are undertaken by the departments of the Government at the district level as well as by the local authorities;
- d) ensure that the guidelines for prevention, mitigation, preparedness and response measures as laid down by the National Authority and the Provincial Authority are followed by all departments of the Government at the district level and the local authorities in the district;
- e) give directions to different authorities at the district level and local authorities to take such other measures for the prevention or mitigation of disasters as may be necessary;
- f) lay down guidelines for preparation of disaster management plans by the departments of the Government at the districts level and local authorities in the district;
- g) monitor the implementation of disaster management plans prepared by the departments of the Government at the district level;
- h) lay down guidelines to be followed by the departments of the Government at the district level;
- i) organize and coordinate specialized training programmes for different levels of officers, employees and voluntary rescue workers in the district;
- j) facilitate community training and awareness programmes for prevention of disaster or mitigation with the support of local authorities, governmental and non-governmental organizations;
- k) set up, maintain, review and upgrade the mechanism for early warnings and dissemination of proper information to public;
- l) prepare, review and update district level response plan and guidelines;
- m) coordinate with, and give guidelines to, local authorities in the district to ensure that pre-disaster and post-disaster management activities in the district are carried out promptly and effectively;
- n) review development plans prepared by the departments of the Government at the district level, statutory authorities or local authorities with a view to make necessary provisions therein for prevention of disaster or mitigation;
- o) identify buildings and places which could, in the event of disaster situation be used as relief centres or camps and make arrangements for water supply and sanitation in such buildings or places;
- p) establish stockpiles of relief and rescue materials or ensure preparedness to make such materials available at a short notice;
- q) provide information to the Provincial Authority relating to different aspects of disaster management;
- r) encourage the involvement of non-governmental organizations and voluntary social-welfare institutions working at the grass root level in the district for disaster management.
- s) ensure communication systems are in order and disaster management drills are carried out periodically; and
- t) perform such other functions as the Provincial Government or Provincial Authority may assign to it or as it deems necessary for disaster management in the district.

**District Plan:**

- a) There shall be a plan for disaster management for every district of the Province.
- b) The District Plan shall be prepared by the District Authority having regard to the National Plan and the Provincial Plan.
- c) The District Plan shall be reviewed and updated annually.

**Additional Powers of District Authority:**

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

- a) give directions for the release and use of resources available with any department of the Government and the local authority in the district;
- b) control and restrict vehicular traffic to, from and within, the vulnerable or affected areas;
- c) control and restrict entry of any person into, his movement within and departure from, a vulnerable or affected area;
- d) remove debris, conduct search and carry out rescue operations;
- e) provide shelter, food, drinking water and essential provisions, healthcare and services;
- f) establish emergency communication system in the affected area;
- g) make arrangements for the disposal of the unclaimed dead bodies;
- h) direct any department of the Government of the Province or any authority or body under the Government at the district level to take such measures as are necessary in its opinion;
- i) require experts and consultants in the relevant fields to advise and assist as it may deem necessary;
- j) procure exclusive preferential use of amenities from any authority or person;
- k) construct temporary bridges or other necessary structures and demolish structures which may be hazardous to public or aggravate the effects of the disaster;
- l) ensure that the non-governmental organizations carry out their activities in an equitable and non-discriminatory manner; and
- m) take such other steps as may be required or warranted to be taken in such a situation.

**Revenue Department (Functions and Responsibilities)**

In case of any disaster or calamity the head of the revenue department in the district i.e. the DC/DC should ensure that the following measures and steps have been taken:

- Taking everyone on board is perhaps the most important thing to do. Regular meetings of DDMA should be held to clearly highlight the roles and duties of DPOs, EDOs, XENs etc.
- Pre-flood meeting should be held and duties of all concerned officers and departments should be clearly defined and assigned.
- A district disaster management plan should be prepared using the set template and updated regarding any disaster or emergency that may strike the district.
- A focal person for the disaster or calamity should be nominated and his/her number should be communicated to all concerned departments.
- Proper stock taking should be done regarding available stocks of food and rations. Similarly stock regarding machinery and equipment should also be taken and inventories should be prepared. Out of order machinery should be repaired or replaced.
- Committees should be formed and constituted which will deal with various functions during a flood or emergency. Purchasing of food items, food, and machinery should all be done through committees.
- Identification of Low lying, medium and high vulnerability levels with flood level
- In case of evacuation the district administration should be very clear about the places where the relief camps or shelters will be established. Teams should be formulated which will look after these camps and will be in-charge for provision of tents, food, water and maintaining general law and order. Provision of cooked food is also to be ensured.
- Proper ware houses and stores should be made available for storing of aid and donated items that may be received from authorities such as PDMA, WFP etc. A committee should be constituted to look after the record of all the items in the store.
- Proper crop surveys or girdawaris should be conducted through the revenue officials so that crop damage assessment can be made after disaster or flood affects the district. These surveys will also help in determining the identity of the true owners as well.

- Post damage assessment should be carried out by joint teams constituted of patwaris, teachers, and agriculture field assistants. Technology should be involved and android sets should be used to gather accurate data.
- Round the clock active control rooms should be set up and the numbers be circulated to all concerned. The control rooms should be equipped with wireless, telephones and computers. All info gathered or received should be conveyed to the concerned. The control room should have representatives of concerned departments such as police, health, 1122, and revenue.
- Early warning is critical in saving lives. The local revenue officials along with local police should be deployed to warn the people against the oncoming disaster and to urge them to vacate the disaster prone areas and villages. Loudspeakers, mosque speakers and word of mouth should be used. Banners and posters can also be used.
- Data collection is of prime importance and the senior network administrator should be declared as the focal person for collection of relevant information such as number of casualties, damages to infrastructure, injured, perished livestock etc. for onward submission to PDMA etc.
- Mock exercises should be carried out along with all concerned departments specially 1122, Police, civil defence and Pakistan army regarding the action plan during any emergency or flood. This will give a fair idea about the preparedness of the district.
- Availability of vehicles should be ensured for use during any emergency especially off road vehicles like jeeps.
- Suitable locations should be identified for accommodating armed forces like the Pakistan army. Normally schools, colleges or stadiums are allocated for the armed forces

#### Checklist for Revenue Department:

- Survey of entire District (Preparation of Village level information by Patwari)
- Identification of Low lying, medium and high: vulnerability levels with flood level
- Liaison of Patwari with Numberdars of their respective villages
- Contacts of all revenue staff posted near river belts and their output in flood prone areas
- List of Numberdars with their contacts, volunteer from low lying settlements with contact numbers
- Prepare list of vulnerable villages and make an estimate of likely affected population in such villages in the event of flood
- Name and contact numbers of private boat owners and operators Announcement of Flood Warning at settlement level – Patwari responsible Forced evacuation with police
- Rapid assessment for relief goods and ration provision Coordination and reporting
- Carry out survey of entire flood affected areas to assess losses in collaboration with Agriculture, Livestock and Education Department
- Conduct crop damaged/ house damaged surveys

#### Metropolitan / Municipal Corporations

##### Municipal / Town Committees

- Local Bodies play an important role of providing municipal services in the district including clean drinking water, sanitation facilities, maintenance of parks and removal of encroachment etc.
- Local Bodies will provide assistance to the District Administration for setting up and management of relief camps/ operations.
- Local Bodies are responsible for provision & restoration of water and sanitation facilities in their municipalities besides disposal of waste or rain water/sewerage.
- Local Bodies are equipped with trucks, water bowsers, tractors, dewatering sets, bulldozers, loaders and dump trucks. All of these equipment are utilized to restore proper sanitary facilities, ensure the delivery of clean water and remove debris or excess water.
- Local Bodies sanitary workers can be employed for cleaning relief camps, or other such areas which has been affected by any disaster.

- Local Bodies employ de-watering sets to remove excess water. All Local Bodies are required to ensure the maintenance of all dewatering sets prior to the monsoon season. The Local Bodies maintains a list of all the choking points where rainy water accumulates as a result of heavy storms which can cause urban flooding.
- Local Bodies should ensure supply of clean drinking in overhead reservoirs and ensure supply to the affected areas or relief camps through water bowsers. Clean drinking water is a major issue and requirement during any disaster.
- In case of any disaster that requires people to be relocated, the Local Bodies under the concerned Administrator i.e Commissioner / DC / AC will assist in the migration of the affected people.
- During the relief effort and subsequent rehabilitation effort the Local Bodies manpower can be effectively used for the distribution of food and essential commodities among evacuated people or any other relief activity such as provision of cash compensation.

### District Disaster Management Authority (DDMA)

- DDMA's are created under the NDM Act 2010 under Chapter IV Section 18 and the law defines their composition and also outlines their functions, duties and powers.
- District Disaster Management Authorities are the first line of defense and the implementing arm of the government policy and plans. Within the district there are three to four key players/departments that have to put up a joint and coordinated effort in order to fight with and handle any disaster under the leadership and coordination of the DC. The office of the DC fully supported by the DPO and line departments such as Health, Agriculture, Livestock, Civil Defence, 1122, Local Bodies and the Revenue Department form the main disaster management team within any given district. This plan is an effort to highlight their sets of responsibilities followed by the role of provincial departments.
- All district administrations had prepared a detailed contingency plan to face any disaster or hazard specially floods which until recently have become an annual affair for some districts.
- The district administration will divide the area as per district division with the Assistant Commissioner as in charge of his her tehsil. All disaster related activities in a said tehsil will be coordinated through the concerned AC and the Local Bodies.
- On receipt of a flood warning, immediate warning will be conveyed to all the concerned officers. Immediate action will be taken in each sector / sub sector for evacuation of the population from risk prone areas to safer places or to Relief Camps. An Assistant Commissioner will ensure that announcements are made through loudspeakers of the mosques utilizing the services of the Revenue department. Each Patwari will inform the Numbardar, Headmaster of the School, Imam Masjid and councillors to make announcements etc.
- 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.
- Provincial government had notified the following composition of DDMA's for whole of the province:
  - i. **Deputy Commissioner (Chairperson)**
  - ii. District Police Officer
  - iii. Additional Deputy Commissioner (Rev)
  - iv. Two Elected Representatives to be nominated by the Chair
  - v. Representative of Pak Army
  - vi. Two Representatives of NGOs/Civil Society to be nominated by the Chair
  - vii. Additional Deputy Commissioner (General)
  - viii. Additional Deputy Commissioner (F&P)

- ix. XEN Buildings
- x. XEN Highways
- xi. Chief Executive Officer (DHA)
- xii. Chief Executive Officer (DEA)
- xiii. SP Special Branch
- xiv. XEN Irrigation / Public Health
- xv. District officer Civil Defense
- xvi. Administrators of Tehsil Councils / Municipal Corporations
- xvii. All Chief Officers of Local Bodies in District
- xviii. District Emergency Officer, Rescue 1122 (Secretary)
- xix. Representative of Red Crescent
- xx. Such other District level Officers to be appointed by District Administration

- District Administrations must establish a Disaster / Flood control room at the DC's office, the numbers of which will be circulated to all concerned. The Disaster / Flood Control Room has to maintain updated information regarding the threat of disaster and statistics post disaster. The center will maintain a regular communication with the Flood Forecasting Division or the dam authorities up stream in case of a flood.
- The District Administration would immediately mobilize the equipment needed to tackle the challenges created by a disaster. The District Administrations will provide a comprehensive list of flood fighting equipment to PDMA as part of their flood contingency plans.
- Executive District Officer (Health) will ensure the availability of adequate medicines for treatment of common issues, particularly for snake and dog bite cases and general vaccines at each relief camp.
- DO (Agriculture) and DO Livestock would arrange fodder and feed supplement for livestock and animals displaced.
- District Regional Transport Authorities (DRTA) in all 36 districts of Punjab are managed by Secretaries who would coordinate with local transporters to arrange for arranging transport required for evacuation of people from affected areas. In case of shortfall in transport in a particular district, the adjoining district would mobilize the transporters in his district to assist with the evacuation of people.

#### **Role of Rescue 1122 in districts during disaster**

- The immediate evacuation of people from the disaster prone and vulnerable areas.
- Provision of immediate medical aid during any emergency and at the same time transporting the injured or sick to the nearby hospital through their team of ambulances.
- In flood situations rescuing people from drowning in the strong currents is a specialty of 1122 as it has its own set of divers and boats. Similarly in case of collapsed buildings or structures the 1122 is equipped with heavy machinery to cut through heavy debris.
- Apart from that responsible 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 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.

#### **Pre-disaster Check list for DDMA**

- Meeting of DDMA held
- Identification of vulnerable areas
- Identification of Safe places

- Preparation of contingency plan
- Bunds and encroachments visited
- Sites identified for relief camps Evacuation routes/plan
- Safe custody of Government records and essential equipment and their shifting to safer areas on receipt of flood warning
- Enlistment of department wise available resources
- Preparation of list of required relief goods/ items
- Involvement of Volunteers, NGOs and other CSOs
- Designation of Focal Person
- Preparation of District vulnerability map with varying degrees of floods
- Evacuation well in time from vulnerable areas
- Establishment of Camps – All services under one roof
- Flood warning and weather forecast: Loudspeakers announcements
- Establishment of control rooms
- Cancellation of all type of leaves of all employees Designation of Focal Persons
- Assignment of duties and responsibilities of all officers for flood emergency
- Preparation of Telephone Directories with the cell numbers of all the members of DDMA's and volunteers
- No leave during flood days; No official will leave station

#### **Disaster Emergency Control Room (functions and responsibilities)**

District Flood Control has been established in the Office of District Coordination Officer, Sahiwal with telephone No.040-9200078, it remains operational round the clock and one official and Naib Qasid remain present round the clock. All flood situation reports are received in this control room and conveyed to the concerned Assistant Commissioner / Sub Divisional Control Officer. The daily situation reports are exchanged on telephone and in case of emergency, police wireless system is also used.

#### **2.3 FLOOD WARNING SYSTEM**

Sr. No Flood Warning Center Source of Information

- 1 District Flood Control Room DC Office, Pakpattan (0457-921011)
1. Met. Dept. Lahore (042-99200139)
2. Divisional Irrigation office at (040-9200217)
3. Police Wireless Control Distt. Pakpattan (0457-921060)
4. Sector Incharges
5. Patwaris
6. General Public
7. District Irrigation Office Pakpattan  
XEN Sulemanki (0304-0826776)  
Sub Division (0457-921073)

**Checklist for Control Room:**

- Dedicated Staff as per magnitude of the disaster
- Duty roaster of the staff
- 2 Dedicated telephone lines
- Dedicated Fax
- Wireless
- Internet and Email or any other source of communication
- Power backup

**Checklist for Relief Camp Incharge:**

- List of staff displayed with name and department teams will work in shifts
- Presence of representatives of all service providers i.e. Health, livestock, Rescue 1122, Civil Defence etc.
- No movement without the permission of Centre Incharge
- Each shift in-charge to contact District Control Room on arrival and then on departure
- In-charge will keep close liaison with SHO of the respective area
- No of affectees in camp (sick, aged and children) shall be communicated daily
- Availability of at least one emergency vehicle at center be ensured
- Keep record of private boat owners and their contacts details
- List of Doctors and private hospital in the vicinity
- List and contact of philanthropists in the vicinity
- Keeping record of donations coming directly to Centre and report the same to Tehsil and District Incharge.
- Centre Incharge shall ensure vaccination of animals and humans against Communicable diseases
- List of missing persons must be displayed at all Relief Camps

**Role of Health Department**

The public sector health delivery system comprises of four tiers and as such will continue to provide services at these four tiers during and after any disaster:

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

In case of any disaster or calamity the health department will ensure that the following measures are in place;

- To provide first aid to the injured people and arrange evacuation of patients for further assistance.
- Medical camps and mobile health teams should be arranged for prevention and control of communicable diseases, immunization and provision of essential drugs.
- Health department would make a roster of all medical officers and paramedics that would be deployed to these camps and teams.
- Drugs and other medical equipment should be available at all these camps and with mobile teams. The medicine should be for relevant flood related issues, **particularly Anti-snake venom, Anti-rabies.**
- The shelters or relief camps established by the district administration should have medical centers with ambulances and special facilities for women and children.
- 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 control room.
- A list of essential medicines would be prepared by the Health department and it would ensure that medicines and other resources are present in sufficient stocks in hospitals in disaster hit areas.
- Medical colleges may be involved to create Emergency Response teams
- Health department would also coordinate with international organizations such as WHO and UNICEF.
- Extensive disease surveillances in the disaster hit areas should be carried out warnings if needed be issued through the Disease Early Warning System.

- Medical teams and paramedic staff should be mobilized and deployed for rapid assessment and quick response in the affected areas.
- A contingency plan will be prepared and submitted regarding preparedness for any disaster or calamity.
- 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 department would employ female health workers in emergency areas specially, for spreading awareness regarding health risks in a disaster and for any vaccination or immunization programme that may be needed during any emergency.
- A Health and Nutrition Cluster for overall management and oversight of Health department's disaster response would be formed at the Directorate General Health office.
- 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.

### **Civil-Military Coordination Mechanism**

Military Assistance is solicited formely through Home Department according to the required emergency situations.

Past experience reveals that military is requested to come in aid of civil administration during elections and Muharram & Urs. During flood each of the relief centers is provided military personel to ensure relief activities.

Quich Relief Force is formed to respond to any untoward situation and mini Head quarters are establsihed at central locations. Logistics like POL, fire wood, vehicles, telecommunication alongwith bording & lodging are provided to the military contigents. During Muharram, military is usually kept at certains vuluerable points and called in to the field only if some untoward incident takes place. However, no such untoward incidents has so far been reported in the past few years in Pakpattan.

**Volunteer Network**

*E.g. how many registered volunteers, how to activate them, who will coordinate with them etc.*

According to the list of NGOs working under social welfare in the district and philanthropists, the volunteers help the district Govt. and relevant departments play their own role in any emergency but due to their limited resources they need community's assistance. In this way NGOs/philanthropists/volunteers mobilize the community resource and develop relief centers to collect relief items as per need and deliver/supply where needed. Volunteers of the civil defence office are required for assistance of affected/victim persons during the flood season.

# RISK ANALYSIS

## 1. Potential hazards of the district

Hazards	Likelihood (Score 1-5)	Impact (Score 1-5)	Risk
Floods	2	2	4
Urban Flooding	1	2	3
Flash Floods	1	1	1
Hill Torrent	0	0	0
Glacial Lake Outburst Flood (GLOF)	0	0	0
Landslide	1	1	1
Tornado	0	0	0
Earthquake	2	1	2
Drought	0	0	0
Epidemic	2	1	2
Fire Incidents	3	2	6
Other Major Accidents (Building Collapse, road traffic accidents, train accident, Stampede, plane crash)	3	3	9
Environmental Hazards (industrial accidents, severe pollution etc.)	3	3	9

Risk = Impact x Likelihood

Low : 1-7

Medium : 8-14

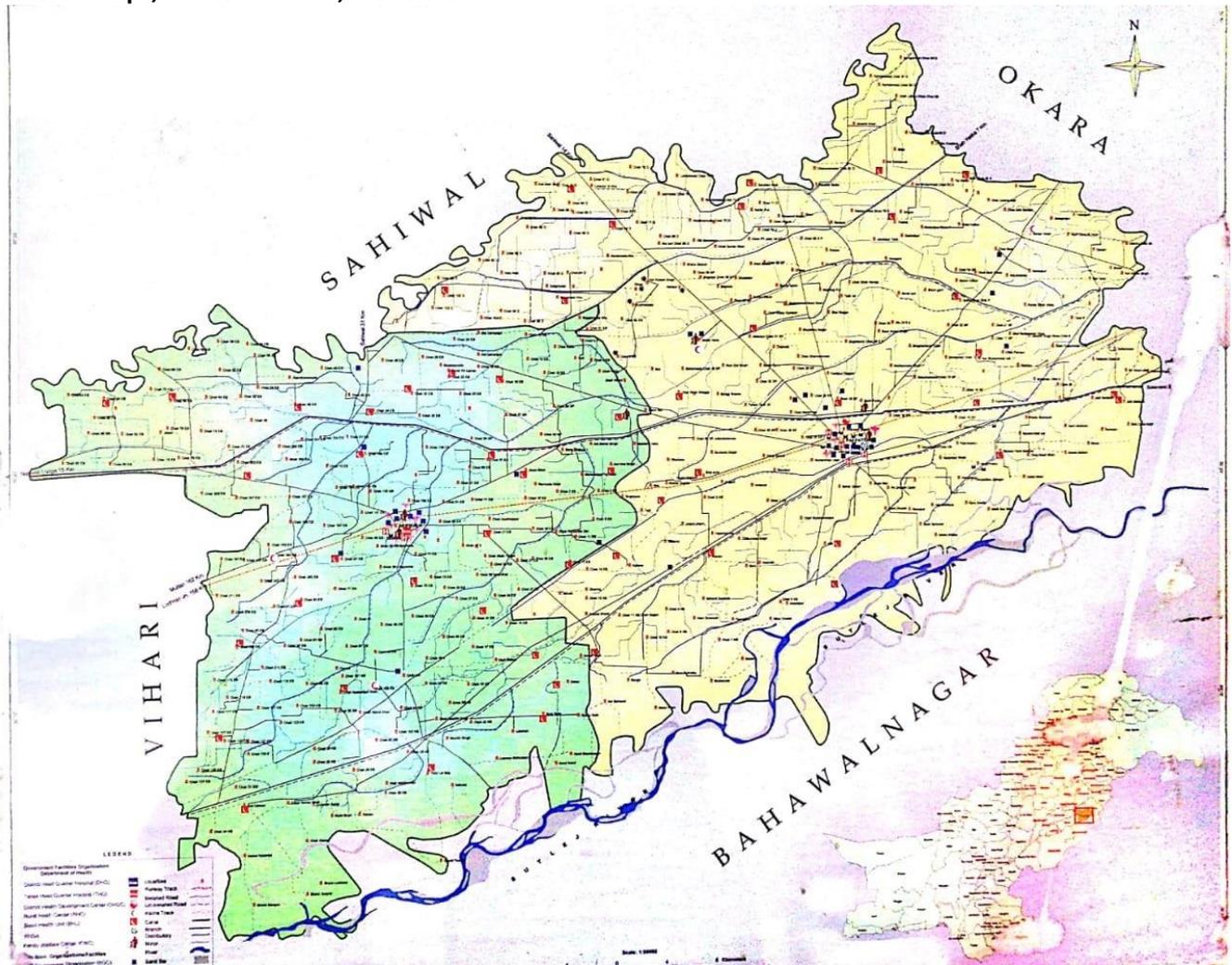
High : 15-25

## 2.Hazards

- *Disasters occurred over the past two to three decades and their impact on communities and development sectors*
- *Provide a brief description of the hazards being planned for (medium and high risks), including potential location that could be affected;*
- *Briefly outline the triggers*

The District Pakpattan surrounded by two Rivers i.e River Satluj and river Khushak Bayas. As there is no water in khushak bayas so it is not vulnerable in context of flood. The river Satluj enters to the district pakpattan from the east side and passes through tehsil Papattan and Arifwala from its southern boundary covers an area of 75-Km approximately. There is history of floods of Satluj river. In 1955 a very high flood was recorded as 597000 Cs. A huge population, area and Government infrastructure were damaged in Pakpattan and Arifwala. Similarly in 1988 & 1995 the river Satluj with its discharge of 500000 Cs & 302000 respectively at Headworks Sulemanki badly effect various villages and cause heavy damages to human, animals lives and crops.

District detail map with vulnerable points including (Rivers, Nullahs, Hill Torrents, Wheat Gowdowns, hazards, planned camps, health facilities, warehouses.



Source:

### 3. Response & Operational Capacity

*Briefly describe the existing response capacities in District (including government and NGO partners)*

The District Pakpattan has got fairly good response capacities both on the on the part of government and its NGO partners. The District has got public hospitals and a number of private health facilities. The urban infrastructure which is sufficient to cope with any likely disaster both natural or imposed by some unwanted human intervention. The district emergency set up is also well-equipped and trained to respond promptly and accurately. Mock exercises are also part of usual training and keep the emergency response in proper shape.

## 4. Strategic Reserves

Items	Available	Functional	Non-Functional	Extra Demand
Boats	7	7	0	3
Inflatable Boat	1	1	0	0
OBM	8	8	0	0
De-watering sets				
Navigators				
GIS devices				
Life Jackets	157	157	0	0
Life Ring	62	62	0	0
Life Lines (Ropes)	0	0	0	10(100 Feet)
Scuba diving suit with complete accessories				
First Aid Kits	10	10	0	0
Rescue Bag	10	10	0	0
Safety Harnesses	4	4	0	0
Ambulances	13	13	0	0
Fire Brigade	2	2	0	0
Water Tanks / Bouzers	1	1	0	0
Extendable Ladders	3	3	0	0
Hydraulic Cutter	1	1	0	0
Sonar Rader				
Jumping Sheet	4	4	0	0
Dumpers				
Excavators				
Cranes				
Bulldozer				
Boat Carrier/Trolleys	1	1	0	0
Pickups/Jeeps/4x4 vehicles/Mini Trucks				
Search light	5	5	0	10
Tent	750	750	0	0
Mosquito Net				
Plastic Mat	612	612	0	0
Blanket	80	80	0	0
Any other main relief/rescue equipment	0	0	0	0
Generator Sets (2.5 KVA) with Accessories	0	0	0	07
Gas-Cutters				
Sonar Radars				
Navigator/GPS Tracker				
LED Lamp with Accessories (45 W)	0	0	0	14
Floating Rope	0	0	0	0
Pedestal Fans	0	0	0	7

## 5.Gaps and Constraints

- *Briefly outline the capacity gaps in the provision of rescue and response;*
- *Describe major obstacles to providing humanitarian assistance (security, access constraints, administrative obstacles, logistics, etc.)*

Due to the budgetary constraints the coverage and quality of municipal service delivery is affected. The major source of receipts of the municipalities is the fiscal transfers from the provincial government of their share in the provincial consolidated fund based on the PFC Award announced by the Provincial Finance Commission. The budget is insufficient and machinery is curcial need for such purpose as well as human resource is also mandatory. To overcome natural disasters there is a dire need for training plan.

## MITIGATION STRATEGY

- ✓ Briefly describe what measure could be taken to reduce the impact of the potential disasters.
- ✓ Strategic pre-positioning of available relief stocks
- ✓ Public education and community awareness

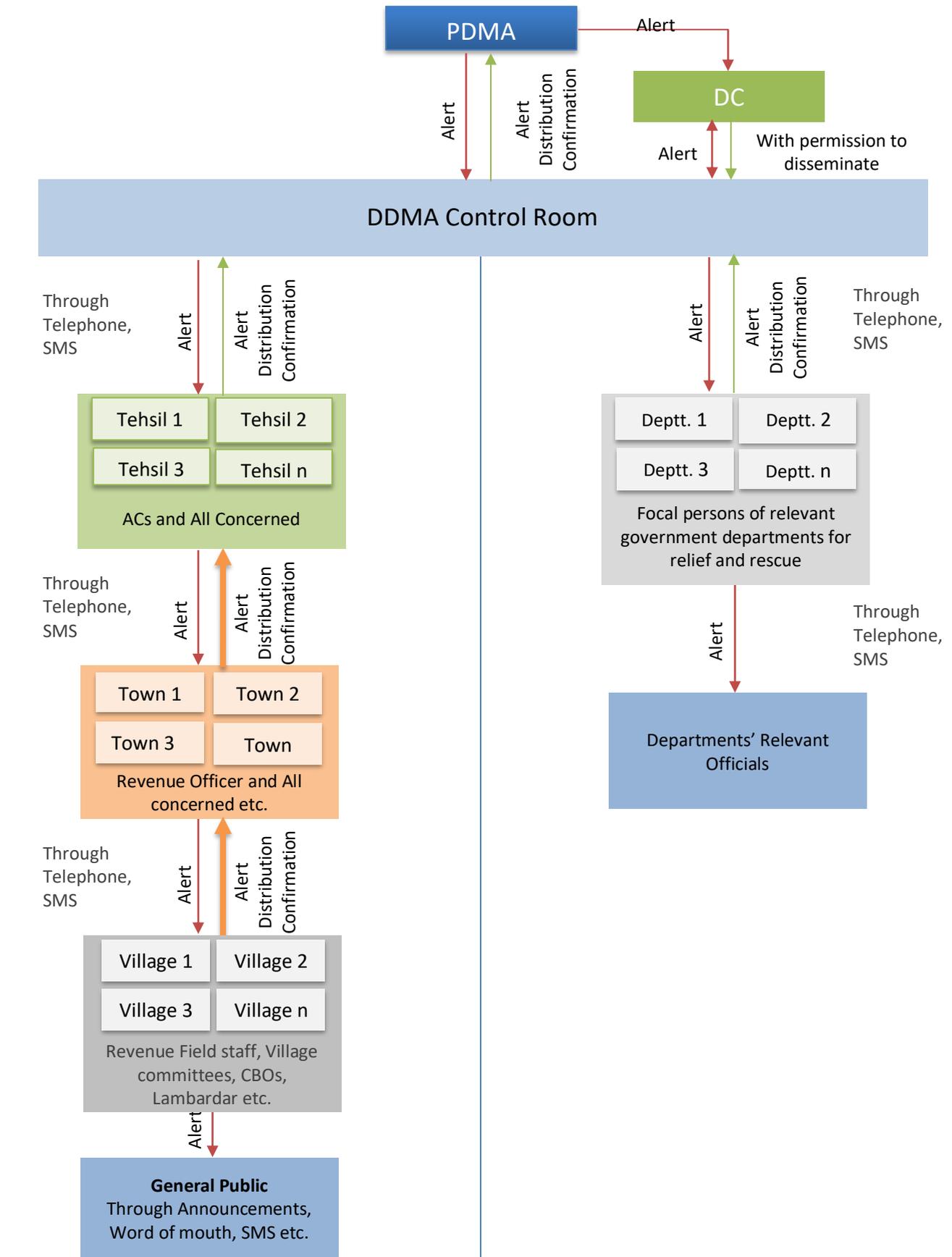
Hazards	Mitigate Actions	Responsible Department
Floods	<p>Mock exercises regarding flood are conducted with all departments in District.</p> <p>Medical camps may be established in flood affected areas.</p> <p>Public awareness campaign for timely evacuation from flood affected areas.</p> <p>Ensure coordination with all departments for timely response in flood prone areas.</p>	<p>Irrigation, Rescue 1122, Health Department MC, Revenue Department , Live Stock Department</p>
Urban Flooding	<p>The waste water disposal stations are in bad shape because of out dated and workout structure. The sewage pipe line are also old and work out. The same is meant to catch the rain water as well. Hence, poses great threat towards urban flooding in rainy seasons especiously when power failures occure.</p>	
Flash Floods	<p>Maximum funds are required for rehabilitation of inhabitants of Dhaki for this purpose major projects is necessary to be made on urgent basis. Owing heavy rain during flood season/ moonson season. A main issue of sliding is generated thefore it is necessary to be arranged at the earliest.</p>	
Hill Torrent	NII	
Glacial Lake Outburst Flood (GLOF)	NII	
Landslide	NII	

Tornado	NII	
Earthquake	NII	
Drought		
Epidemic		
Fire Incidents	Small fire incidents become of shot circuits and decanting of liquified petroleum gases do assure of and on in the city but Fire service both of MC and Rescue 1122 is equiped enough to respond to any such situation.	Rescue 1122, Fire Bregade, MC
Other Major Accidents (Building Collapse, road traffic accidents, train accident, Stampede, plane crash)	<p>Ensure to prevent one wheeling</p> <p>ensure to prevent high speed and overloading</p> <p>ensure to use helmets</p> <p>ensure to use safety belts</p> <p>ensrue to use reflectors behinds trolley and rikshawas</p> <p>ensuree demolishing of old and dengerious buildings</p> <p>ensure safety protocole to be followed in high rise build ings</p> <p>evacuation plan must be ensured</p> <p>enter &amp; exist points must be declared</p> <p>industries should not be situated in residential areas</p>	Rescue 1122, Health Department, Moter way Police, MC, Tariffice Police.

	<p>ensure to conduct evacuatin drill in all schools, colleges, universities and industries.</p>	
<p>Environmental Hazards (industrial accidents, severe pollution etc.)</p>		

# EARLY WARNING

## Information Flow Diagram



## Alertness Levels

Following four levels alertness have been established:

<p><b>Level-D</b> (Disaster threat is perceptible)</p>	<p>DDMA shall conduct monthly meetings besides atleast 2 mock exercises as per DDMP, well in time, to make the concerned officers/officials understand their role and responsibility for better coordination and testing of rescue and relief equipment. DDMA shall also ensure the physical presence of concerned staff deputed and availability of equipment/resources for all designated vulnerable sites within given time frame during disaster. Vulnerable site's inspections and necessary works/action shall be carried out as mitigation measures.</p>
<p><b>Level-C (Alert)</b> (Warning issued but likelihood of occurrence is less than 100%)</p>	<p><b>Activities to be undertaken in level D</b> + DDMA shall issue “<b>alert</b>” to all concerned for the vulnerable area. DDMA and LDMA (tehsil level) control rooms be made operational 24/7 and ensure availability of all required (available and additional) resources for on call mobilization and monitor the situation 6 hourly. Only DC and DPO shall grant leave according to the situation.</p>
<p><b>Level-B (High Alert)</b> (Disaster threat is imminent)</p>	<p><b>Activities to be undertaken in level C</b> + DDMA shall issue EW to all stakeholders and “<b>High Alert</b>” for the district to ensure that all additional HR and material resources including volunteers has reported to their assigned duties, and all resources for evacuation and disaster management have been mobilized as per DDMP. All emergency (health, fire, rescue 1122, MC etc) facilities shall work 24/7 with full staff strength. DDMA shall monitor the situation on hourly basis.</p>
<p><b>Level-A (Red Alert)</b> (Disaster is materialized)</p>	<p><b>Activities to be undertaken in level B</b> + DDMA shall respond to the emergency immediately and shall carry out rescue and relief operation as defined in DDMP and shall continuously monitor the situation. Resources of adjoining districts shall be mobilized and Army may be called keeping in view the magnitude of the disaster.</p>

## Early Warning

*Briefly describe how the early warning will be received from provincial level?*

*Who is the focal person at district level?*

*Functions of District/Tehsil Emergency Control Rooms in early warning*

*How the early warning will be communicated to relevant departments for different disasters? What actions each relevant department should take after receiving the early warning e.g. evacuation.*

*How the early warning will be communicated to the relevant population? E.g. through Patwaris, SMS, Announcements, Media etc.*

A District Control Room is established throughout the year. The controls rooms at each Tehsil headquarter are established at the start of each flood season or as soon as any severe weather/ disaster alert is generated from the Provincial Headquarter, under the direct supervision of each Assistant Commissioner. Each District department especially police and Rescue 1122 also established their separate control rooms. The District Control Room is directly monitored by the District Coordination Officer or his nominee (ADC or DOC etc).

As soon as some alert situation is initiated the lower revenue formations i.e. upto Patwaris are intimated and directed to respond immediately through landline and cellular networks e.g. evacuation of population of any target area. Safe haven are already identified to more the target population thereto e.g. schools etc. Camps of all emergency services departments are also established therein as required by the magnitude of the emergency situation.

## RESCUE STRATEGY

- *What actions will be taken as an immediate response to the situation? E.g. Evacuation, medical assistance*
- *Who does what and when? Responsible departments/agencies*
- *How and when Pakistan Army will be requested to support the rescue activities*
- *Camp sites identified? List at Annex I.*

1. As an immediate action, information is to be disseminated to the target area/population through announcements on local speakers and drum beats by the lower revenue field staff.

2. Rescue 1122 responds to any emergency situation in minimum possible time and other departments like Health and Civil Defense follow suit. District administration is always alert to make up the deficiencies and fill up the gaps by mobilizing communities through NGOs and its own revenue field formations.

3. Pakistan Army is usually kept on call and invited only when the situation is out of control of the Civil Administration. In Pakpattan, usually two companies of Army are deployed during elections or Muharram processions.

## HUMANITARIAN ASSISTANCE

- *How damage and losses data will be collected and communicated to higher level?*
- *How the priority needs (e.g. food, shelter, health etc.) will be determined?*
- *What activities will be carried-out to provide assistance to the affected population and by whom?*
- *What assistance will be provided?*
- *Standardization of different packages/kits e.g. food, tents*
- *Humanitarian Assistance monitoring mechanism – to avoid duplication and identify gaps*
- *Minimum standards for camps, if camps are established*
- *What is the current capacity in the district? Enough for how much caseload?*
- *Explain how protection, gender and age, environment and other relevant cross-cutting issues that will be addressed or mainstreamed into the humanitarian assistance strategy*

The damage and loss data is collected by registration of affectees of any disaster either in the relief camps established for the displaced people through revenue/ agriculture field formations in case of damage to life or property/crops etc in case of earth quakes, floods etc. Usually, a third party validation is done to authenticate the validity of data either by out sourcing the task to some well renowned national/international firm or a neutral team from some neighbouring district is detailed to conduct the data validation by field visits of the actual disaster stricken area.

Usually, the relief activities are designed and provided as per UN standards regarding food, health, shelter etc which are constantly monitored by PDMA onmitoxs and even independent NGOs, working in aid of the government. Philanthropists provide food hampers and langer petrol diesel and another foodstuff for the assistance of affected / victims persons of the flood .

## ANNEX I: IDENTIFIED SITES FOR DISPLACED PERSONS

S#	Location	No. of persons which can be accommodated	GPS Coordinates	S#	Location	No. of persons which can be accommodated	GPS Coordinates
1	BHU Pir Ghani Pakpattan	250	X: Y:	16			X: Y:
2	Govt. Elementary School Basti Ghulam Farid Pakpattan	300	X: Y:	17			X: Y:
3	Govt. Elementary School Malik Bahwal Pakpattan	200	X: Y:	18			X: Y:
4	Govt. High School Feroze Pur Chishtian Pakpattan	250	X: Y:	19			X: Y:
5	Veterinary Hospital Mari Amb Pakpattan	250	X: Y:	20			X: Y:
6	BHU Hotta Pakpattan	200	X: Y:	21			X: Y:
7	Govt. High School Noora Rath Arifwala	200	X: Y:	22			X: Y:
8	BHU Arazi Dilawar Arifwala	300	X: Y:	23			X: Y:

9	<b>Al-Farid Oil Mill Chowk Marly Arifwala</b>	250	X: Y:	24			X: Y:
10	<b>Govt. Boys Primary School 25/KB Arifwala</b>	200	X: Y:	25			X: Y:
11	<b>Union Council Office Goharabad Jamu Bodla Arifwala</b>	150	X: Y:	26			X: Y:

## ANNEX II: LIST OF HAZARD PRONE VILLAGES/REVENUE ESTATE (NAMES REQUIRED)

Hazards	Tehsils	UCs	Names of Revenue Estates
Floods	02	6	40 Bhella, Dhakkar, Malay Kay Taroo Kay, Kund Malay Kay, Ameer Ahlu Ka, Kund Saddu Haider Malkana, Chak Ameera AhluKa, Mustaqeem Mamuka, Meer Khan Mauka, Meer Khan Mamuka, Kund Mahaar Kalan, Kund Nain Singh, Rakh Feroze Pur, 5/KB, Rehmani Malkana, Chak Khaggay Wala, Arazi Jhajhal Bhag, Bahadar Ali, Shaikhay Kay, Mumay Kay , Tirsangi, Sahanwali, Belari Peeran, Bablana, Munawar , Kadoos, Mari Umb, Kund Noora Rath. Kund Shamas Din, Kund Kabal, Belari Kasooria, Belara Delawar, Belara Lakhu Ka, Kalia Shah, Belara Hassan Ka, Hassu Hassan Ka, Sohawa-Mal, Natha Singh, Sham Din, Shahbazi, Bilara Arjun Kay, Madhu Feroz Kay, Mouza Santhy Kay
Urban Flooding	Nil		
Flash Floods	Nil		
Hill Torrent	Nil		
Tornado	Nil		
Earthquake	Nil		
Drought	Nil		

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Epidemic	Nil			
Environmental Hazards (industrial accidents, severe pollution etc.)	Nil			

## ANNEX III: LIST OF HEALTH FACILITIES AND THEIR VULNERABILITY TO HAZARDS

S#	Name and Location	GPS Coordinates	Health Facility Type (Primary, Secondary, Tertiary )	Name and Contact No of Focal Person	Hazard Vulnerability (Floods, Earthquake etc.)
1	Pir Ghani	X: 30.3777 Y: 73.5932	BHU	Dr.M.Asif 0303-9379539	Flood
2	Malika Taroo	X: 30.3386 Y:73.4992	BHU	Dr.Hamaad Subhaani 0304-4652202	Flood
4	Hota	X: 30.1948 Y: 73.2023	RHC	Dr.Anum Nasir 0302-4176656	Flood
5	Noora Rath	X: 30.1537 Y:73.1635	BHU	Dr.Sidra 0334-7462989	Flood
6	Behli Dilawar	X: 30.095 Y:72.953	BHU	Dr.M. Faisal 0300-5170533	Flood
7	Tibbi Lal Baig	X: 30.1148 Y:73.0823	BHU	Dr.Hassam Ali 0321-7001607	Flood
8	Gadai Shah			Sikandar Ali 0345-7971556	Flood
9	Malik Bahawal			Dr. Arslan Javed 0332-0755564	Flood
10	Feroz Pur Chishtian			Dr. Umar Hameed 0331-7163007	Flood
11	Hassuu Hasan Ka			Dr Nadeem Khalid 0306-5105977	Flood
12	Kot Baksha			Mr.M.Yousaf 0304-2891408	Flood
13	Didar Singh			Mr. Muneer Ahmad 0305-6314971	Flood

## ANNEX IV: LIST OF VULNERABLE EDUCATIONAL INSTITUTIONS

SR.NO	NAME	Primary/ Middle/ High	GPS COORDINATES	ENROLL MENT	IN-CHARGE	CONTACT. NO
1	GHS PIR GHANI	High	-	-	Jamshed Iqbal Kamboh	0301-7383982
2	GHS Feroz Pur Chishtian	High	-	-	Hamad Ullah Chishti	0302-6780740
3	GHS Hotta	High	-	-	Fakhar Hayyat	0300-6942873
4	GHS Noora Rath	High	-	-	M.Ashraf	0301-7240427
5	GHS Tibbi Lal Baig	High	-	-	Muhammad Rafique Saqi	0303-7782782
6	GES Basti Ghulam Farid	Middle	-	-	M.Sarwar	0300-6946273
7	GES Malik Bahawal	Middle	-	-	Muhammad Afzal Khan	0312-6051529

## ANNEX V: LIST OF INDUSTRIES WITH THEIR RISK LEVEL

Sr#	Category of Units	Number
1	Cotton Ginning Factories	34
2	Oil Mills	5
3	Rice Mills	71
4	Cold Storages	43
5	Ice Factories	43
6	Flour Mills	7
7	Brick Kilns	140
8	Poultry Feed	3
9	Agricultural Implements	1
10	Dairy Products	1

## ANNEX VI: LIST OF NGO WORKING IN THE DISTRICT

S.No	NAME OF NGO	NGO TYPE (LOCAL, NATIONAL, INTERNATIONAL)	LOCATION WHERE THEY ARE WORKING	SECTOR/CULUSTER OF WORK (e.g WASH, HEALTH, EDUCATION	CONTACT PERSON NAME	CONTACT PERSON MOBILE
1	2	3	4	5	7	8
1	Public Welfare Society Arifwala	Local	Moh. Muzaffar Abad Arifwala	Education	Ch. Abdul-Ghani	0301-7240678
2	Public Welfare Society Pakpattan	Local	Basi Street Pakpattan	Health	Huraria Nawaz	0345-4536247
3	Sahara Welfare Foundation	Local	GaliTaameer-E-Millat School WaliTibbaSherkot Pakpattan.	Education	Mrs. Mehr-Un-Nisa	0331-7179460
4	Arifwala Development Program Arifwala	Local	Chowk Kumharan Wala Arifwala	Education	Nighat Rana Raja Fida Hussain	0300-4600187
5	DehiTarqiyati Council	Local	MozaKalyana Pakpattan	Student, Child and Women Welfare.	Muhammad Umar	0301-4829107
6	HamdaradAnjuman Basti Seal Gaon	Local	Basti Seal Gaon Chak No 23/SP Pakpattan	Education	Muhammad Islam	0300-8753912
7	AnjumanIslah-e-Moushara Arifwala	Local	Chak No. 38/E.B Arifwala	Education	Muhammad Shafique Bhatti	0301-6934238 0301-6929300
8	Deaf & Dumb Association	Local	Gala Mandi Bazar Pakpattan	Disabled Person's Welfare & Education	Syed Zafar Ullah Shah	0300-8755061
9	AnjumanIslah-e-Moushara Pakpattan	Local	College Road Pakpattan	Education	Dr. Iqbal Ahmad	0333-6944251
10	AZAM Foundation Pakpattan	Local	Mohallah Islam Colony Pakpattan	Health, Education,	Muhammad Jameel Fareedi	0300-6940751
11	Social Development Foundation	Local	Saddat House Sahiwal Road Pakpattan	Education	Syed Hamad Raza Bukhari	0300-8750508
12	Human Rights Society	Local	Opposite Distgrict courts Road Pakpattan	Education, Health,	Rao Naseem Hashim	0300-6949000

13	District T.B. Association	Local	By Pass Road Madina Town Pakpattan	Health	Hakim Lutaf Ullah	0300-6947003
14	Roshni Welfare Society Pakpattan	Local	Moh. PirKaryaana Pakpattan	Education, Health,	Iftikhar-ul- Hassan	0300-4906098
15	Waqar Women Welfare Association	Local	Chak No. 28/EB Arifwala	Education	Waqar-Un- Nisa Shazia Saleem	0300-8969128, 0340-6154801
16	One Welfare Society	Local	Adda Rang Shah Tehsil Arifwala District Pakpattan	Health	Muhammad Insha.	0346-2584708
17	Khidmat-E-Khalaq Welfare Society	Local	Khawaja Aziz Makki Road Pakpattan	Health	Nazir Ahmad Faridi	0302-6940879
18	Skill 4 Success Welfare Society Pakpattan	Local	Daha Street, Gali No. 02 Khawaja Aziz Maki Chowk Pakpattan	Educatkion	Shafique Anwar	0300-7253499
19	Pakpattan Development Foundation Pakpattan	Local	571/A Hospital Road Pakpattan	Education	Pir Saeed Ahmad Chishti	0300-8640581
20	Al-Mustafa Welfare Society Pakpattan	Local	Near Madina Masjid Street Nadar Khan Wali Pakpattan.	Education	Muhammad Safdar	0300-8750401
21	Fazeela Welfare Foundation Arifwala	Local	Vukla Housing Colony, Qaboola Road Arifwala	Health	Miss Walija Fatma M. Lutf Ullah	0300-6913572
22	Punjab Skills Vocational Council Pakpattan	Local	House No. 3542, Mohallah Tahli Wala Pakpattan.	Education	Muhammad Jamil	0300-4433385
23	UKS Welfare Foundation Pakpattan	Local	Office # 1, First Floor, UKS Plaza, Nagina Chowk Pakpattan.	Education	M. Umer Khan	0333-0450333
24	Maan Welfare Foundation Pakpattan	Local	Gailani Free Dawakhana, Khawaja Aziz Maki Chowk Pakpattan.	Education	Noreen	0300-8754838
25	Social Development Council Malka Hans	Local	Main Bazar Malka Hans Pakpattan	Education	Gulam Nabi Dhudi	0300-7531467
26	Rehmat-e-Aalim Welfare Society Pakpattan	Local	Near Model Public School , Ghalla Mandi pakpattan Pakpattan	Health	Urooj Eishrat Adeel Ahamed , Muhammad awais	0310- 7621800,0301- 7251183
27	Anjuman Falah-e- Marizan Pakpattan	Local	Araian Chowk Pakpattan	Health	Dr. Shahid Murtaza	0300-6940116

28	Jinnah Welfare Association Chak No.167/EB Arifwala	Local	Chak No.167/EB Arifwala	Health	Ameer Ali	3064777167
29	Orphans Welfare Society Arifwala	Local	4-KM Sahiwal Road Arifwala	Education	Dr. Saeed Shaikh	0300-6949398
30	Sanjh Welfare Society for Human Development Pakpattan	Local	Excise Office WaliGaliMohallah Eid Gah Pakpattan	Education, Health	Ali Hasnain	0344-4555311
31	Society For the Advancement of Human Rights Arifwala	Local	Arifwala	Education	Rana Imran Haider	0302-7240605

## ANNEX VII: CONTACT LIST OF MAIN STAKEHOLDERS/ DEPARTMENTS

S#	Designation	Person Name	Telephone (Office)	Telephone (Residential)	Mobile
1	Focal Person for Disasters	Maham Asif Malik	0457-921093	-	0321-9828414
2	Commissioner	Nadir Chattha	040-9200491	040-9200499	
3	RPO	Ahmad Arslan Malik	040-9200011	040-9200080	
4	DC	Rana Shakeel Aslam	0457-921003	0457-921004	0304-0920087
5	DPO	Malik Jamil Zafar	0457-3741106	0457-921106	
6	ADC (R)	Maham Asif Malik	0457-921093	-	0321-9828414
7	DEO Rescue 1122	Dr. Ahtesham Mazhar	0457-383547	-	0316-4369988
8	DO Civil Defence	Asgar Ali	0457-921077	-	0331-7407343
9	SNA	Fayyaz Masood	0457-921020	-	0321-4630359
10	AC Pakpattan	Sharjeel Shahid	0457-921095	-	0321-7058171
11	AC Arifwala	Azhar Tariq Wattoo	0457-920074	-	0300-8689777
12	Tehsildar Pakpattan	Mehar M.Iqbal	-	-	0300-6901618
13	Tehsildar Arifwala	Ch.Ghazanfar Naveed	0457-920074	-	0300-8100875
14	Chief Officer -MC Pak	Javed Aslam	0457-352415 0457-374472 0457-372415	-	0300-6969121
15	Chief Officer – MC Arf	Syed Najaf Ali	0457-92006	-	0303-5845460
16	CEO Education	Rana Kasur Khan	0457-921085	-	0301-7240147

S#	Designation	Person Name	Telephone (Office)	Telephone (Residential)	Mobile
17	Chief Engineer. Irrigation	Ch. Javed Iqbal	040-9200491		0335-7721065
18	XEN Irrigation Eastern Bar	Abdul Raheem Wattoo	0457-921073	-	0301-4610600
19	XEN Irrigation Sulemanki	M.Junaid But		-	0304-0826776
20	XEN Buildings	<b>Muhammad Ali</b>	0457-921047	-	0332-4843536
21	XEN Highways	Ghulam Abbas	0457-921048	-	0300-7564941
22	DD Agriculture	Riaz Ahmad	0457-921046	-	0307-2499761
23	CEO Health	Dr. Ahmad Shahzad	0457-921122	-	0307-3875541
24	DMO	Mushtaq Tiwana	0457-383144	-	0322-8883288
25	Incharge DHQ Hospital	Dr.Nasir	0457-373486	-	0308-7965355
26	Addl. Director Livestock	Dr.M.Iqbal	0457-352691	-	0300-6914281

## ANNEX VIII: LIST OF VOLUNTEERS

Sr.#	Volunteer Name	Address	Contact Number and Email	Blood Group	Time required to be on-board
1	MUHAMMAD ISHAQ	O/O DEO (SE), PAKPATTAN	0301-7243973		30 minute
2	MUHAMMAD AKHTER	O/O DEO (EE-M), TEHSIL PAKPATTAN	0304-2482776		45 minute
3	MANSOOR AHMED	O/O DEO (EE-M), TEHSIL PAKPATTAN	0304-5012768		60 minute
4	MUHAMMAD ZEESHAN	O/O DEO (EE-M), TEHSIL PAKPATTAN	0312-6940925		45 minute
5	FAHEEM ANWAR	O/O DEO (EE-M), TEHSIL PAKPATTAN	0302-4041757		60 minute
6	SAJID UR REHMAN	O/O DEO (EE-M), TEHSIL PAKPATTAN	0300-6943467		45 minute
7	AHMED RAZA	O/O DEO (EE-M), TEHSIL PAKPATTAN	0301-7508815		60 minute
8	ABDUL QADIR	O/O DEO (EE-M), TEHSIL PAKPATTAN	0301-7191806		45 minute
9	MUHAMMAD IMRAN	O/O DEO (EE-M), TEHSIL PAKPATTAN	0301-6580705		30 minute

10	MUHAMMAD AMEER	O/O DEO (EE-M), TEHSIL PAKPATTAN	0308-7249768		60 minute
11	SHABBIR AHMED	O/O DEO (EE-M), TEHSIL PAKPATTAN	0301-4820500		30 minute
12	FAKHAR ZIA	O/O DY. DEO (EE-W), TEHSIL PAKPATTAN	0300-8754078		45 minute
13	IMDAAD FAREED	O/O DY. DEO (EE-W), TEHSIL PAKPATTAN	0303-9895212		60 minute
14	MUHAMMAD AHMED SADIQ	O/O DY. DEO (EE-W), TEHSIL PAKPATTAN	0348-7116667		45 minute
15	SHAKEEL HUSSAIN	O/O DY. DEO (EE-W), TEHSIL PAKPATTAN	0301-7248421		60 minute
16	MUHAMMAD YOUNAS	O/O DDEO (EE-M), ARIFWALA	0306-6971424		45 minute
17	AFTAB ZIA	O/O DDEO (EE-M), ARIFWALA	0300-7893193		45 minute
18	HABIB UR REHMAN	O/O DDEO (EE-M), ARIFWALA	0300-6931956		60 minute
19	MUHAMMAD SHAFQAT	O/O DDEO (EE-M), ARIFWALA	0300-0798806		45 minute
20	REHAN IDREES	O/O DDEO (EE-M), ARIFWALA	0306-7871638		45 minute
21	ABDUL QADIR	O/O DDEO (EE-M), ARIFWALA	0300-7696843		30 minute
22	MUHAMMAD IMRAN	O/O DDEO (EE-M), ARIFWALA	0301-6580705		60 minute

## ANNEX VIII (B) : LIST OF SWIMMERS/DIVERS

S#	Name	CNIC	Address	Contact # and Email	Blood Group	Time Required to be on-board
1	Masood Farid	36402-0746958-5	H. No. 94/292 b-3 Moh. Jhajranwala. Pakpattan.	0304-8310820	AB +ve	
2	Muhammad Farooq	36402-9415894-7	Chak Chanwat, Pakpattan.	0300-8141920	B +ve	
3	Kashif Yasin	36402-5193704-1	H. No. 20 E Block Alfarid Garden, Pakpattan.	0300-8861867	B +ve	

4	Shahzad Ahmad	36402-7054069-3	H. No. 40 L Block Joyia Colony, Pakpattan Road Arif Wala.	0300-4839981	A +ve	
5	Ali Ahmad	36402-1481037-7	Chak No.6KB Feoz Pur Road, Pakpattan.	0344-6681427	B +ve	
6	Muhammad Altaf	36402-8703897-5	Chak No.27/SP, Pakpattan.	0344-7290600	A +ve	
7	Ahmad Nadeem Sharif	36402-8598166-1	Chak Azmat, Pakpattan.	0321-7559241	O +ve	
8	Shahbaz Farid	36402-4652651-7	H No 359/16 St Baba Sb Wali, Pakpattan.	0301-7251351	O -ve	
9	Inam Ullah	36402-1980709-7	Adda Noor Pur, Pakpattan	0346-7101424	B +ve	
10	Muhammad Sufyan	35302-9254113-1	Chak No.49/A2-L, Depalpur Road Okara.	0303-6975851	A +ve	
11	Ejaz Ahmad	36402-5986104-1	Chak Moose waal, Pakpattan.	0307-6175920	A +ve	

## ANNEX IX: POLITICAL CONSTITUENCIES

National Constituencies				Provincial Constituencies			
Name of constituency	Name of Sitting Parliamentarian	Portfolio	Contact Number	Name of constituency	Name of Sitting Parliamentarian	Portfolio	Contact Number
NA-145	Mian Ahmad Raza Maneka	-	0300-8452073	PP-191	Mian Farukh Mumtaz Maneka	-	0300-3750813
NA-146	Rana Aradat Sharif	-	0345-8446949	PP-192	Mian Naved Ali	-	0300-5554446
				PP-193	Pir Ahmad Shah Khagga	-	0301-8649512
				PP-194	Naeem Ibraheem	-	0300-6949249
				PP-195	Pir Kashif Ali Chishti	-	0300-9447415

## ANNEX X: LOCAL GOVERNMENT

### District and Tehsil Level

S#	Designation	District/Tehsil Name	Name	Contact Number	Mobile Number
1	District				
2	District				
3	Tehsil				
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					

### Town Level

S#	Tehsil	TC	Chair	Chair Contact	Vice Chair	VC Contact
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						

S#	Tehsil	TC	Chair	Chair Contact	Vice Chair	VC Contact
16						
17						
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# ANNEX XI: DATA COLLECTION PERFORMAS

## P1: House Damage Assessment

District: \_\_\_\_\_

Date: \_\_\_\_\_

S#	Name	Father Name	CNIC	Address	Revenue Estate	Union Council	Tehsil	Partially/Completely	Katcha/Pakka	%age of Damage	Contact No.	GPS Coordinates	Picture Taken (Y/N)

## P2: Deceased Person Reporting Performa

District: \_\_\_\_\_

Date: \_\_\_\_\_

S#	Name of deceased	Father's name	Address	Domicile	Gender	Age	CNIC	Cause of death	Date of death	Place of death	Marital status	Next of kins (Name and Contact and CNIC etc.)	Verifying Officer (Name, Designation and Contact)	Compensation Paid or not

## P3: Injurd Person Reporting Performa

District: \_\_\_\_\_

Date: \_\_\_\_\_

S#	Name of injured	Father's name	Address	Domicile	Gender	Age	CNIC	Cause of injury	Date of injury	Injury Type (Permanent or Temporary)	Compensation Paid or not

**P4: Cattle Head Perished**

District: \_\_\_\_\_

Date: \_\_\_\_\_

S#	Name of Farmer	Father Name	CNIC	Mauza	Tehsil	Type of Animals	Number of Animals (Cow, sheep etc.)	Vaccinated/ Unvaccinated	Witness 1 name and contact No.	Witness 2 Name and Contact No.
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**P5: Crop Damages**

District: \_\_\_\_\_

Date: \_\_\_\_\_

S#	Tehsil	Qanoongoi	Union Council	Mauza	Farmer Name	Land owner/Tenant	CNIC of farmer	Contact number	Type of Crops	Total land affected (acres)	% of mauza affected
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**P6: Relief Distribution Tracking Performa**

District: \_\_\_\_\_

Date: \_\_\_\_\_

S#	Location/ Destination	Arrival Date and time	Items	Quantity	Items short (if any)	Items sent by	Driver name	Received by	Bilty no
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**P7: Private Machinery (Boats, Bulldozers, cranes etc.)**

In case of mega disaster that overwhelms the resources of the Government in certain area, the equipment 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.

District: \_\_\_\_\_

Date: \_\_\_\_\_

S#	Name of boat owner	Father name	Contact Number	Age	CNIC	Location of boat/Machinery	Type of Machinery (Boat, Bulldozers, Cranes etc.)	Engine type	Boat capacity	Equipment Condition	Number of Machinery
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**P8: Relief camp registration Performa**

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

District: \_\_\_\_\_

Date: \_\_\_\_\_

S#	Nationality	Domicile	Male	Female	Age	Children Under 12	Infants under 3	Sick	Injured	Pregnant
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**P9:NGOs registration performa**

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.

District: \_\_\_\_\_

Date: \_\_\_\_\_

S#	Name of NGO	Local /INGO	Relief activity	Relief camp if any	Focal person in the district	Registered with PDMA	Foreigners to be visiting or not.
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**P10: Control Room**

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:

District: \_\_\_\_\_ Focal Person: \_\_\_\_\_ Date: \_\_\_\_\_

S#	Location of control room	Shift I Incharge Name and Contact	Shift II Incharge Name and Contact	Shift III Incharge Name and Contact	Phone Numbers	Fax Numbers	E- Mail Address
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## ANNEX XII: CAMP MANAGEMENT SOPS

- Camps would be established in areas accessible by metalled roads so that provision of essential facilities is not difficult
- Basic facilities such as food, clean drinking water, health, hygiene and sanitation should be available at these shelters.
- Proper registration mechanism should be in place to differentiate between those actually affected and cunning opportunists
- Proper security system should be in place in coordination with the local police as the presence of police always acts as deterrence for criminals who may be attracted to such places.
- Emergency medical care should be available as well as a proper firefighting system as fire out breaks are common in such tents
- Proper camp management should be announced and notified and there should be a complaint cell as well
- A proper distribution mechanism should be in place to ensure that the needy get what they deserve.
- Scattered camps should be catered for and encouraged to join the main camp.
- At times shallow hand pumps are not safe for drinking as the water underground has been affected. In such cases clean medicated water should be provided through water bowsers.
- Vector control is an essential part of the camp management and steps should be taken to remove rats, snakes and mosquitoes etc.
- Un-accompanied and missing children shall be placed separately with proper care and fulfilment of their physical and psycho-social needs.
- Needs of women as per local and cultural environment shall be considered for establishing separate relief camps for ladies with provision of proper security and light arrangements.

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

## ANNEX XIII: FLOOD BUNDS

### INFORMATION REGARDING FLOOD BUND CATEGORY A

SR:#	NAME OF DIVISION	NAME OF EMBANKMENT / BUND	LENGTH (ft)
<b>SARGODHA ZONE</b>			
1	Rasul Head works Division	Right Guide Bund	2,121
2	-do-	Left Guide Bund	3,360
3	-do-	Right Guide Spur	2,762
4	-do-	Left Marginal Bund	17,170
	<b>Total in feet.</b>		<b>25,413</b>
	<b>Total in Miles.</b>		<b>4.81</b>
<b>PMO BARRAGES</b>			
1	Kalabagh H/Works Division	Jinnah Barrage	25,080
	<b>Total in feet.</b>		<b>25,080</b>
	<b>Total in Miles.</b>		<b>4.75</b>
<b>FAISALABAD DIVISION</b>			
1	Khanki Division	Left Marginal Bund	21,000
2	-do-	Right Marginal Bund	29,000
3	Jhang Division	Jhang Flood Protection Bund	43,875
4	Qadirabad Barrage Division	Left Marginal Bund	20,000
5	-do-	Right Marginal Bund	20,000
	<b>Total in feet.</b>		<b>133,875</b>
	<b>Total in Miles.</b>		<b>25.36</b>
<b>BAHAWALPUR ZONE</b>			
1	Punjad Head works Division	Right Marginal Bund	15,000
2	-do-	Left Marginal Bund	15,000
3	-do-	Colony Protection Bund	15,000
4	Khanpur Canal Division	Minchin Flood Bund	10,000
	<b>Total in feet.</b>		<b>55,000</b>
	<b>Total in Miles.</b>		<b>10.42</b>
<b>MULTAN ZONE.</b>			
1	Trimmu Division	Right Marginal Bund	20,000
2	-do-	Left Marginal Bund	20,000
3	Sulemanki Division	Left Marginal Bund	10,000
4	-do-	Right Marginal Bund	10,000
5	Shuja Canal Division	Right Bank of Shujabad Branch	10,000
6	-do-	Akbar Flood Bund	10,000
	<b>Total in feet.</b>		<b>80,000</b>
	<b>Total in Miles.</b>		<b>15.15</b>
<b>D.G.KHAN ZONE</b>			
1	Taunsa Barrage	Right Guide Bund Upstream	15,000
2	-do-	Left Guide Bund	20,000
3	-do-	Shahwala Groyne	10,000
4	Muzaffargarh Canal Division	Muzaffargarh Flood Bund	50,000
5	-do-	Doaba Flood Bund.	5,000
6	-do-	Khangarh Flood Bund	5,000
7	-do-	Khanwah Flood Bund	5,000
8	Jampur Construction Division	Jampur Flood Bund	5,000
9	-do-	Rojhan Flood Bund	20,000
	<b>Total in feet.</b>		<b>1,35,000</b>
	<b>Total in miles</b>		<b>25.57</b>

<b>LBDC(IP)</b>			
1	Balloki Head works Division	Left Marginal Bund	15,000
2	do	Right Marginal Bund	15,000
<b>Total in Feet</b>			<b>30,000</b>
<b>Total in miles</b>			<b>6</b>
<b>LAHORE ZONE</b>			
1	FLOOD Bund Division Narowal	Jassar Highway Bund	10,000
2	do	Rayya flood Bund	5,000
3	Pasrur Link Division Sialkot	City Flood Protection Bund along Aik Nullah	7,340
4	do	Hajoipur Flood Protection Bund along Aik Nullah	86,00
5	do	Left Flood Protection Bund over deg Nullah from defence embankment to Zafarwala Kingra road	10,000
6	Marala Division UCC	Left Marginal Bund	50,000
7	do	Right Marginal Bund	10,000
8	Lahore Drainage Div.	Shahdara Flood Protection Bund	15,000
<b>Total in Feet</b>			<b>115,940</b>
<b>Total in miles</b>			<b>22</b>
<b>Grand total in miles</b>			<b>114</b>

**INFORMATION REGARDING FLOOD BUND CATEGORY B**

S#	Name of Division	Name of Embankment / Bund	Length (ft.)
<b>SARGODHA ZONE</b>			
1	Rasul Headworks Division	Important / Vulnerable Reaches	10,000
2	Bhakkar Division	-do-	10,000
3	Layyah Division	-do-	10,000
4	Jhelum Division	-do-	5,000
<b>Total in feet.</b>			<b>35,000</b>
<b>Total in miles</b>			<b>6.63</b>
<b>FAISALABAD ZONE</b>			
1	Khani Division	-do-	20,000
2	Jhang Division	-do-	50,000
3	Qadirabad Barrage Division	-do-	60,000
4	Burala Division	-do-	35,000
<b>Total in feet.</b>			<b>165,000</b>
<b>Total in miles</b>			<b>31.25</b>
<b>BAHAWALPUR ZONE</b>			
1	Punjad Headworks Division	-do-	90,000
2	Khanpur Canal Division	-do-	100,000
3	Bahawalpur Canal Division	-do-	50,000
4	Rahimyar Canal Division	-do-	50,000
<b>Total in feet.</b>			<b>290,000</b>
<b>Total in miles</b>			<b>54.92</b>
<b>MULTAN ZONE</b>			

1	Trimmu Division	-do-	80,000
2	Suleimanki Division	-do-	50,000
3	Shujabad Canal Division	-do-	60,000
	<b>Total in feet.</b>		<b>190,000</b>
	<b>Total in miles</b>		<b>35.98</b>
<b>D.G.KHAN ZONE</b>			
1	Taunsa Barrage	-do-	80,000
2	Kot Adu Canal Division	-do-	90,000
3	Muzaffargarh Canal Division	-do-	180,000
4	River Diversion Division	-do-	80,000
5	Jampur Construction Division	-do-	140,000
6	D.G.Khan Construction Division	-do-	60,000
	<b>Total in feet.</b>		<b>630,000</b>
	<b>Total in miles</b>		<b>119.32</b>
<b>LBDC (IP)</b>			
1	Balloki Headworks Division	-do-	40,000
2	Okara Division	-do-	40,000
3	Sahiwal Division	-do-	20,000
	<b>Total in feet.</b>		<b>100,000</b>
	<b>Total in miles</b>		<b>18.94</b>
<b>LAHORE ZONE</b>			
1	Flood Bund Division Narowal	-do-	40,000
2	Pasrur Link Division Sialkot	-do-	10,000
3	Chakbandi Division	-do-	20,000
4	Marala Division UCC	-do-	50,000
5	Lahore Drainage Division	-do-	80,000
6	Kasur Division	-do-	80,000
7	Gujranwala UCC	-do-	100,000
8	Rachna Drainage	-do-	42,000
	<b>Total in feet.</b>		<b>422,000</b>
	<b>Total in miles</b>		<b>79.92</b>
<b>PMO BARRAGES</b>			
1	Jinnah Barrage	-do-	20,000
	<b>Total in feet.</b>		<b>20,000</b>
	<b>Total in miles</b>		<b>3.79</b>
	<b>Grand Total (in miles)</b>		<b>350.76</b>

## ANNEX XIV: RIVER DISCHARGE RATES

River	Gauge Site	Designed Capacity (lac Cs)	Flood Limits in Lac Cs.				Exp. High
			Low	Med:	High	Very 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
JHELUM	Kohala	12	1	1.5	2	3	4
CHENAB	Mangla	10.6	0.75	1.1	1.5	2.25	3
	Rasul	8.5	0.75	1.1	1.5	2.25	3
	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
SUTLEJ	Sidhnai	1.5	0.3	0.45	0.6	0.9	1.3
	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 Mailsi Syphon	3 4	0.5 0.75	0.8 1.1	1.2 1.5	1.75 2.25	2.25 3

## ANNEX XV: LIST OF BASIC TERMS

### **Acceptable risk**

The level of loss a society or community considers it can live with and for which it does not need to invest in mitigation

### **Biological hazard**

Biological vectors, micro-organisms, toxins and bioactive substances, which may cause the loss of life or injury, property damage, social and economic disruption or environmental degradation.

### **Capacity**

A combination of all the strengths and resources available within a community, society or organization that can reduce the level of risk, or the effects of a disaster.

Capacity may include physical, institutional, social or economic means as well as skilled personnel or collective attributes such as leadership and management. Capacity may also be described as capability.

### **Capacity building**

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

### **Climate change**

The climate of a place or region is changed if over an extended period (typically decades or longer) there is a statistically significant change in measurements of either the mean temperature or variability of the climate for that region.

### **Coping capacity**

The means by which people or organizations use available resources and abilities to face a disaster. In general, this involves managing resources, both in normal times as well as during crises or adverse conditions.

### **Disaster**

A serious disruption of the functioning of a community or society causing widespread human, material, economic or environmental losses which exceed the ability of the affected community or society to cope using its own resources. It results from the combination of hazards, conditions of vulnerability and insufficient capacity to reduce the potential negative consequences of risk.

### **Disaster risk management (DRM)**

The comprehensive approach to reduce the adverse impacts of a disaster. DRM encompasses all actions taken before, during, and after the disasters. It includes activities on mitigation, preparedness, emergency response, recovery, rehabilitation, and reconstruction.

### **Disaster risk reduction/disaster reduction**

The measures aimed to minimize vulnerabilities and disaster risks throughout a society, to avoid (prevention) or to limit (mitigation and preparedness) the adverse impacts of hazards, within the broad context of sustainable development.

### **Early warning**

The provision of timely and effective information, through identified institutions, to communities and individuals so that they could take action to reduce their risks and prepare for effective response.

### **Emergency management**

The management and deployment of resources for dealing with all aspects of emergencies, in particularly preparedness, response and rehabilitation

### **Forecast**

Estimate of the occurrence of a future event (UNESCO, WMO). This term is used with different meanings in different disciplines.

### **Geological hazard**

Natural earth processes that may cause the loss of life or injury, property damage, social and economic disruption or environmental degradation. For example earthquakes, tsunamis, volcanic activity and emissions, landslides, rockslides, rock falls or avalanches, surface collapses, expansive soils and debris or mud flows.