



# **Monsoon Hazards/Threats**

- ☐ Torrential Rains
- ☐ Flash Flooding/Floods
- ☐ Land Slides/Mud Flows/Avalanches
  - > Consequential Threats
    - Human ,Livestock Casualties and Shelter Losses
    - Road blockage, Collapse of Communication & electricity network
    - Loss of public and private properties
    - Population displacement
    - Livelihood Destruction and Food Insecurity
    - Health Issues





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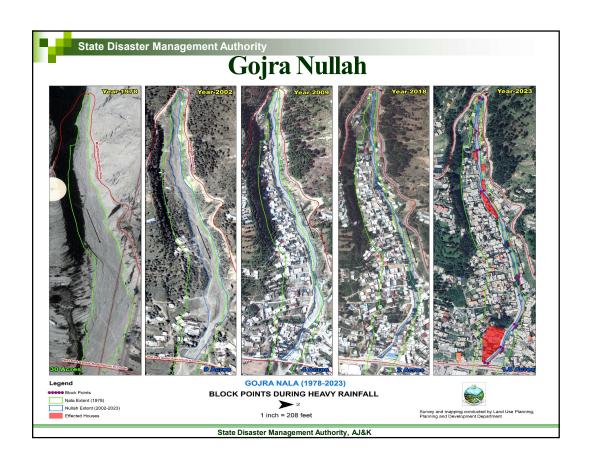
### State Disaster Management Authority

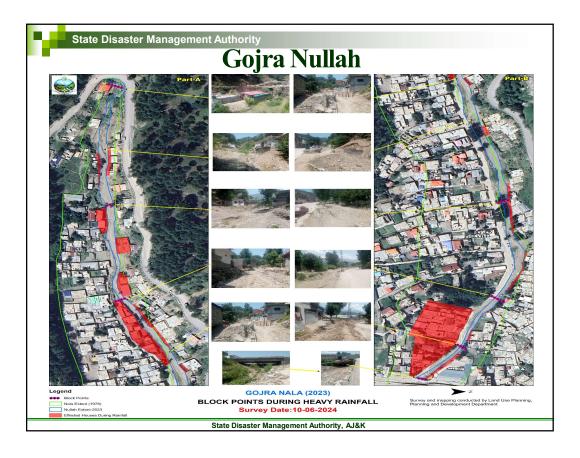
# **Monsoon Risk Enhancing Factors**

- > Tempering with natural environment
  - o Increased deforestation
  - o Sand & stone mining
  - Unplanned construction of roads/cutting of hill slopes
- > Encroachments
  - o Blockade of natural water ways
  - Illegal use of vulnerable/marginal land for habitation
- > Inadequate early warning arrangements
- ➤ Non observation of early warning by general public
- ➤ Potential Nallahs=66

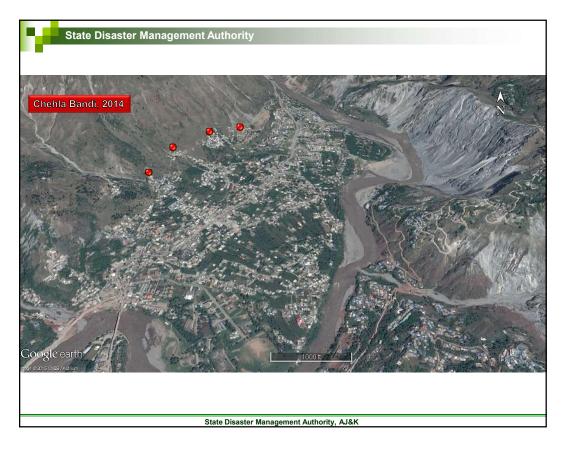














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# Detail of Nullahs in AJ&K (66)

No.	District	Nullahs
1	Neelum	Phulawai, Dudgaie (Taobut), Janavai, Kel, Surgan, Kharigam,
		Dossut, Dudhnial, Dawarian, Nagdar, Lawat, Changan, Tehjian,
		Athmuqam, Katha Piran, Jagran Kundal Shahi, Leswa
2	Muzaffarabad	Jheeng, Pathika (Butdara), Kahori, Shawaie, Chellah, Gojra
		Kass, Makri, Tariqabad, Kaimanja, Chatter Kalass,
		Saheli, Parak
3	Jhelum Valley	Qazi Nag (Leepa), Sharian, Kalri, Sena Daman, Qazi Nag
		(Kathie)
4	Bagh	Malwani Kass, Mallot, Mahl (Bessuti-Rehra)
5	Haveli	Hillan (Khurshidabad), Budhal Sharif, Bissan, Battar (Chanjal)
6	Poonch	Hajira, Guien, Mohri Farman Shah, Abbasspur, Ali Sojal
7	Sudhnuti	Baral
8	Kotli	Sarsawa, Goi, Sarhuta, Nakial, Khuratta (Rajdhani), Mohel
		(Sehnsa)
9	Mirpur	Jari Kass, Ratta, Khatar, Sankiah, Kaneli, Dadyal
10	Bhimber	Samahni , Kasguma, Bhimber City, Mallot Kass, Patni (Barnala)
		Pir Jamal

Source: LUP



## **Climate Change Impacts in AJ&K**

- Extreme & erratic weather patterns
- Enhanced disasters (Floods, landslides, avalanches, glacier melting-GLOFs) damaging lives, property, infrastructure
- Snowfall pattern shifting & residency period shrinking
- Variable river flows
- Shifting cropping patterns, reduced productivity
- Shifting of tree line
- Forest & land degradation
- Increase in forest fires
- Infrastructure damages
- Impacts on Health
- Water, food & energy securities at risk

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# **Monsoon Disaster History**

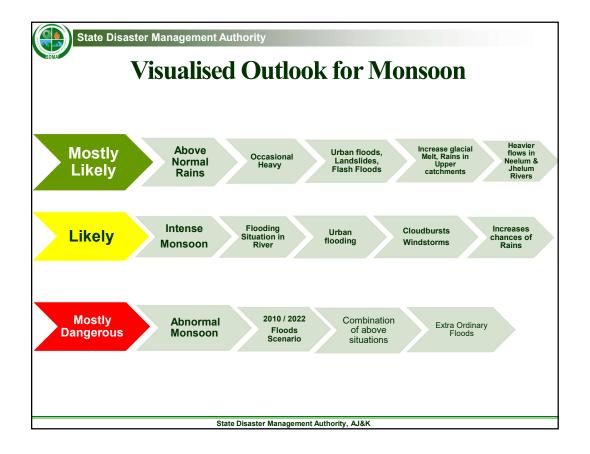
Year	Affected Districts	Persons affected	Deaths	Injured	Houses Damaged	Socio-Economic Loss
1992	All Districts	125,000	322	1,375	21,920	Infrastructure, livestock, cash crops, orchards. A 1.25 million of population adversely affected
2010	Neelum, MZD, Hattian, Bagh	14,459	69	79	10,616	Infrastructure, Livestock, Cash Crops, Environmental degradation /losses
2011	Hattian	1,300	-	-	49	Infrastructure damages
2012	All Districts	12942	52	25	2,092	Infrastructure, human and property losses besides environmental degradation
2013	All Districts	1,644	35	15	274	Public & private property losses & environmental degradation
2014	All Districts	91,950	56	87	15,325	41 shops, 82 Water mills, 203 cattle, agricultural & Multi sectoral loses
2015	All Districts	2856	26	05	408	10 Shops, 06 Cattle,
2016	All Districts	9024	31	21	1409	43 shops, 21 Cattle
2017	All Districts	228	13	5	30	Infrastructure damages
2018	All Districts	448	23	31	64	06 Vehicles,02 Cattle Sheds
2019	All Districts	924	42	18	132	04 School 43 shops, 69 Cattle, 23 Mills,
2020	All Districts	1176	12	09	168	03 School 02 shops, 11 Cattle, 23 Mills,
2021	All Districts	161	09	04	23	03 Vehicles, 01 Police Station, 01 Public health Office partially damaged
2022	All Districts	3885	48	24	555	09 Mills, 05 Vehicles, 08 Pedestrian Bridges, 01 School
2023	All Districts	3374	18	20	482	13 Schools, 07 pedestrian bridges, 03 masjids, 17 shops, 18 cattle sheds, 08 vehicles

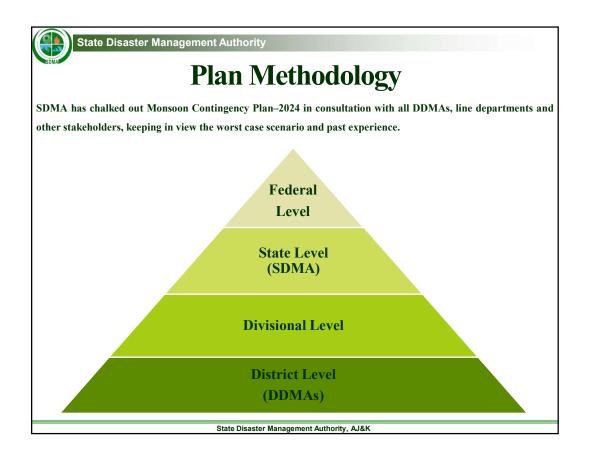


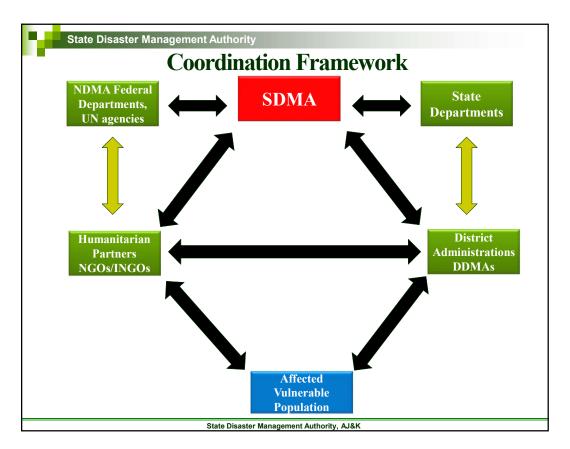
# Weather Outlook for Monsoon (July-August-September 2024 by PMD)

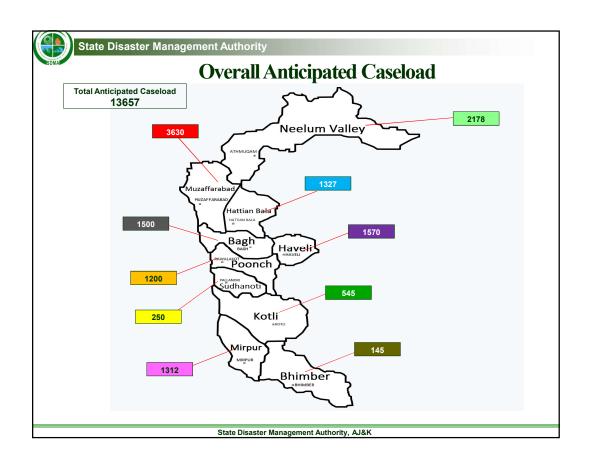
Monsoon rainfalls are expected

20-40% above normal in region.





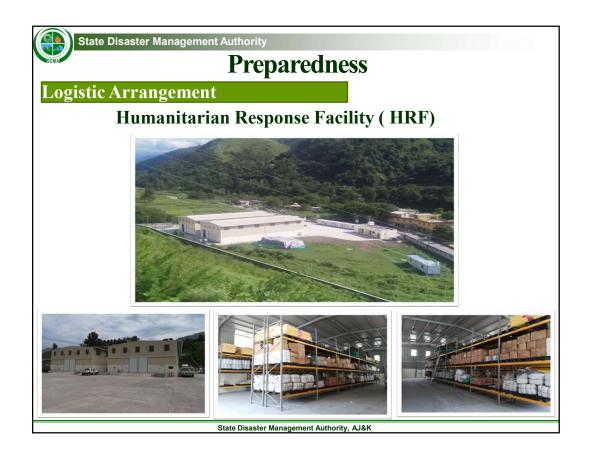




	State Disaster Ma	nagement Authority							
Overall Anticipated Caseload									
	District	Vulnerable Families	Vulnerable Areas						
01	Muzaffarabad	3630	Makri, Lower Plate Walkway, Taali Mandi, Shahsultan, Saheli Sarkar Bridge Gulshan Pir Allodin , Tariqabad, Manak Payeyan, Barsala, Dhani mai Sahiba Bandi Saman, Danna Sahotar, Panjkot, Panjgran, Sarlisacha, Bheri.						
02	Jehlum Valley	1327	Khilana, Gundigran, Nalai, Gujarbandi, Chakhama, Ghehal Jabra, Hattian Chinari, Chikar, Lamnia, Lasdhar, Banni Langryal, Bandi Ghorsian, Saint Daman, Peeran bandi, Neli, Derran, Batsher, Bail, Moji, Gahasla, Antliyan & Chatkari						
03	Neelum	2178	Chilihana, Katha Semari, Jura, Sosal Bandi Laswa Sharda, Kharigam,Surgan Bakwali,Gamote, Shonter Valley, Kel, Kalalot, Guraiz Valley						
04	Poonch	1200	Soon, Nakar, Ali sojal, Singhola, Dothan, Pothi Chapriyan, Serari Neriyan Kalot, Bhanteeni Khas, Akramabad, Harkarian, Chak, Potha Bala, Kanoli Numal, Chaffar Janobi, Nakar Bela, Bandi Dhalkot, Chil Bosa Galla						
05	Bagh	1500	Grid Colony Bagh,Refugee Camp, Mang Bajri, Qadirabad, Chatrora, Grid Colony bagh Village Bees Bagla ,Thub, Village Minhasa , Mala Bagla Salian Dhondan, Dhirkot, Gojar Kohallah						
06	Haveli	1570	Chanjal , Bahdi, Jokan, Quaid-i-Abad, Hillan Kalamulla Khurshidabad, Tangari, Doba , Aliwas, Sayie.						
07	Sudhnoti	250	Bharal, Chichyan. Gorah, Kancheri, Patan Sher Khan, Nerian, Papynar Habibabad, Nalayan.						
08	Mirpur	1312	Saim, Lehri Azizpur Jharikass, Begabalwal, Sahib Chak, Jatlan, Shahpur Pakhral Chabrian Dattan, Chakraja Bains, Jhangyan, Bidder, Boryal, Tatrot, Chak rupa, Afzalpur, Qazi Chak, Raipur						
09	Bhimber	145	Ali Baig, Bhimber City, Giga Mossa, Toneen, Jhandi Chontra, Malot, Kanjlot Saleema Matta.						
10	Kotli	545	Thalair Colony, Dakhari, Juzwi Mandi, Choch, Holar, Majjan, Jahndroot Manoli Nala, Nala, Nala Kala Dabb						
	Total	13657							
		State Disaster Mana	agement Authority, AJ&K						



# **State of Preparedness - Resources Available**





# **Preparedness**

## Logistic Arrangement

## **DDMAs Warehouse (All Districts)**











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### State Disaster Management Authority

## **Preparedness – Available Stocks with SDMA (NFIs)**

Sr.	Item	Qt	ty	Total
51.	Item	Available	To be procured	Total
01	Mattress	47	500	547
02	Winterized Tent	26	-	26
03	Tent	30	1000	1030
04	Sleeping Bags	120	-	120
05	Plastics Sheets	56	1500	1556
06	Blanket	578	-	578
07	Quilts	348	2000	2348
08	CGI Sheets	300	-	300
09	Plastic Mats	-	900	900
10	Kitchen Set	-	1000	1000

### State Disaster Management Authority **Relief items with districts** District Blankets 3 Nil Nil Nil Nil Nil Nil Nil 3 Muzaffarabad Jehlum 12 12 Nil 4 11 Nil Nil Nil 2 Valley Nil Nil Nil Nil 5 1 Nil Nil Nil Neelum Nil Nil 4 4 Nil Nil Nil Nil Nil Poonch 5 Nil Nil Nil Nil Nil Nil Nil Nil Bagh 20 Nil 04 Nil 10 Nil Nil 20 30 Bhimber 35 10 Nil 10 10 Nil Nil Nil Sudhnuti 43 22 Nil 22 60 70 Nil 11 21 Kotli 15 07 05 15 6 10 09 15 20 Mirpur Nil Nil Nil Nil Nil Nil Nil Nil Nil Haveli

Sta	te Disaster				h Res	cue 11	22		
Ambulance	FR Vehicle	Water Bowser	DR Vehicle	Mini FR Vehicles	Scissor Lift	Recovery Vehicle	Cranes	Wheel Loader	Folk lifter
20	19	07	13	12	02	1	03	1	02
		The state of the s		0					
			1						



Preparedness

Available Machinery with Public Sector

Machinery	Mzd	Jhelum Valley	Bhimber	Sudhnuti	Haveli	Rw.kot	Bagh	Neelum	Kotli	Mirpur	Total
JCB Machine	-	-	1	-	-	-	2	-	1	-	3
Wheel Loader	3	3	2	-	2	4	2	-		-	16
Excavator	5		3	-	1	2	3	-	1	-	15
Dump Truck	3	-	-	-	1	1	1	-	1	2	9
Tractor Trolley	-	-	-	-	2	6	3	-	2	-	13
Ambulance	17	7		6	5	13	15	11	23	9	105
Fire Brigade	3	-	-	-	-	2	1	-	-	-	6
Dozer	-	1	-	3	2	3	1	6	-	2	18

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# **Preparedness**

Available Machinery with Private Sector

Machinery	Mzd	Jhelum Valley	Bhimber	Sudhnuti	Haveli	Rw.kot	Bagh	Neelum	Kotli	Mirpur	Total
Wheel Loaders	8	1	1	-	-	-	2	-	-	-	12
Excavators	27	4	2	-	-	5	13	14	10	-	75
Dump Trucks	12	-	1	-	-	-	-	-	-	-	13
Tractor Trolleys	8	-	-	-	-	-	15	-	20	-	43
Ambulances	23	3	20	10	8	2	10	10	50	40	176
Chain Dozers	-	_	1	-	-	3	2	_	-	-	6



# **De-Silting/Clearance of Storm Water Drains**

### ☐ De-Silting/Clearance of Storm water drains

- Mass clearance campaign launched in all ten districts before monsoon
- De- Silting of major nullahs particularly in municipality area has been completed







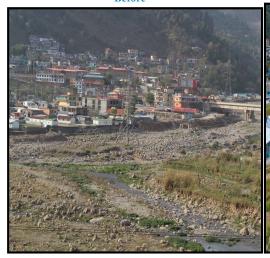


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## State Disaster Management Authority

### **Flood Protection Work**

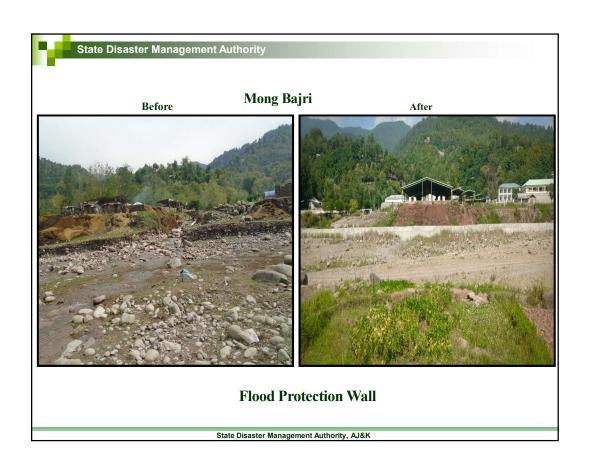
Before Bani Pasari

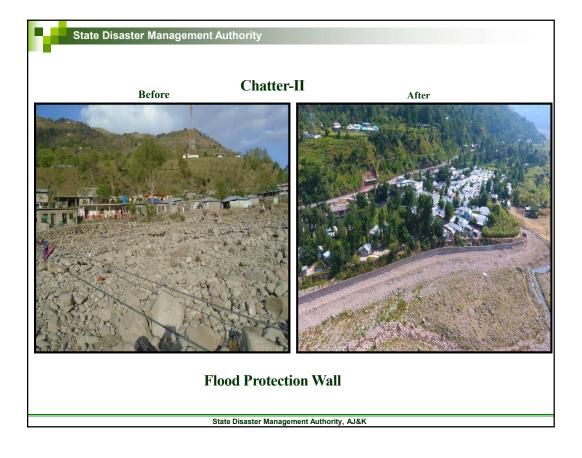


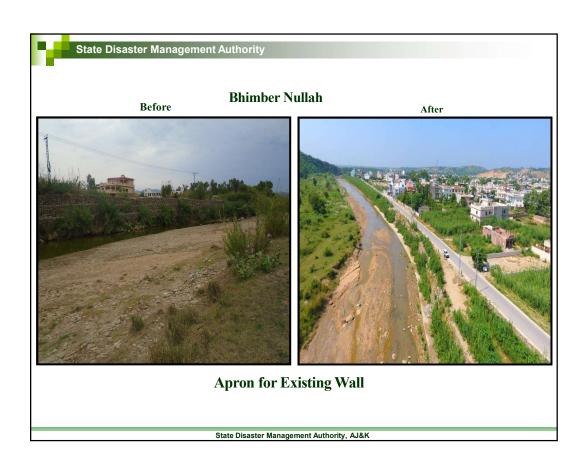


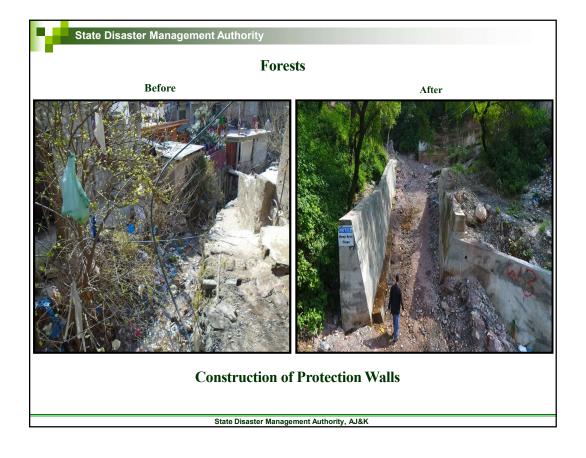
After

Flood Protection Retaining Wall







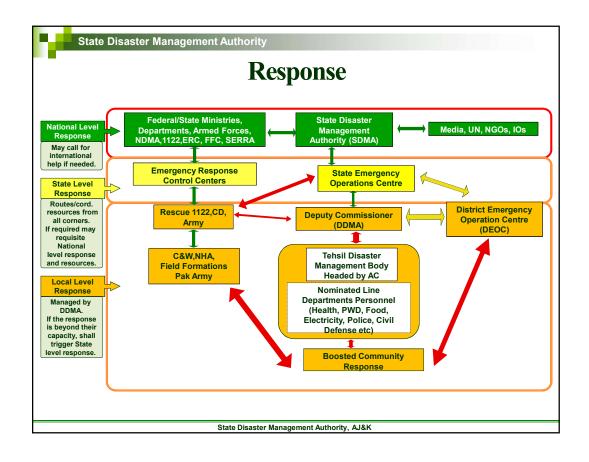


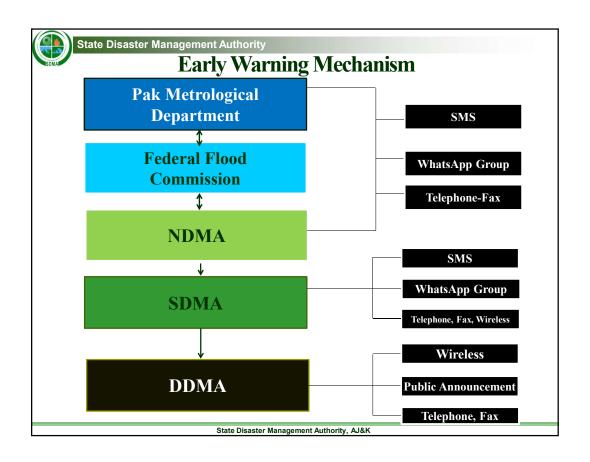


# Response

### **Coordination and Operation**

- SDMA to play a lead role during monsoon emergency in AJK focal point for coordination
- State level Emergency Operation Center (SEOC) will remain operational 24/07 for coordination among all the districts
- SEOC to keep close contact with Pakistan MET department, NDMA, Pakistan Army, UN agencies, Red Crescent and all other concerned stakeholders
- District control rooms have been established by DDMA's and will remain operational round the clock
- All the departments have their own contingency plans & control rooms





Flood Response Measures						
Rescue Operation	(1122, Police, Army)					
Re-opening of Road Communication	(Works Dept,Army,NHA)					
Food Security for affected population	(Food Dept, SDMA)					
Provision of Health Services	(Health, NGOs)					
<b>Emergency Response Stockpiling</b>	(NDMA,SDMA, PRCS)					
IDP Camps and Emergency Shelters	(DDMA, PRCS, NGOs)					
WASH and WATSAN Facilities in Relief Camps	(Local Govt,NGOs)					
Food and Non-food items for IDPs	(SDMA,Food Dept,NGOs)					



# Roles and Responsibilities of Stakeholders

SDMA	Coordination with NDMA/Federal Govt. entities and Allied Departments NGOs/INGOs     Provision of Logistic Support to all DDMAs
	To ensure follow ups and monitoring of emergency response activities
District Administration/ DDMA s	To ensure effective dissemination of Early Warnings, Evacuation of affected/distressed population Camp Management Provision of Food & Non Food Items in the camps Coordination with relevant departments for timely clearing of roads and communication facilities To ensure provision of essential services including health and relief services
Pakistan Army	To extend support in search & rescue operations Clearance & Rehabilitation of Road communications when and where ever their support is needed
Health Department	To ensure First Aid, all preventive measures and provision of medicines     Establishment of Medical Camps and provision of Ambulance Service
Civil Defence/ Rescue 1122	Fire Fighting, Search & Rescue operations by utilizing capacity of Municipalities and Development Authorities in case of emergency spill over     Establishment of Flood Emergency Control Cell in respective districts     Keeping the volunteers on alert

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## State Disaster Management Authority

# Roles and Responsibilities of Stakeholders

<ul> <li>Police</li> </ul>	Maintenance of Law & Order Situation
	To support in Dissemination of Early Warnings by DDMAs
	Assist the Search and Rescue operations
• C &W	Clearance & Rehabilitation of Roads & Removal of Debris/Slides
• NHA/FWO	<ul> <li>Clearance of slides and Rehabilitation of Road communications</li> <li>under their operation and control</li> </ul>
• Electricity Department	Maintenance of power transmission lines to ensure un-interrupted electricity supply
• Education Department	Provision of School Buildings for temporary setting up of IDPs camps
• UN/INGOs/NGOs	To coordinate and provide active support to SDMA for assessment and evacuation of vulnerable families
	Provision of Food & NFIs, Tents & Medicines
	Provision of WASH & WATSAN Facilities for IDPs
	To ensure all types of humanitarian assistance as per mandate and resource availability

Cont.

### State Disaster Management Authority Roles and Responsibilities of Stakeholders **Food Department** Keeping stock of wheat available as per the requirement at various places in the State Broadcast advance warnings to sensitize the public Information Guide the public about the nearby safer places, routes and other Department precautionary measures Publication of the flood-related reports on daily-basis in the local, regional and national newspapers Arrange press briefings/press conferences for any officer/official **Local Government &** Arrange potable drinking water and sanitation facilities for flood affected areas **Rural Development** Arrange for the removal of carcasses and debris after floods **Department** · Immediate restoration of water supply, sanitation, cause ways, culverts, links roads, street lights and public latrines Coordinate with humanitarian agencies i.e, INGOs, NGOs and UN agencies to make up the short falls Arrange for requisite Water and Sanitation in all the earmarked evacuation centers in coordination with education department Recovery Need Assessment **Board of Revenue Damage Need Assessment** Coordination for early recovery & rehabilitation



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# **Challenges**

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- Unpredicted Monsoon Pattern
- Cloud Burst Phenomenon
- Difficult Terrain
- Resource Constraints
- Accessibility/mobility



# Way forward

- **■** Improvement in early warning system
- Mass awareness strategies
- Capacity building (structural & non structural) towards climate induced disasters
- Availability of stand by Helicopter

