

PUNJAB MONSOON CONTINGENCY PLAN 2026



Provincial Disaster Management Authority, Punjab



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Provincial Disaster Management Authority, Punjab, Pakistan

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Provincial Disaster Management Authority, Punjab

Maryam Nawaz Sharif

Chief Minister, Punjab
Government of Punjab



The safety and well-being of the people of Punjab remain our foremost priority as we face the growing realities of a changing climate.

The floods 2025 highlighted Punjab's growing vulnerability to extreme weather, causing extensive damage to livelihoods, infrastructure, and agricultural systems. These events underscored the urgent need for improved disaster preparedness, robust institutional coordination, and rigorous community engagement to build an effective resilient framework.

The Government of Punjab is fully committed to a proactive and risk-informed approach to disaster governance. The Punjab Monsoon Contingency Plan 2026 incorporates lessons learned from 2025, with a focus on timely early warnings, strategic pre-positioning of rescue & relief resources, and strengthening institutional capacities at Provincial, Divisional, and District levels.

This Plan emphasizes upon a Disaster Management approach that is inclusive while vigorously promoting public awareness, civil society participation, and community preparedness. By fostering coordinated Inter-Departmental efforts, while engaging all stakeholders, and sustained vigilance, Punjab aims to mitigate risks, protect lives and property, safeguard critical infrastructure, and advance climate resilience capable of withstanding future monsoon challenges.

Khawaja Salman Rafique

**Chairman Cabinet Committee
on Disaster Management**



Proactive planning and coordinated response are not merely institutional responsibilities; they are our moral obligation to the people we serve.

Punjab continues to face a growing range of climate-related threats, with the floods of 2025 highlighting the severe challenges posed by extreme rainfall, urban and peri-urban flash floods, and prolonged heatwaves affecting vulnerable populations. These events have underscored the importance of pre-emptive and comprehensive preparedness, installation of robust response mechanisms, and efficient resource management at all levels of Government.

The Punjab Monsoon Contingency Plan 2026 reflects our commitment to proactive disaster management. It establishes an operational framework covering early warning systems, communication protocols, interdepartmental coordination, strategic pre-positioning of emergency supplies, and rapid deployment of rescue & relief equipment to affected communities. Community engagement and public awareness campaigns are central to ensuring that citizens, particularly in high-risk and underserved areas remain alert, informed, and ready to respond.

Departments, agencies, and stakeholders are urged to implement this Plan diligently, while prioritizing disaster risk reduction, protecting critical infrastructure, and safeguarding vulnerable populations, including women, children, elderly, and persons with disabilities. Learning from lessons of 2025 and using evidence-based strategies, we can build a safe and resilient Punjab, capable of facing future monsoon challenges.

Zahid Akhtar Zaman

Chief Secretary, Punjab

Government of Punjab – Secretariat



Comprehensive and strategic planning, inter-institutional coordination, and community engagement are the three pillars upon which Punjab's disaster resilience must be built.

The devastating floods of 2025 exposed Punjab's growing vulnerability to climate-induced disasters, highlighting the critical need for comprehensive strategic planning, institutional preparedness, and effective risk governance. These events demonstrated that timely and coordinated actions are essential to minimize socio-economic impacts of climate change. Resilience is cultivated through continuous investments in preparedness, capacity building, and inter-agency collaboration.

The Punjab Monsoon Contingency Plan 2026 provides a structured, evidence-based framework for disaster risk reduction. It includes detailed assessments of district-level vulnerabilities, resource inventories and deployment capacities, clearly defined stakeholder responsibilities, and operational mechanisms for timely and coordinated response. Developed in close collaboration with Provincial Departments, District Administrations, and Partner agencies, the Plan ensures a unified and coherent approach across all Government levels.

All key stakeholders are urged to implement this Plan diligently, while Prioritizing early preparedness, protection of human life, resilience of critical infrastructure, and security of livelihoods, particularly for vulnerable and marginalized communities. By consistently learning from past experiences and strengthening institutional capacities, Punjab can remain safe, resilient, and fully capable of effectively responding to future monsoon hazards.

Nabeel Javed

**SMBR / Relief Commissioner,
Punjab**

Board of Revenue – Relief Operations



An integrated, multi-sectoral approach to preparedness is the most effective instrument we possess against the complex and evolving nature of disaster risk.

The floods 2025 highlighted complex and multi-dimensional disaster risks facing Punjab, demonstrating that no single agency can manage these challenges alone. Therefore, an integrated & multi-sectoral approach covering all aspects of disaster cycle including early warning, emergency response, relief distribution, and long-term recovery is essential. Climate change continues to augment these risks, emphasizing the need to strengthen forecasting systems, institutional capacity, and coordination mechanisms capable of delivering under operational stress.

The Punjab Monsoon Contingency Plan 2026 provides a comprehensive framework for disaster management across Punjab, addressing all phases from risk assessment and mitigation to emergency response and post-disaster recovery. PDMA Punjab is committed to lead interdepartmental coordination, collaboration with humanitarian partners, engaging local communities, civil society, and private sector ensuring timely and equitable resource deployment.

The Plan emphasizes empowering field formations at district level, pre-positioning of rescue & relief resources, while guaranteeing that the most vulnerable populations including subsistence farmers, daily wage workers, women-headed households, and displaced communities have access to vital information and support. By fostering shared responsibility, proactive planning, and evidence-based decision-making, Punjab can reduce impacts of disaster, protect lives and property, and build resilience against future monsoon hazards.

Umer Javed

Director General, PDMA Punjab
Provincial Disaster Management Authority



PDMA Punjab's mission is clear: to build an institution that is prepared, ready to coordinate among all stakeholders, and focused on the protection of livelihoods.

PDMA Punjab plays a central and pivotal role in disaster risk reduction, preparedness, and emergency response across the Province. The floods 2025 provided critical lessons in all aspects of disaster management, including risk identification, early warning, resource mobilisation, logistics, inter-agency coordination, and community-level response and recovery. These lessons have been incorporated into the Punjab Monsoon Contingency Plan 2026 to ensure a more effective and timely response.

The Plan presents a comprehensive operational framework for integrating risk assessment, hazard-specific mitigation, phased preparedness actions, and structured recovery protocols. It emphasizes strengthened collaboration with provincial departments, district administrations, municipal authorities, and national and international partners, focusing on the districts and communities most exposed and least equipped to cope.

PDMA Punjab is committed to enhancing institutional capacities, improving forecasting capabilities, and promoting a province-wide culture of disaster readiness. By applying lessons learned, engaging communities as active partners, and managing resources efficiently and transparently, we aim to safeguard lives, protect infrastructure, and build long-term resilience. Through coordinated and proactive action, Punjab can achieve a safe monsoon season 2026 for all its citizens.

Executive Summary

Punjab is highly vulnerable to a range of hydrometeorological hazards, including riverine flooding along the Indus, Jhelum, Chenab, Ravi, and Sutlej river systems; flash floods resulting from hill torrents; and recurrent urban flooding caused by intense rainfall events and drainage constraints in major urban centers. During the monsoon season, these hazards pose significant risks to human lives, livelihoods, agriculture, critical infrastructure, and the continuity of essential public services across the province. The Punjab Monsoon Contingency Plan 2026 is structured around the full disaster management cycle, from risk analysis and preparedness to evacuation, coordination, response, and recovery. Its key components include:

- Assess exposure to riverine floods, flash floods, urban flooding, hill torrents, major nullahs, rivers, barrages, historical flood events, flood routing time-lags, and global and local monsoon outlooks.
- Capture key operational gaps observed during the flood season 2025, particularly in early warning, evacuation, rescue operations, community preparedness, coordination, institutional capacity, and relief camp management.
- Outline pre-monsoon actions under the Activity Calendar 2026, including district and departmental contingency plans, mock exercises, preparatory meetings, Third Party Validation (TPV), bund inspections, Army Survey Board engagement, urban flooding Standard Operating Procedures (SOPs), nullah desilting, and Provincial Emergency Operations Center (PEOC) functions, Multi-Hazard Vulnerability Risk Assessment (MHVRA) findings, procurement of rescue and relief equipment, resource inventory management, existing and planned warehouse facilities, and Regional Crisis Centres.
- Define evacuation guidelines, assessment formats, relief management procedures, and standards for relief camp operations.
- Establish mechanisms for partner mapping, the 5W (Who, What, When, Where, Why) matrix, early warning coordination, information sharing, and planning with Humanitarian partners
- Provide key contact details of relevant stakeholders to support timely coordination and response.

Collectively, these pillars mark a shift from reactive disaster management to proactive risk anticipation, mitigation, and response. By addressing the operational and coordination gaps identified during the floods 2025, enhancing institutional capacities across all administrative levels, and prioritizing the protection of vulnerable communities, the Plan positions the province on a path towards a safe, resilient, and climate-adaptive future.

Acknowledgment

The Punjab Monsoon Contingency Plan 2026 has been developed through a comprehensive, and evidence-based process to strengthen preparedness, coordination, and response arrangements for monsoon-related emergencies across Punjab. The Plan incorporates lessons learned from previous flood events, particularly the monsoon season 2025, and inputs received from provincial departments, district administrations, and other stakeholders. It reflects Punjab's commitment to enhancing anticipatory action, risk-informed planning, and coordinated emergency management to safeguard lives, livelihoods, infrastructure, and public services during the monsoon season. The overall supervision provided by **Mr. Mutahir Amin Wattoo, Additional Director General (ADG, PDMA)**. The development of this Plan was undertaken under the technical leadership and guidance of **Mr. Nisar Ahmed Sani, Director (Operations)**, PDMA Punjab, who provided overall direction, technical oversight, and strategic guidance throughout the planning process. His leadership ensured the integration of operational experiences, district-level risk information, and sectoral preparedness measures into a coherent and actionable planning framework aligned with provincial disaster management priorities and disaster risk reduction principles.

The preparation of the document was supported by a dedicated technical team. **Ms. Iqra Basit (Assistant GIS)** and **Ms. Fizza Hafeez (Assistant GIS)** led the compilation and analysis of multi-sectoral data, GIS mapping, spatial analysis, risk visualization, documentation, and report development. Their commitment, technical expertise, and attention to detail significantly contributed to the analytical quality and overall presentation of this Plan. Appreciation is further extended to the dedicated efforts of the **Operations Branch** and **PEOC staff** of PDMA Punjab for providing information, compiling operational data, and extending support throughout the planning process.

PDMA Punjab acknowledges the valuable contributions of all provincial line departments and attached agencies for providing sectoral data, preparedness plans, resource inventories, and technical inputs that formed the foundation of this document. Special appreciation is extended to the Deputy Commissioners and District Disaster Management Authorities (DDMAs) of all districts for sharing district-level risk information, preparedness measures, response arrangements, and local contingency planning inputs. Finally, PDMA Punjab acknowledges the support and cooperation of all partner organizations and stakeholders that contributed to the preparation of the Punjab Monsoon Contingency Plan 2026.

Umer Javed

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List of Abbreviations & Acronyms

Acronym / Abbreviation	Full Form
PDMA	Provincial Disaster Management Authority
DDMA	District Disaster Management Authority
EOC	Emergency Operations Centre
EWS	Early Warning System
MHVRA	Multi-Hazard Vulnerability Risk Assessment
CFS	Child-Friendly Spaces
CMIS	Camp Management Information System
GBV	Gender-Based Violence
GLOF	Glacial Lake Outburst Flood
GIS	Geographic Information System
IRSA	Indus Rivers System Authority
PMD	Pakistan Meteorological Department
PHCF	Punjab Humanitarian Coordination Forum
PWD	Person with Disability
SPHERE	Sphere Humanitarian Standards
SMS	Short Message Service
WASH	Water, Sanitation and Hygiene
SOP	Standard Operating Procedure
NGO	Non-Governmental Organisation
DCP	District Contingency Plans

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Chapter 1: Flood Hazard Landscape and Monsoon Outlook of Punjab



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1 Overview

Punjab is highly vulnerable to floods during the monsoon season, due to its extensive river system, transboundary influences, low-lying floodplains, and changing rainfall patterns. The province faces recurring threats to lives, livelihoods, agriculture, infrastructure, and public services from flood events. Climate change is further increasing the frequency and intensity of extreme weather events, making it imperative to complete all preparedness measures before the onset of the monsoon season. Accordingly, the Punjab Monsoon Contingency Plan 2026 emphasizes the need for proactive coordination, effective early warning systems, comprehensive preparedness, and multi-sectoral response planning to reduce flood impacts and strengthen community resilience across Punjab.

1.1 Geographical and Demographic Profile

Punjab is Pakistan's most populous province and a major agricultural region due to its fertile plains, river systems, and extensive irrigation network.

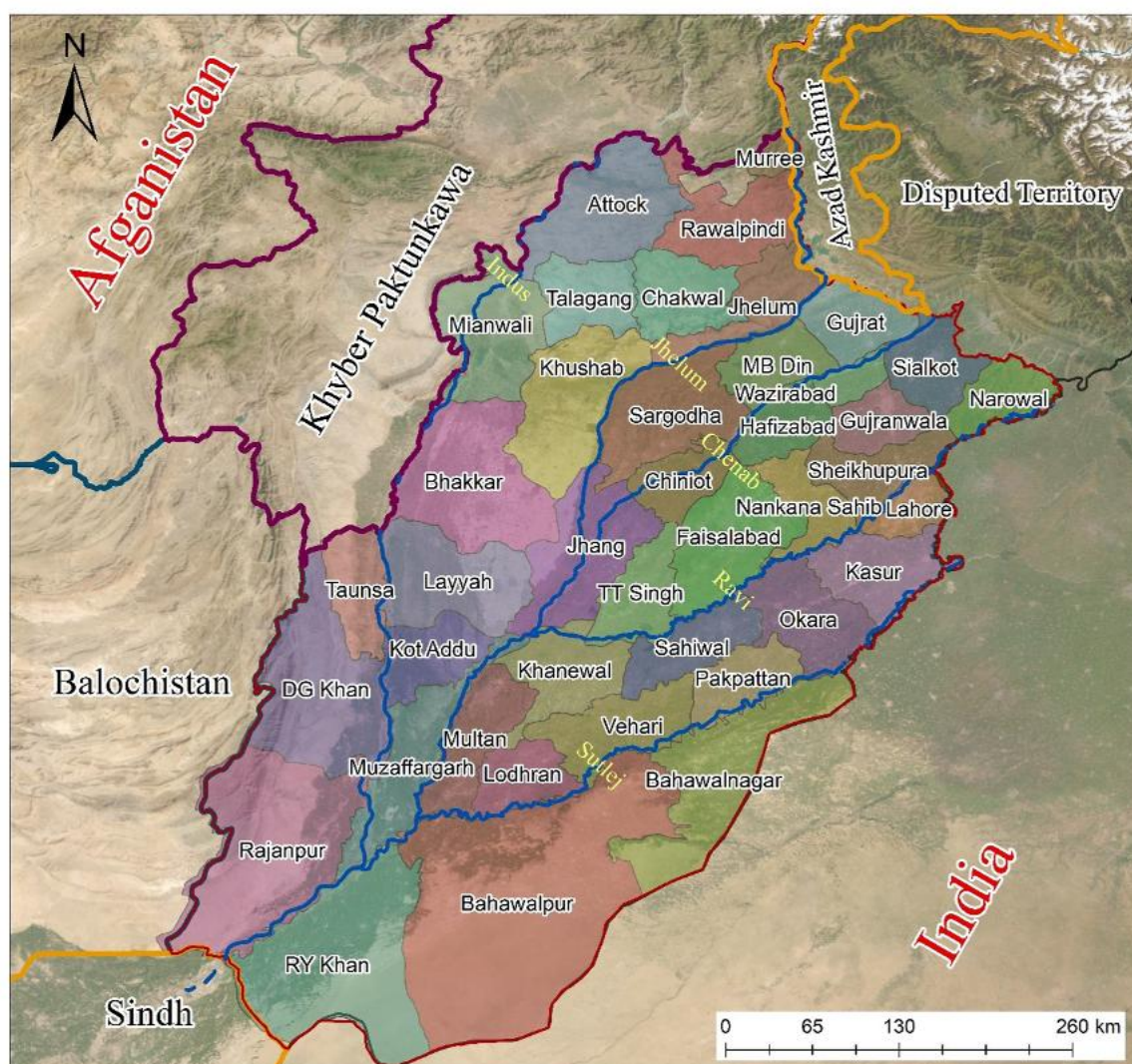


Figure 1 Geographical Map of Punjab, Pakistan

According to the Population and Housing Census 2023, Punjab has a population of about 127.69 million, representing nearly 52.9% of Pakistan's total population, with around 40.71% living in urban areas and 59.29% in rural areas (PBS, 2023).

1.2 Types of Floods

Different types of floods occur in Punjab due to its diverse geography and climatic conditions, which can be categorized into Riverine Flooding, Flash Flooding, Sheet Flooding, Hill Torrents & Urban Flooding.

1.2.1 Riverine Flooding

Riverine flooding is one of the major flood risks in Punjab, especially during the monsoon season when heavy rainfall in river catchment areas increases flows in the Indus, Jhelum, Chenab, Ravi, and Sutlej rivers. The risk becomes higher when intense monsoon rains combine with increased water flows from northern areas of Pakistan and Indian Occupied Jammu & Kashmir.

The Riverine Flooding Hazard Map (Figure 2) illustrates the different categories of riverine flood risk across Punjab. Category A districts, shown in dark red, comprise of highly vulnerable river-adjacent areas, including Mianwali, Jhang, Muzaffargarh, Rajanpur, Rahim Yar Khan, Gujrat, Sialkot, Hafizabad, Kasur, and parts of southern Punjab. These districts require priority preparedness measures and close monitoring during the monsoon season. Category B districts represent areas with moderate exposure to riverine flooding, while Category C districts indicate comparatively lower levels of riverine flood risk.

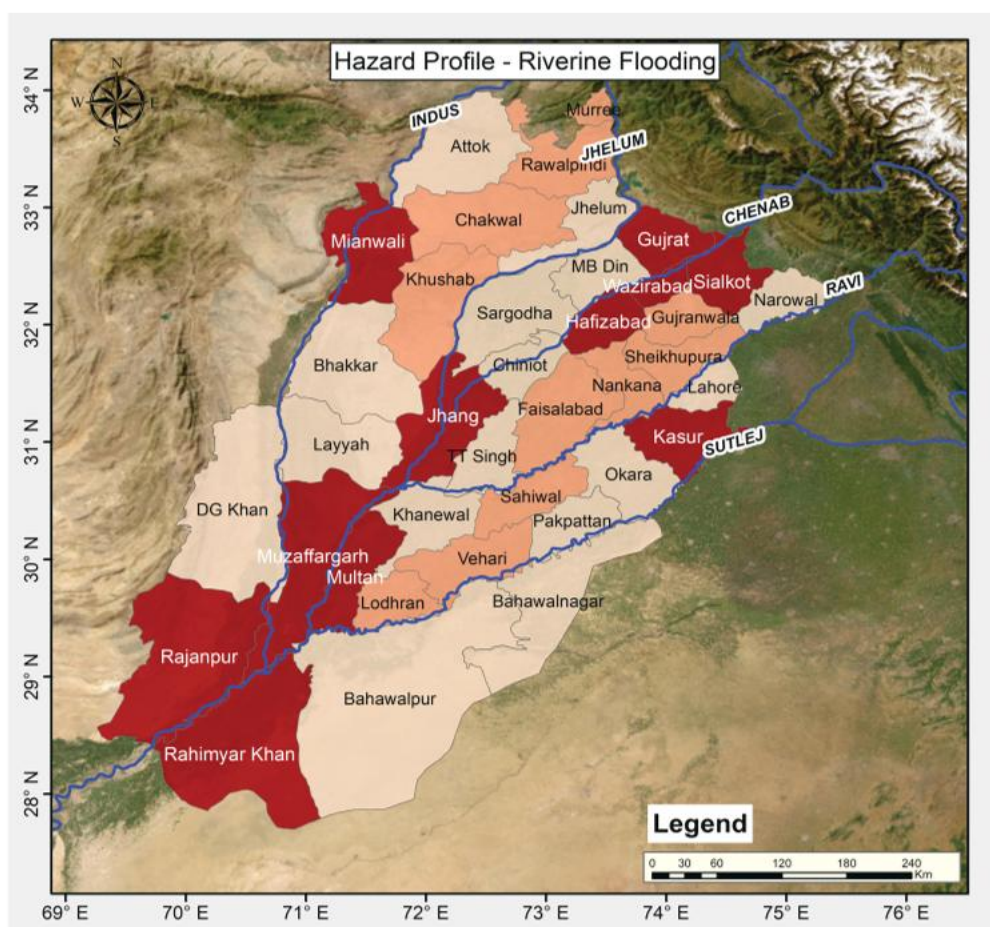


Figure 2: Riverine Flooding Prone Districts, (Source: PDMA Punjab)

Overall, the map highlights that districts located along major rivers and within low-lying floodplains are the most vulnerable to flooding during periods of high river discharge and intense monsoon rainfall.

1.2.2 Flash Flooding

Flash flooding in Punjab mainly occurs due to hill torrents, particularly in Dera Ghazi Khan, Rajanpur, Khushab and Mianwali, where intense rainfall, cloudbursts, and thunderstorms generate sudden runoff from nearby hills. The water quickly flows through nullahs, streams, and hill torrents, often rising within a short time and affecting nearby settlements, roads, crops, and livestock. Unlike riverine floods, flash floods develop rapidly and provide limited time for warning, evacuation, and response.

1.2.2.1 Hill Torrents

The southwestern region of Punjab, particularly the districts of Dera Ghazi Khan and Rajanpur, remains highly vulnerable to hill torrent (Rodh Kohi) flooding originating from the Suleiman Ranges (Figure 3). During the monsoon season, intense rainfall generates rapid flash floods through numerous hill torrents, causing damage to agricultural lands, settlements, roads, irrigation networks, and other critical infrastructure.

The Piedmont (Pachad) zone is particularly exposed due to the unpredictable nature of torrent flows and their potential to bypass traditional irrigation channels.

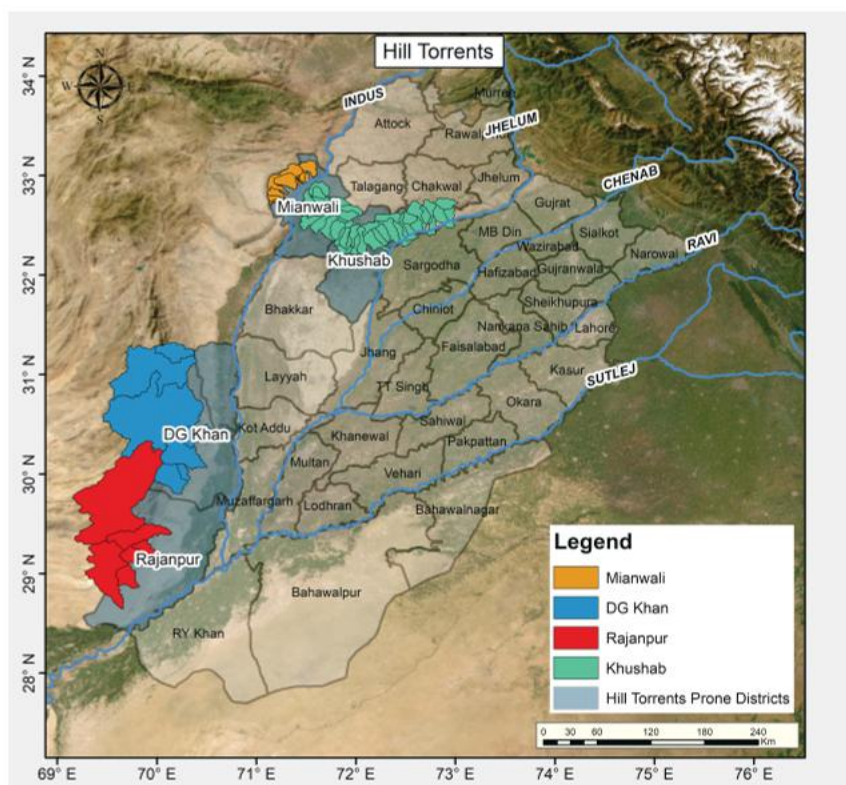


Figure 3: Major Hill Torrents Districts

The Table 1 presents a comparison between the design discharge and the observed peak discharges of various hill torrents during the 2025 flood season, along with the dates of peak flows. Overall, it highlights that while most torrents remained within their design capacity, a few experienced high-intensity or near-critical flows, indicating localized flood stress and varying response levels across the system.

Table 1: Peak Values of Hill Torrents in Flood 2025

Sr No.	Districts	Name of hill torrent	Design Discharge	Peak Discharge 2025	
				Discharge	Date
1.	Rajanpur	Kaha	118500	22345	26.07.2025
2.		Kala Bagga Khosra	27640	17994 (High)	17.07.2025
3.		Chachar	85500	48901 (High)	17.07.2025
4.		Pitok	23900	11309 (High)	17.07.2025
5.		Sori Shumali	13000	9650 (Medium)	31.07.2025
6.		Zangi	33600	10739 (High)	17.07.2025
7.		Sori Janubi	41600	2480	19.08.2025
8.	DG Khan	Kaura	61184	17,570	06.07.2025
9.		Vehova	87200	20,805	06.07.2025
10.		Sanghar	139715	35,081	26.07.2025
11.		Sori Lund	97000	29,270	06.07.2025
12.		Vidore	97095	75,589 (High)	06.07.2025
13.		Sakhi Sarwar	30800	32,643 (High)	06.07.2025
14.		Mithawan	78000	6,000	06.07.2025
15.	Mianwali	Chichali	Discharges are not known as these are never calibrated like hill torrents of Rajanpur and DG Khan		
16.		Adwala			
17.		Baroch			
18.		Rakha / Darsola			
19.		Lunda			
20.		Mochi Maar			
21.		Kurram			
22.	Khushab	Naushera			
23.		Quaidabad			
24.		Billa			
25.		Jauharat			
26.		Hadali			
27.		Mitha Tiwna			
28.		Katha Saghrat			

As part of PDMA's Monsoon Contingency Plan 2026, emphasis is placed on:

- Strengthening early warning systems for upstream rainfall and potential flash flooding.
- Maintaining and upgrading flood protection infrastructure, including spurs, embankments, and diversion channels.
- Documenting and digitizing historical flow data and to enhance predictive modelling.
- Engaging local communities through training and revival of indigenous water management techniques for flood diversion and irrigation.
- Integrating GIS and remote sensing tools to map vulnerable zones and monitor real-time flood behaviour.

By incorporating both modern technology and traditional knowledge, PDMA aims to mitigate the impacts of hill torrent-induced flooding in the region and ensure resilience development for the communities of hill torrent prone districts.

1.2.3 Sheet Flooding

Sheet flooding occurs when intense or prolonged rainfall exceeds the infiltration and drainage capacity of the land surface, causing water to spread uniformly over large, relatively flat areas without being confined to a defined river, stream, or drainage channel. In Punjab, sheet flooding is commonly observed in low-lying agricultural plains, depressed areas, and poorly drained rural and peri-urban landscapes, particularly during periods of heavy monsoon rainfall. Although generally characterized by shallow water depths, sheet flooding can inundate vast areas, disrupt transportation networks, damage standing crops, affect settlements, and hinder access to essential services. Districts with extensive floodplains and inadequate surface drainage are particularly vulnerable, making timely drainage management, rainfall monitoring, and community preparedness essential for reducing associated impacts.

1.2.4 Urban Flooding

Urban flooding in Punjab mainly occurs in large cities where heavy monsoon rainfall overwhelms drainage systems, nullahs, and stormwater channels. Cities such as Rawalpindi, Lahore, Gujranwala, Sialkot, Narowal, and Sheikhupura are more exposed due to rapid urban growth, blocked drains, encroachments, solid waste, and limited drainage capacity. The urban flooding hazard map (Figure 4) shows that flood risk in Punjab is mainly concentrated in major urban centres and districts with dense settlements, limited drainage capacity, and active nullah or stormwater channels. Category A districts, including Rawalpindi, represent the highest urban flood risk and require priority attention for drain clearance, rainfall monitoring, early warnings, and emergency response. Category B districts show moderate exposure, while Category C areas have comparatively lower risk.

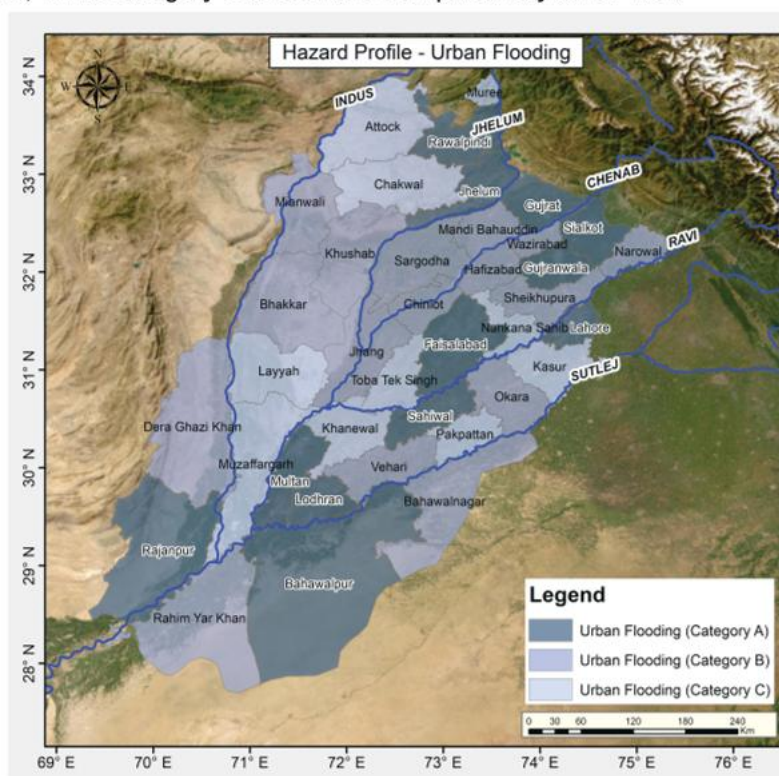


Figure 4: Urban Flooding Prone Districts, (Source: PDMA Punjab)

Overall, the map highlights that urban flooding is most likely to occur in built-up and low-lying areas where heavy monsoon rainfall can quickly overwhelm drainage systems and disrupt critical public infrastructure.

1.2.4.1 Major Nullahs in Gujranwala, Gujrat and Rawalpindi Divisions

Eastern Punjab contains a network of transboundary and local drainage channels that play a critical role in conveying monsoon runoff from the upstream catchments of Jammu and adjoining border areas into Pakistan. These nullahs form an integral component of the province's flood drainage system and significantly influence flood conditions in the districts of Sialkot, Narowal, Gujranwala, Sheikhupura as depicted in Figure 5. During periods of intense rainfall, these channels can carry substantial flood flows, resulting in inundation of agricultural lands, settlements, communication infrastructure, and urban areas. Consequently, the Flood Forecasting Division (FFD), Irrigation Department, PDMA, and district administrations maintain continuous monitoring of these nullahs during the monsoon season.

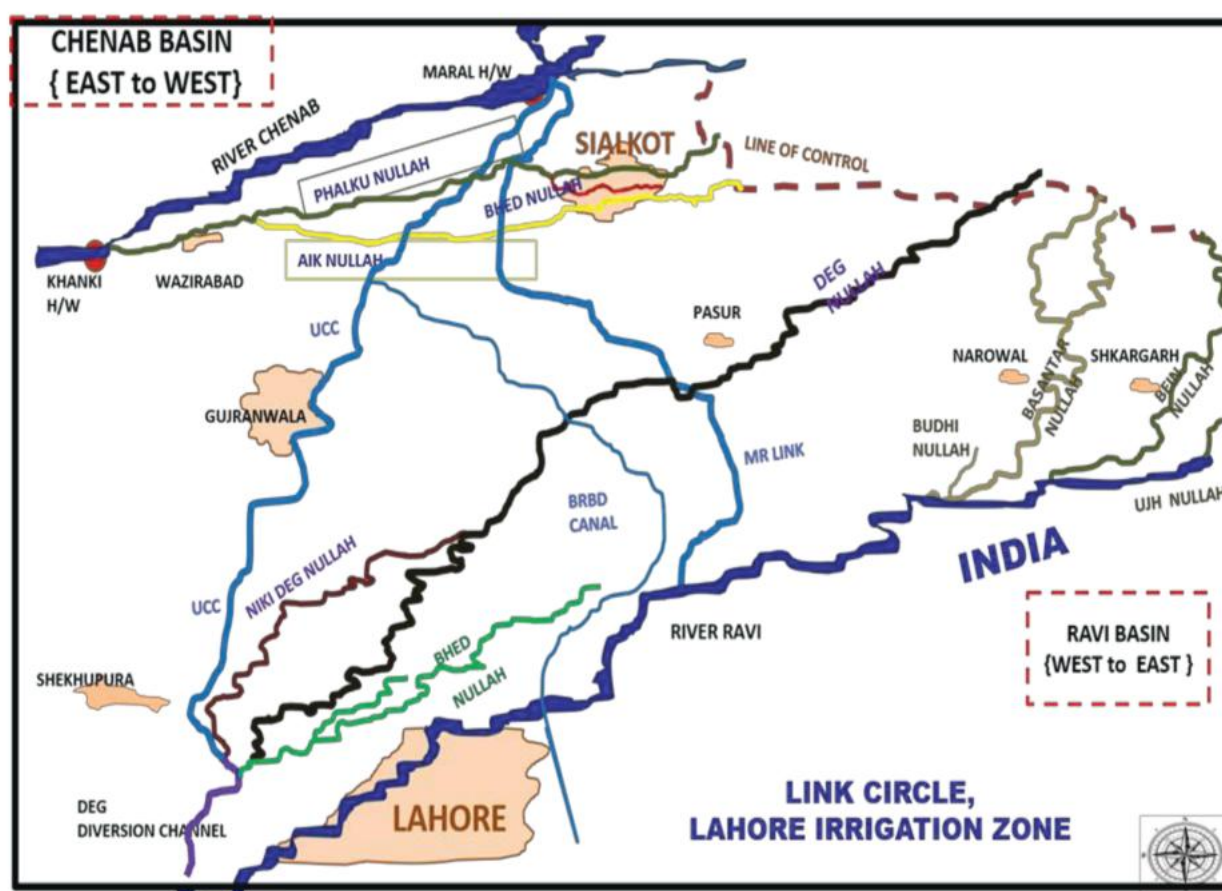


Figure 5: Major Nullahs in Punjab

The most important flood-carrying nullahs in Punjab include Palkhu (Phalku) Nullah, Aik Nullah, Deg Nullah, Bhed Nullah, Basantar Nullah, Bein Nullah, Ujh Nullah. Most of these drainage channels originate in the Jammu region and enter Pakistan near the control line before traversing through densely populated districts. Their interaction with major irrigation infrastructure such as the Upper Chenab Canal (UCC), Marala-Ravi Link (MR Link), BRBD Canal, and Ravi and Chenab river systems strongly influences flood routing and drainage patterns in eastern Punjab.

1.2.4.1.1 Palkhu Nullah

Palkhu Nullah is one of the principal drainage channels affecting Sialkot and Gujranwala districts. Entering Pakistan near Sialkot, it carries runoff from upstream catchments and flows southwest towards the Chenab drainage system. Historical flood events indicate that overflow from Palkhu Nullah can inundate low-lying areas surrounding Sialkot Cantonment, Sialkot City, Sambrial, and adjoining villages.

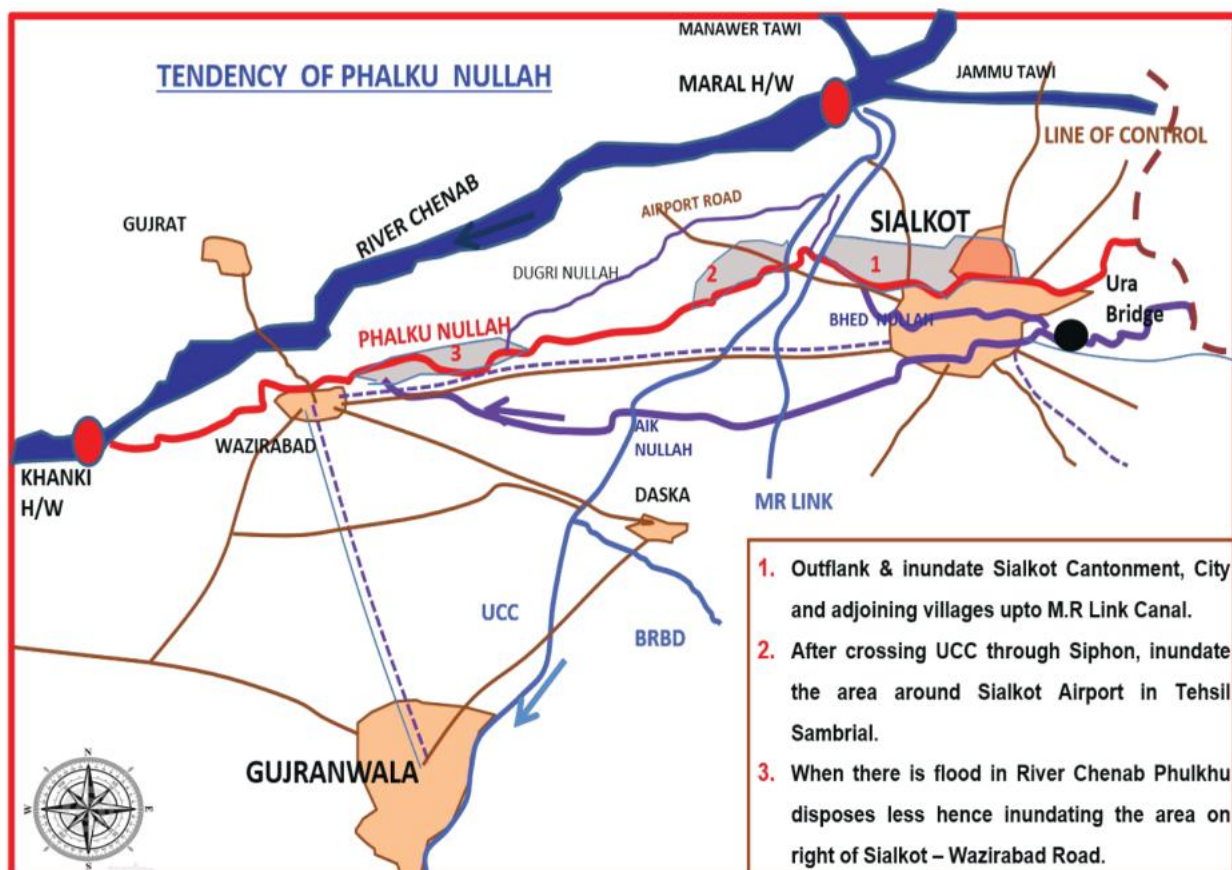


Figure 6: Phalku Nullah

The nullah crosses major transportation corridors and passes near Sialkot International Airport before eventually draining into the Chenab basin. During high flood conditions in River Chenab, drainage from Palkhu becomes restricted, increasing the likelihood of backwater flooding in surrounding areas.

1.2.4.1.2 Aik Nullah

Aik Nullah is among the most flood-prone drainage channels in Punjab and has historically caused significant flooding in Sialkot District. Originating from the Jammu region, the nullah enters Pakistan near the border and traverses through urban and rural areas of Sialkot before moving towards Daska. During high-flow events, Aik Nullah frequently overtops its banks and inundates settlements, agricultural lands, road infrastructure, and commercial areas. Historical records indicate that flooding from Aik Nullah has affected areas around Sialkot City, Sabzi Mandi, Pasrur Road, Eminabad Road, Daska, and surrounding villages in district Sialkot.

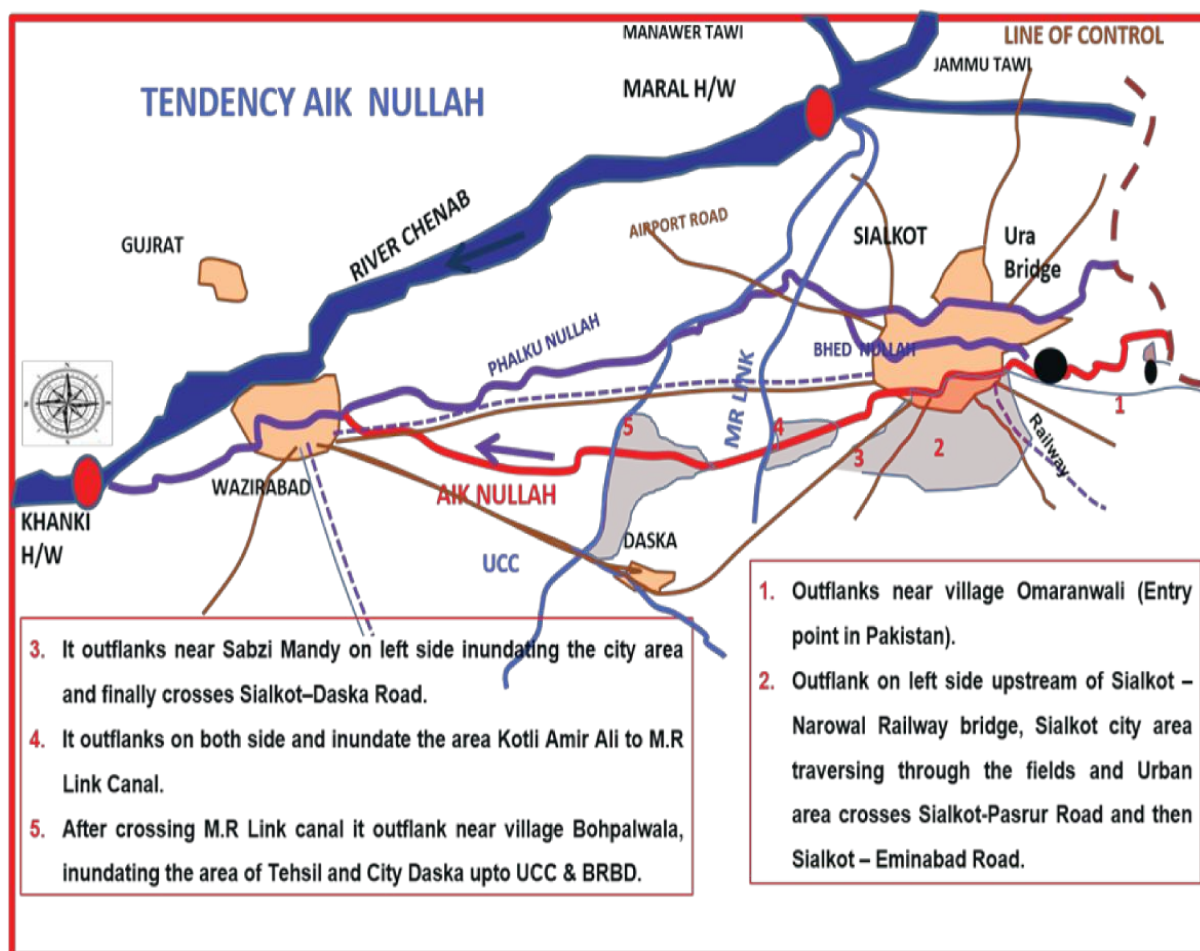


Figure 7: Aik Nullah

The nullah remains under continuous monitoring during the monsoon season due to its rapid response to intense rainfall in upstream catchments.

1.2.4.1.3 Deg Nullah

Deg Nullah is one of the largest and most significant transboundary drainage channels in eastern Punjab. It enters Pakistan near Pasrur and Narowal and flows southwest through Sialkot, Narowal, Gujranwala, and Sheikhupura districts before ultimately draining towards the Ravi River system. The Deg drainage system consists of the main Deg channel as well as associated branches including Nikki Deg and the Deg Diversion Channel. Flooding in Deg Nullah can affect extensive agricultural areas located between the MR Link Canal and BRBD Canal, particularly during periods of sustained monsoon rainfall (Figure 8).

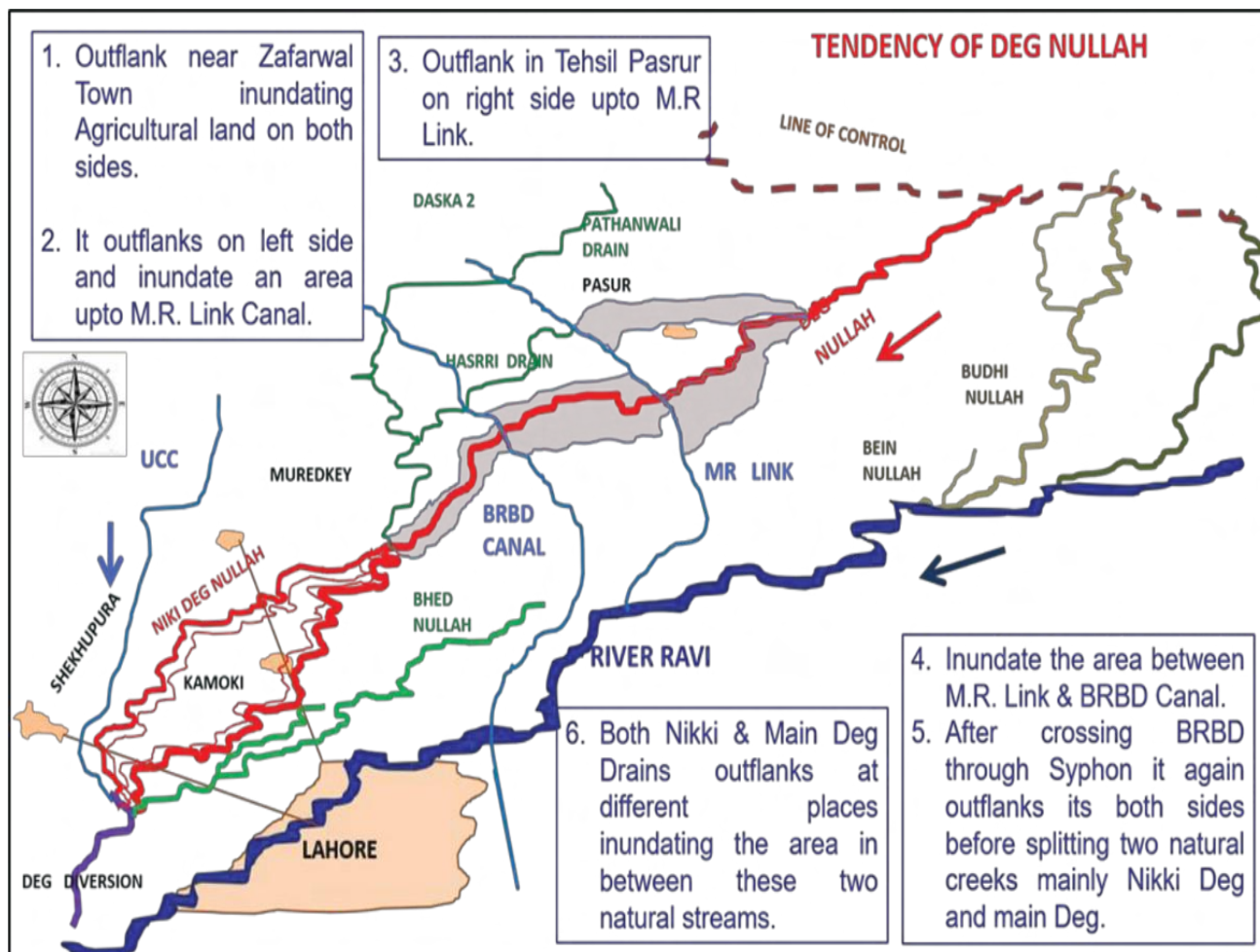


Figure 8: Deg Nullah

Due to its large catchment area and recurring flood history, Deg Nullah is considered one of Punjab's most important monitored flood channels.

1.2.4.1.4 Bhed Nullah

Bhed Nullah forms an important component of the drainage network in the Sialkot region. The nullah conveys runoff from border catchments and contributes to downstream drainage within the Chenab basin. Although smaller than Aik and Deg Nullahs, Bhed Nullah can generate localized flooding during heavy monsoon rainfall, particularly in low-lying agricultural areas.

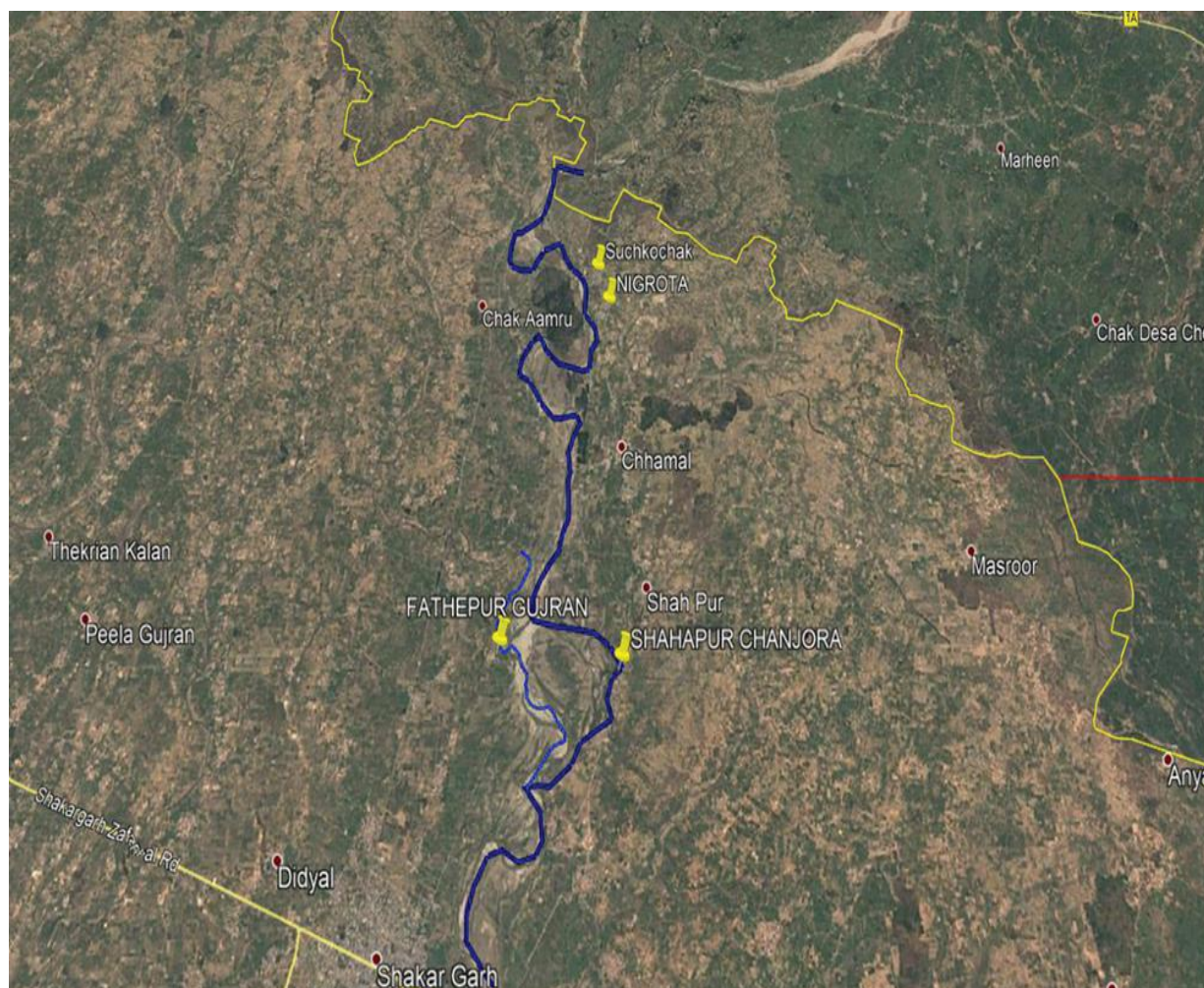


Figure 9: Bhed Nullah

Its hydraulic interaction with nearby irrigation infrastructure necessitates regular monitoring during the flood season.

1.2.4.1.5 Basantar Nullah

Basantar Nullah enters Pakistan in the Narowal–Shakargarh sector and serves as a major drainage channel for transboundary flood flows. Historical flood records indicate that high discharges in Basantar Nullah can inundate agricultural lands and settlements on both sides of the channel. Flood duration in Basantar often increases when River Ravi is simultaneously experiencing elevated flows, resulting in restricted drainage conditions.

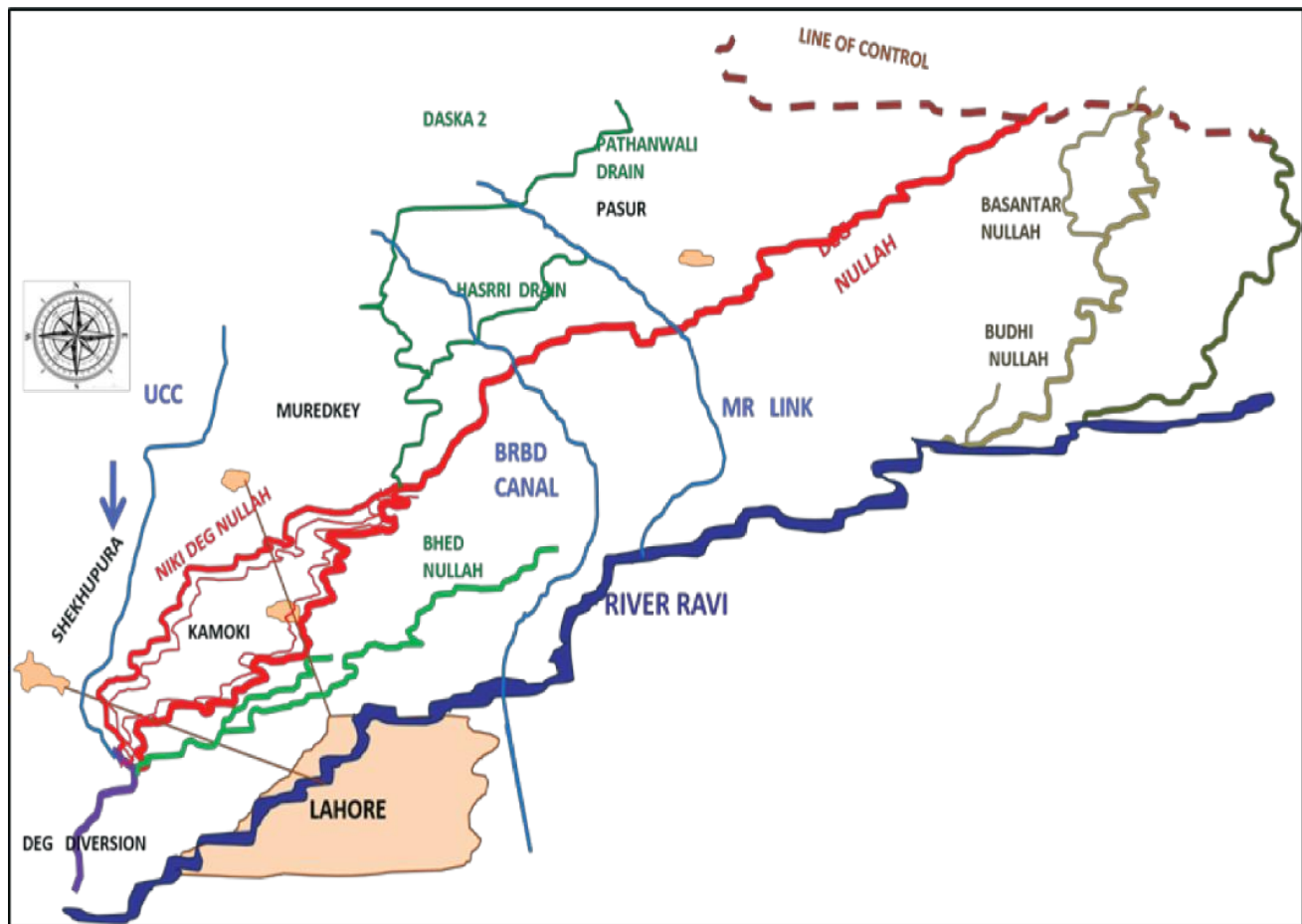


Figure 10: Basantar Nullah

The nullah therefore remains a critical focus of flood monitoring activities in Narowal District.

1.2.4.1.6 Lai Nullah in Rawalpindi

Lai Nullah is the principal flood-carrying channel passing through Rawalpindi City. With an overall length of approximately 30 kilometers, it drains runoff from the surrounding urban catchments and has historically been responsible for urban flooding in densely populated areas including Raja Bazaar, Arya Mohallah, Javed Colony, and adjoining localities.



Total Length of Nullah Lai= 30 km-18 km is in Rawalpindi

Areas under threat by flooding in Nullah Lai= Raja Bazar, ariaa Mohallah, Javed Colony,

Population of Areas under threat of flooding by Nullah Lai= 5 Lakhs

Figure 11: Lai Nullah

Owing to the concentration of population and infrastructure along its banks, Lai Nullah remains one of the most closely monitored urban flood channels in Punjab.

1.3 Historical Floods

Punjab has experienced major flood events in 2010, 2012, 2014, 2022, and 2025, causing significant impacts on livelihoods, agriculture, housing, and livestock across the province. Table 2 presents the flood impacts for these selected years, showing that 2010 recorded the highest crop damage, affecting approximately 1.91 million acres, and the largest number of affected people, at 5.03 million, along with substantial losses to housing and livestock.

In comparison, flood 2025 affected the greatest number of districts (27) and resulted in the highest number of fully damaged houses (877,619). While the impacts in other years were comparatively lower, they still caused considerable damage to crops, housing, and affected populations across Punjab . (Note: Situational Analysis Report – Flood 2025)

Table 2:Historial Floods in Punjab

Year	Districts	Villages affected	Crop area affected (Acres)	Persons affected	Persons Death	Persons injured	Cattle Perished
2010	12	1810	1914104	5038992	258	262	3752
2012	12	1512	473998	887345	60	272	898
2014	16	2519	196971	183	279	1594	1594
2022	6	UC=123; Settlement=58	706797	673970	223	3739	-
2025	27	4,754	143,2225.17	4,760,581	136	13	6,117

1.4 Major Rivers and Barrages

The rivers and barrages of Punjab are shown in the Figure 12. Over the years, numerous barrages and headworks have been constructed along these rivers to manage water flow and distribution.

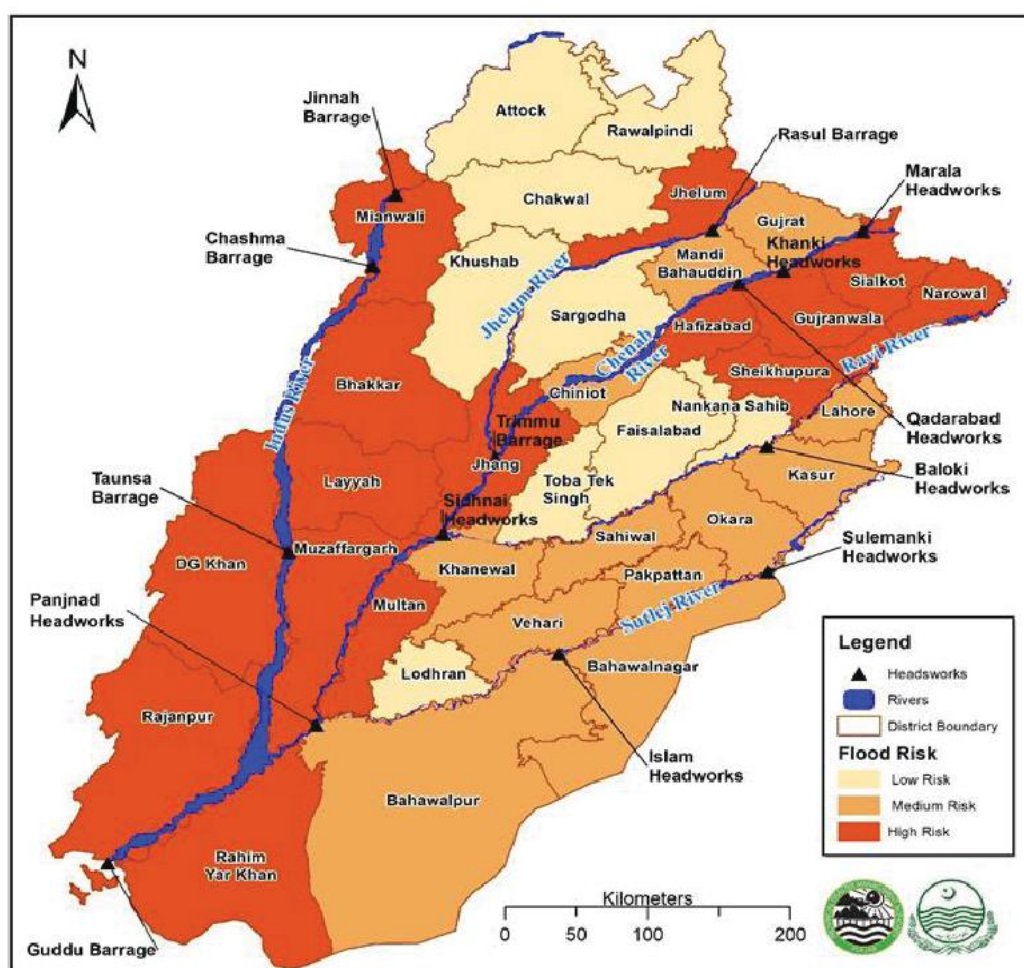


Figure 12 District Punjab Major Rivers and Barrages

1.4.1 River Indus

The Indus River is Pakistan's longest river and a major source of irrigation and livelihoods in Punjab. In the province, it flows through western and southern districts, where barrages such as Jinnah, Chashma, Taunsa, and Guddu help regulate water flows and support flood management. During the monsoon 2025, high upstream discharges caused prolonged flooding in low-lying riverine such as Rajanpur and Rahim Yar Khan (Figure 13).

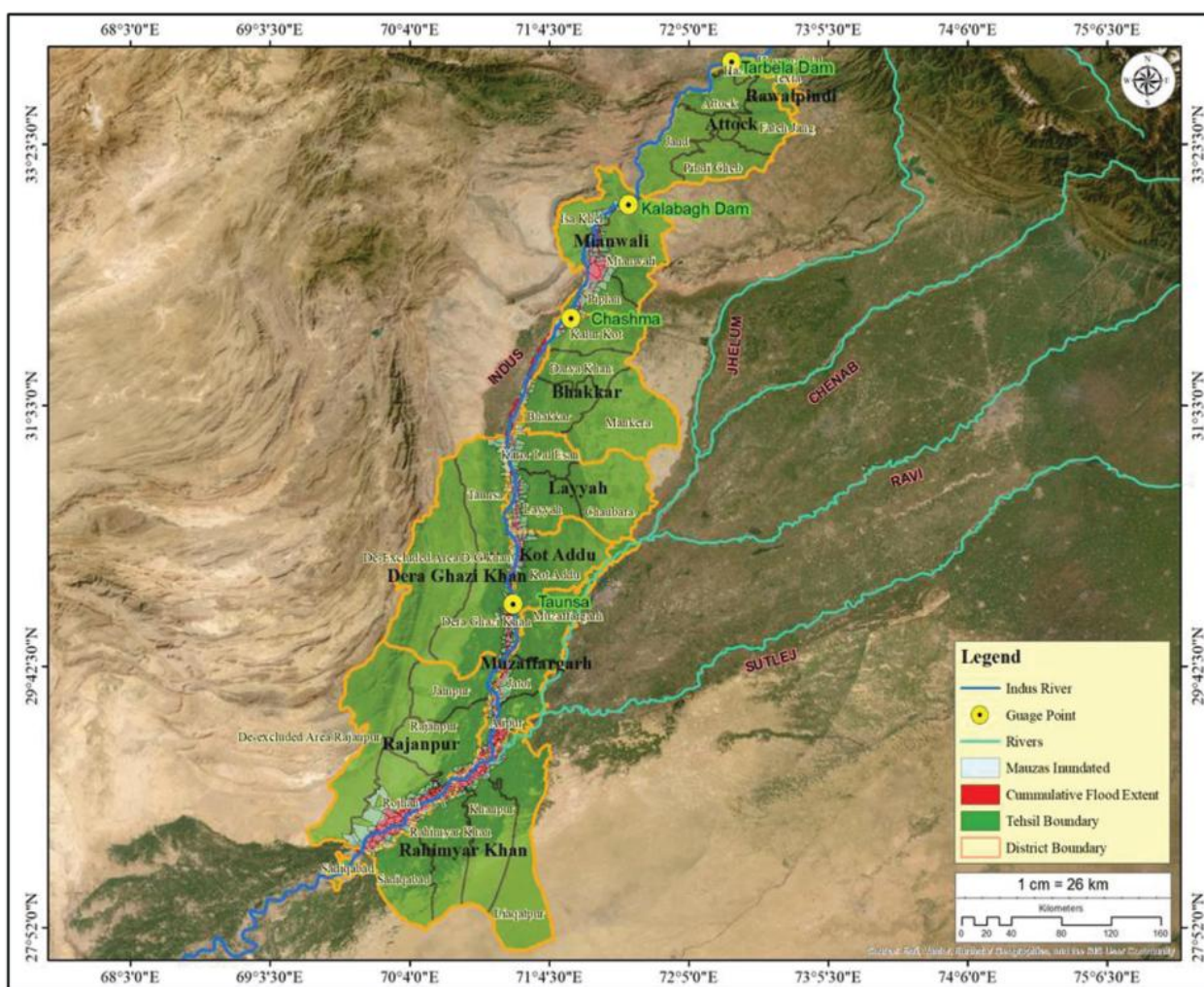


Figure 13: Spatial Distribution of Cumulative Flood Inundation Along River Indus, Source: GIS Team PDMA Punjab

Table 3 presents the district-wise impact of Indus River flooding in Rajanpur and Rahim Yar Khan during floods 2025, including affected mouzas, population evacuations, medical treatment, livestock movement, deaths, and injuries.

Table 3: District-wise Impact of 2025 Floods along the River Indus, Source: PDMA Punjab

Districts	Mouzas Affected	Affected Population	People Treated	Persons Evacuated/ Transported	Animal Transported /Evacuated	Death	Injured
Rajapur	61	1,718	4305	111,543	122,204	-	0
Rahim Yar Khan	74	242,585	15,509	89,100	66,393	11	0
Total	135	244,303	19,814	200,643	188,597	11	0

Figure 14 illustrates the evacuation process and demonstrates how affected livelihood were safely relocated from vulnerable areas during the emergency response operation.



Figure 14: Inundated areas along vulnerable districts of Indus River and coordinated rescue and relief activities undertaken to support flood-affected populations during Floods 2025

1.4.2 River Jhelum

The Jhelum River enters Punjab after flowing through Jammu and Kashmir and Azad Kashmir, with Mangla Dam, Rasul Barrage, and Trimmu Barrage serving as key control structures along its course. Within Punjab, the river passes through important riverine areas where protective bunds and spurs help manage flows and reduce flood risk. During the floods 2025, no major flooding was reported along the Jhelum River.

1.4.3 River Chenab

The Chenab River enters Punjab near Marala and flows through key flood-prone districts including Sialkot, Gujrat, Hafizabad, Chiniot, Jhang, Multan, and Muzaffargarh, with major control points at Marala, Khanki, Qadirabad, and Trimmu. In flood 2025, sustained upstream flows and heavy rainfall caused prolonged flooding along the Chenab belt, particularly affecting low-lying riverine areas as depicted in Figure 15.

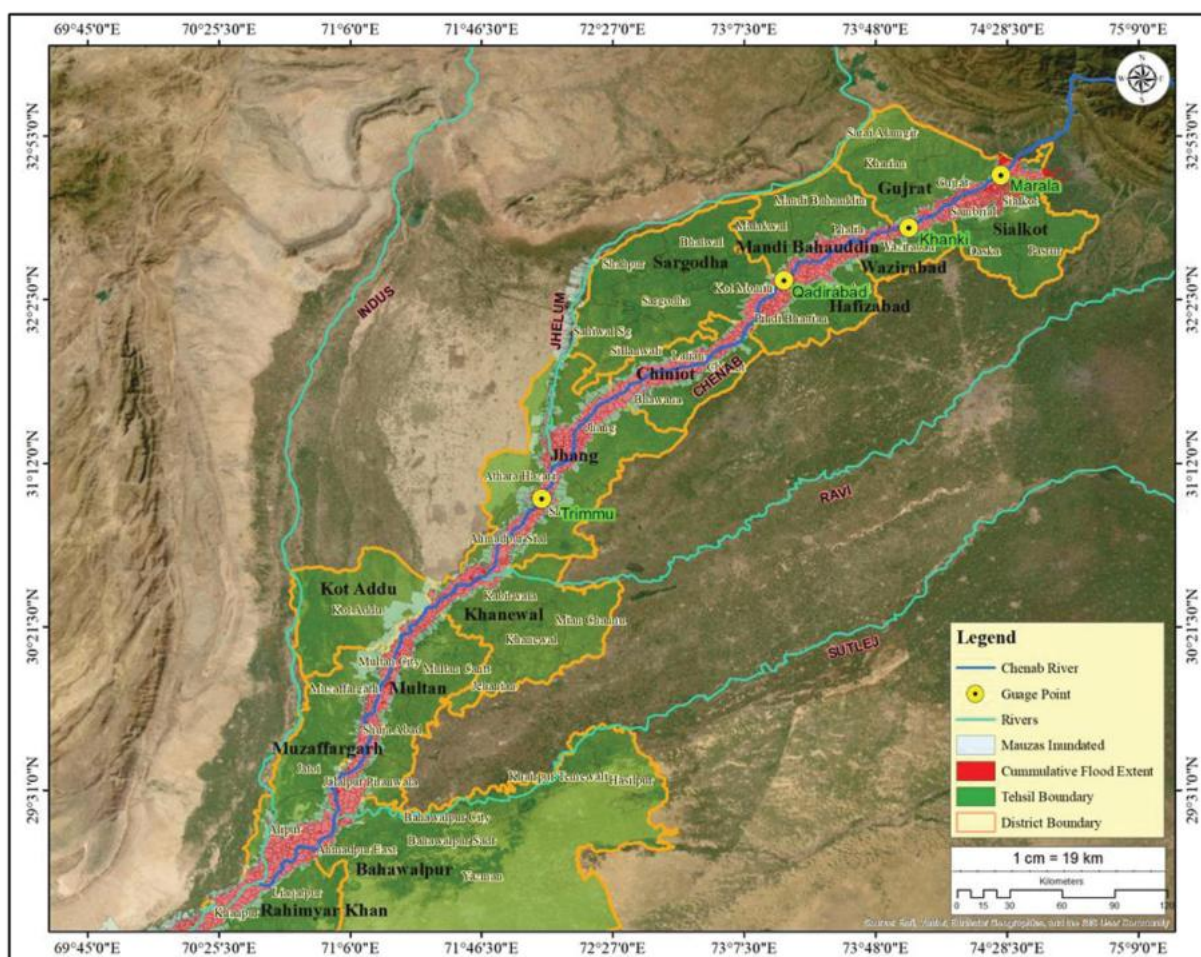


Figure 15: Spatial Distribution of Cumulative Flood Inundation Along River Chenab, Source: GIS Team PDMA Punjab

Table 4 presents the district-wise impact of Chenab River flooding, covering affected mouzas, population, relief camps, evacuations, medical treatment, livestock movement, deaths, and injuries across the affected districts. The table provides a concise overview of the scale of flooding and response actions in the Chenab belt during the 2025 monsoon season.

Table 4: District-wise Impact of 2025 Floods along the River Chenab, Source: PDMA Punjab

Districts	Mouzas Affected	Affected Population	People Treated	Persons Evacuated/ Transported	Animal Transported /Evacuated	Death	Injured
Sialkot	1034	1077300	5172	41015	1540	28	0
Gujrat	214	23,000	13465	2,610	1,450	8	0
Gujranwala/ Wazirabad	66	24,000	74110	6,187	13,900	2	5
MB Din	78	98,400	29,521	5,155	6,687	6	1
Hafizabad	165	205,915	10077	17,479	7419	2	0
Sargodha	41	67,000	36406	22,700	11245	4	1
Chiniot	148	215,000	38123	113,069	135662	6	0
Jhang	308	563,000	51,903	496,997	223,423	0	0
Khanewal	120	161,392	2467	166,931	164969	0	0
Multan	126	348,000	2572	324,372	268,345	35	0
Muzaffargarh	189	394722	57,850	201,302	312,520	20	0
TOTAL	2489	3,177,729	321,666	1,397,817	1,147,160	111	7

Figure 16 illustrates the evacuation process and demonstrates how affected people were safely relocated from vulnerable areas during the emergency response operation.

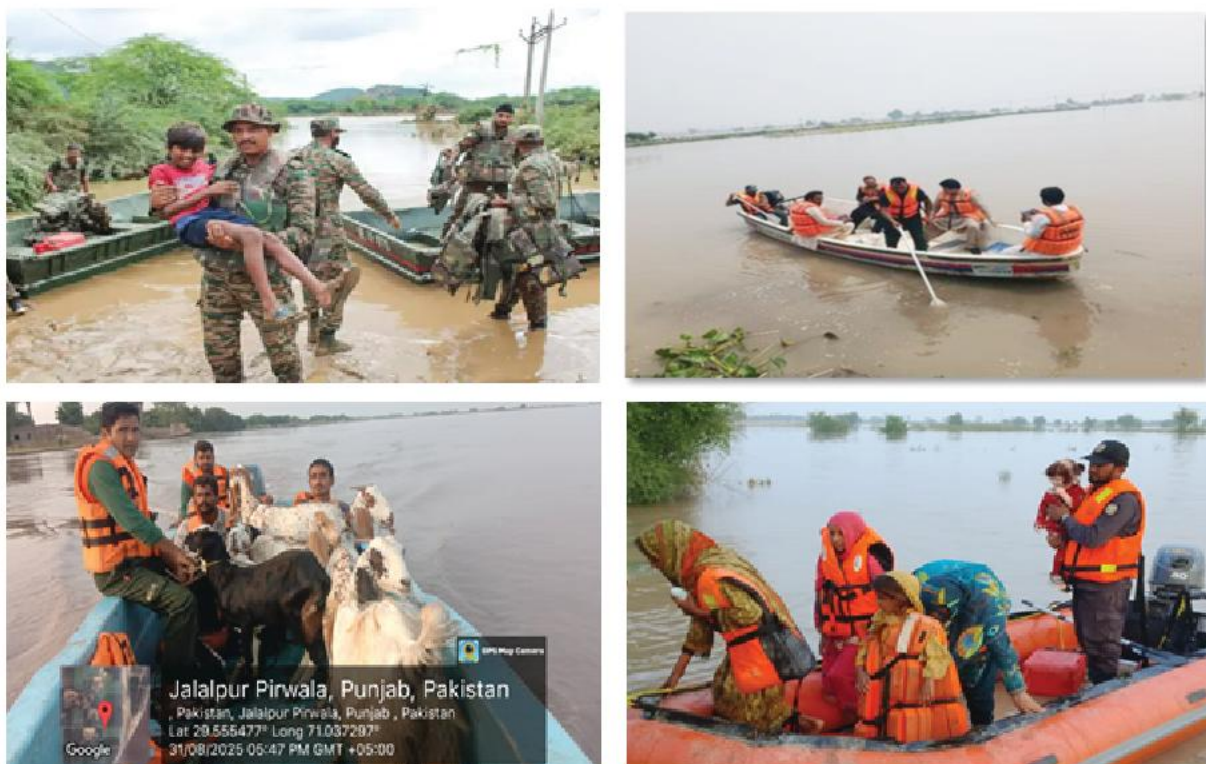


Figure 16: Inundated areas along vulnerable districts of Chenab River and coordinated rescue and relief activities undertaken to support flood-affected populations during Floods 2025

1.4.4 River Ravi

The Ravi River enters Punjab from India and flows along the eastern part of the province, passing through flood-prone areas of Sialkot, Narowal, Sheikhupura, Lahore, and Kasur before joining the Chenab system downstream. Key control structures on the Ravi include Balloki and Sidhnai Barrages. In flood 2025, the Ravi experienced a sudden and fast-moving flood wave, which quickly affected low-lying villages, peri-urban settlements, and areas near natural drainage channels as shown in Figure 17.

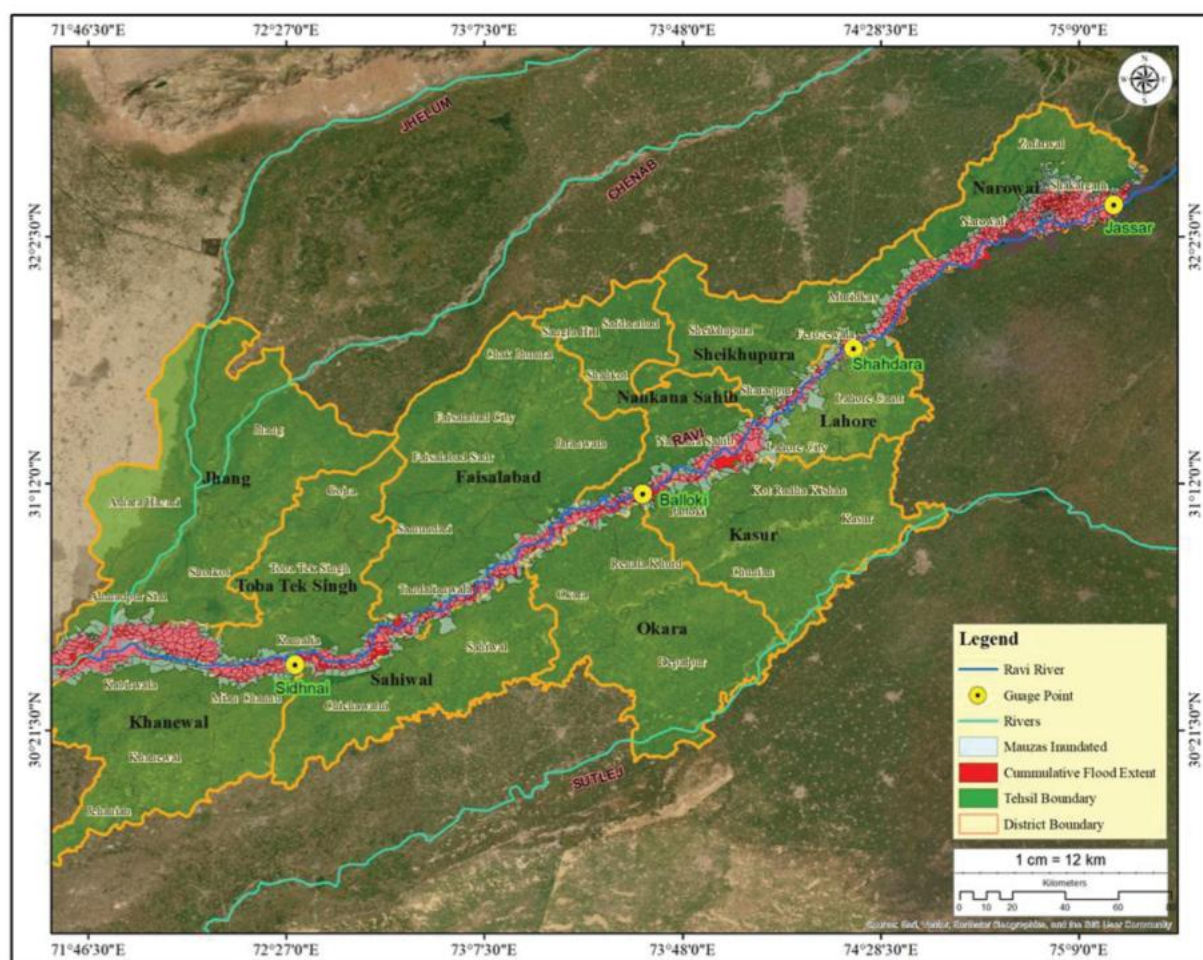


Figure 17: Spatial Distribution of Cumulative Flood Inundation Along River Ravi, Source: GIS Team PDMA Punjab

Table 5 presents the district-wise impact of flooding along the Ravi River. Approximately 1,389 mouzas were affected, resulting in 12 deaths and 6 injuries.

Table 5: District-wise Impact of 2025 Floods along the River Ravi, Source: PDMA Punjab

Districts	Mouzas Affected	Affected Population	People Treated	Persons Evacuated/ Transported	Animal Transported /Evacuated	Death	Injured
Narowal	836	180,000	12843	21,136	59503	4	6
Sheikhupura	96	23,500	8,156	12,127	8,760	-	-
Lahore	28	82,952	16,967	44,546	13,621	1	-
Nankana	97	36,000	14,738	30,344	16,465	-	-
Kasur	30	4,610	3569	8,044	6193	1	-
Okara	50	85,839	1,925	1,414	384	-	-
TT Singh	81	115,765	11521	120,829	81026	6	-
Faisalabad	40	26,000	1304	26,100	19,750	-	-
Sahiwal	91	17,735	17248	14752	18472	-	-
Khanewal	40	48,404	2039	56,396	60,260	-	-
Total	1,389	620,805	90,310	335,688	284,434	12	6



Figure 18: Inundated areas along vulnerable districts of Ravi River and coordinated rescue and relief activities undertaken to support flood-affected populations during Floods 2025

1.4.5 River Sutlej

The Sutlej River enters Punjab from India and flows through key flood-prone districts including Kasur, Okara, Pakpattan, Bahawalnagar, Bahawalpur, and Lodhran, with important control structures such as Sulemanki and Islam Barrages. In Flood 2025, the Sutlej caused widespread and prolonged flooding across southern Punjab, particularly in low-lying rural and agricultural areas as depicted in Figure 19. Unlike the sudden Ravi flood wave, Sutlej flooding developed slowly but sustained for a longer period, damaging crops, houses, roads, livestock assets, and local livelihoods across a wide belt.

Figure 19: Spatial Distribution of Cumulative Flood Inundation Along River Sutlej, Source: GIS Team PDMA Punjab

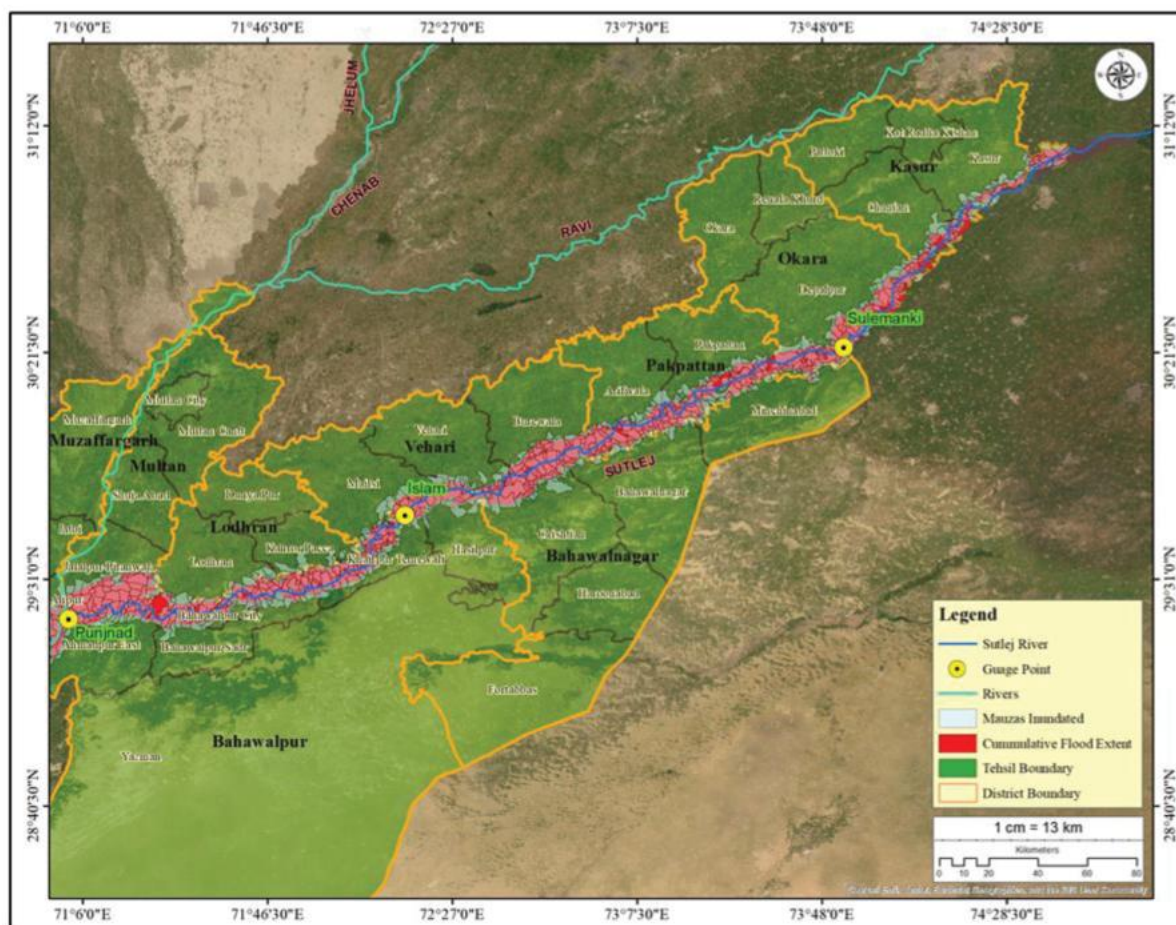


Table 6 presents the district-wise impact of Sutlej River flooding, affected 741 mouzas, However with the support of rescue 1122, approx 706,768 people are evacuated.

Table 6: District-wise Impact of 2025 Floods along the River Sutlej, Source: PDMA Punjab

Districts	Mouzas Affected	Affected Population	People Treated	Persons Evacuated/ Transported	Animal Transported /Evacuated	Death	Injured
Kasur	100	109,138	17186	183126	174466	-	-
Okara	95	81,924	14004	23,140	3,225	-	-
Pakpattan	76	64,801	12032	39,627	4,924	-	-
Lodhran	41	16790	1,250	35,755	25,021	-	-
Multan	37	40644	722	37,900	45771	-	-
Vehari	102	88889	28822	96,521	124435	-	-
Bahawalnagar	168	145,016	37845	145,016	50779	2	-
Bahawalpur	122	170,542	38,357	145,683	68,584	-	-
Total	741	717,744	150,218	706,768	497,205	2	-



Figure 20: Inundated areas along vulnerable districts of Sutlej River and coordinated rescue and relief activities undertaken to support flood-affected populations during Floods 2025

1.5 Rivers and Flood Routing Model (Time Lags)

Flood routing is an important tool for estimating the movement of floodwaters through river systems and predicting downstream flood conditions based on upstream flows. The observed travel times provide critical lead time for flood forecasting, dissemination of early warnings, evacuation planning, operation of barrages and link canals, and the timely deployment of emergency response resources. Understanding these seasonal flow patterns strengthens preparedness and supports effective flood management across Punjab.

Table 7 presents the estimated travel time of flood flows through major rivers and link canals of Punjab under different seasonal conditions.

Table 7: Time Lag of Flood Flows in Punjab Rivers and Link Canals Across Seasons (Source: Federal Flood Commission (FFD))

Rivers	Reach	Notified Lag Times (Hours) currently in practice as per PMD Notification No. FWC-2/2019/2/IV/ dated 23rd July 2021	Lag Times Observed during Monsoon 2025 (Hours) First Wave	Lag Times Observed During Monsoon 2025 (Hours) Second Wave
Chenab	Marala – Khanki	9	14	9
	Khanki – Qadirabad	6	4	5
	Qadirabad – Trimmu	64	112	83
	Trimmu – Panjnad	81	155	113
	Panjnad – Guddu	52	38	-
Ravi	Jassar – Shahdara	22	34	-
	Shahdara – Balloki	19	45	-
	Balloki – Sidhnai	48	89	-
Sutlej	GSW – Suleimanki	53	19	-
	Suleimanki – Islam	60	227	-
Indus	Tarbela – Kalabagh	26	-	-
	Kalabagh – Chashma	12	-	-
	Chashma – Taunsa	58	-	-
	Taunsa – Guddu	84	-	-
	Guddu – Sukkur	32	49	-

The detailed of time lag are given in (Annexure – A). The available warning period enables authorities to disseminate alerts, undertake evacuation measures in vulnerable areas, regulate barrage and canal operations, and mobilize rescue and relief resources before floodwaters reach downstream locations.

1.6 Global Monsoon Outlook

Global and regional seasonal climate outlooks provide valuable guidance for anticipating monsoon behaviour and supporting preparedness planning. The monsoon forecasts 2026 from the North American Multi-Model Ensemble (NMME) and the South Asian Climate Outlook Forum (SASCOF) generally indicate a tendency towards normal to below-normal rainfall across much of Pakistan, including Punjab.

1.6.1 NMME Precipitation Anomaly Forecast (July–September 2026)

The NMME forecast indicates predominantly normal to below-normal rainfall across Punjab during the 2026 monsoon season as depicted in Figure 21, with relatively larger rainfall deficits expected in central and southern parts of the province. The forecast suggests an increased likelihood of drier-than-average conditions, which may affect water availability and agricultural activities, particularly in rain-fed areas.

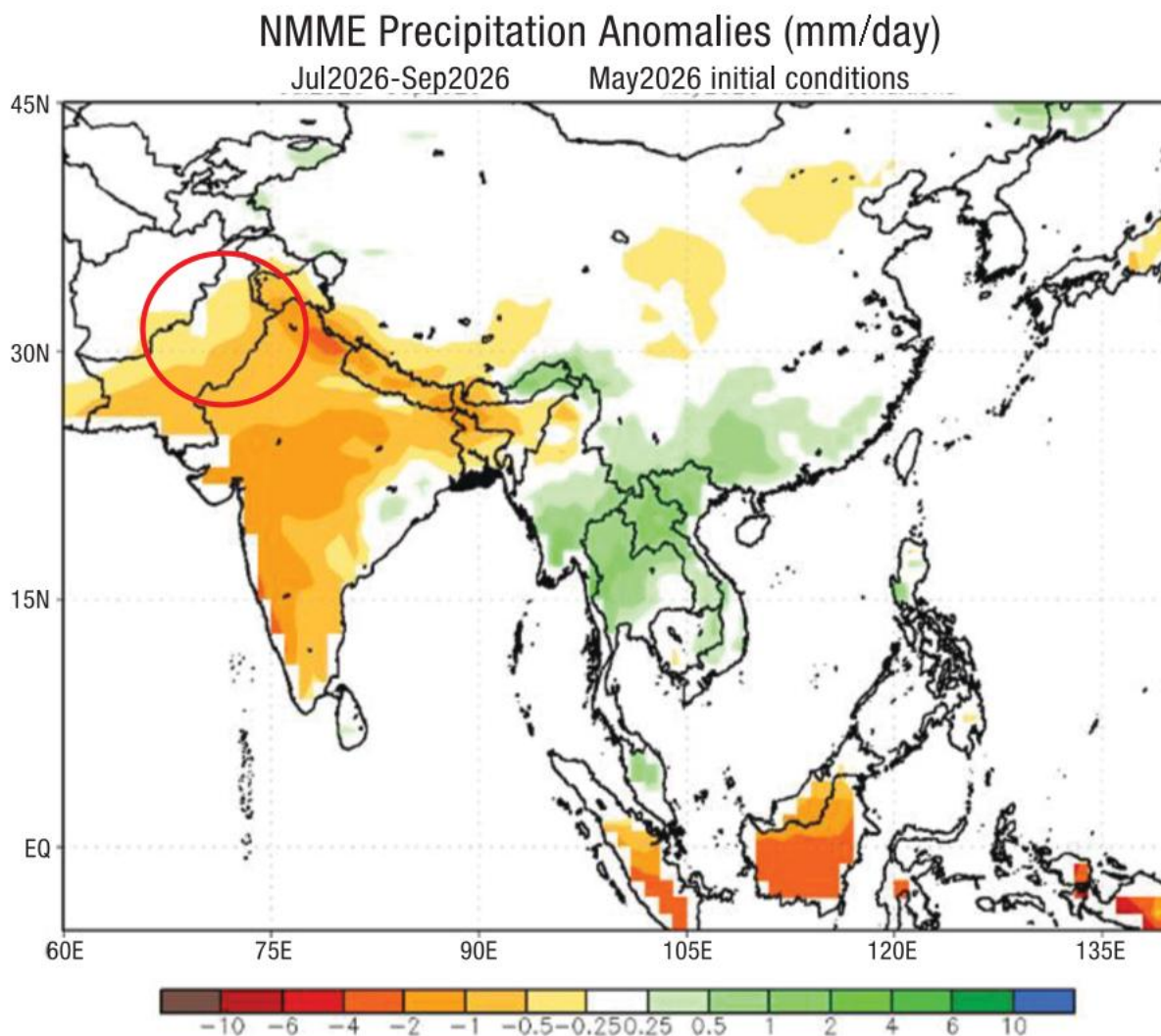


Figure 21: Precipitation Anomalies, (Source: CPC, NOAA/NCEP, 2026)

1.6.2 SASCOF Seasonal Outlook (June–September 2026)

The SASCOF outlook supports the NMME forecast and indicates a moderate-to-high probability of normal to below-normal rainfall over much of Punjab as depicted in Figure 22. Southern Punjab is expected to be more vulnerable to rainfall deficits, while central Punjab may also receive reduced monsoon precipitation.

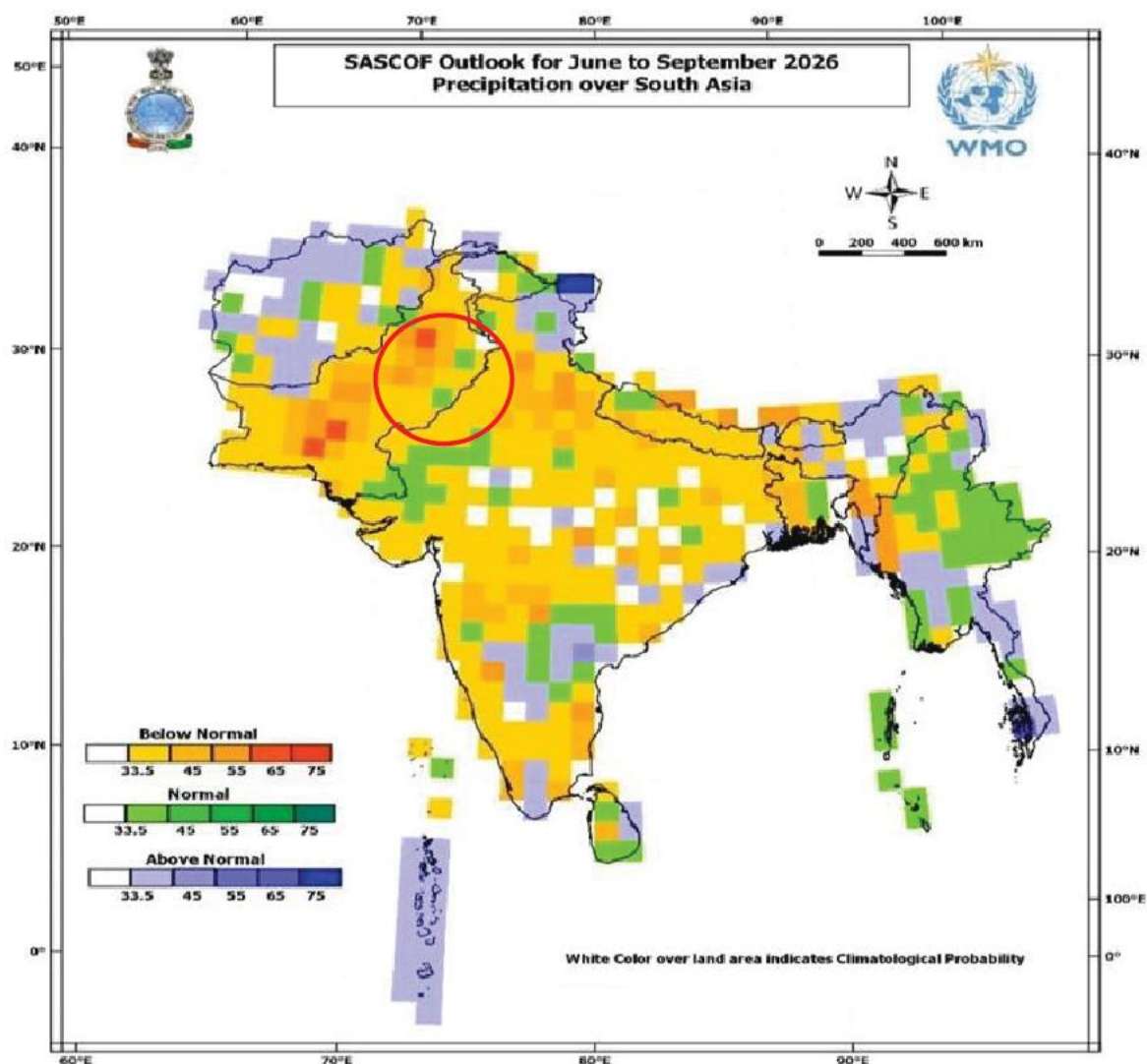


Figure 22: Precipitation over South Asia, (Source: World Meteorological Organization, 2026)

1.7 National Monsoon Outlook

The Pakistan Meteorological Department (PMD) Seasonal Climate Outlook for May–July 2026, based on global climate models and ensemble forecasts, indicates regionally variable rainfall and temperature patterns. Northern areas may receive above-normal precipitation, while parts of Punjab, Sindh, and Baluchistan are likely to experience below-normal rainfall.

1.7.1 Pakistan Meteorological Department (PMD) Seasonal Outlook (July – Sep 2026)

PMD issues monthly and seasonal forecasts using multiple global climate models at the end of each month. Since no single model is sufficient for reliable long-range prediction, outputs from various international forecasting centres are integrated using a multi-model ensemble approach. At present, 13 recommended climate models are used, incorporating different boundary conditions to improve forecast reliability and reduce uncertainty in seasonal precipitation outlooks.

The precipitation outlook for July to September 2026 (JAS 2026) indicates a generally below-normal rainfall pattern across much of Pakistan, including significant parts of Punjab. The anomaly maps show that July 2026 is expected to experience the strongest negative deviations, particularly across north-eastern and central Punjab, indicating a high likelihood of suppressed monsoon activity during the peak rainfall month. In August 2026, below-normal rainfall conditions are likely to persist across most of Punjab, although the intensity of negative anomalies appears relatively weaker compared to July. By September 2026, the outlook suggests partial recovery towards near-normal to slightly below-normal conditions in some northern and upper regions, while southern and central Punjab may still remain under mild rainfall deficits, as shown in Figure 23.

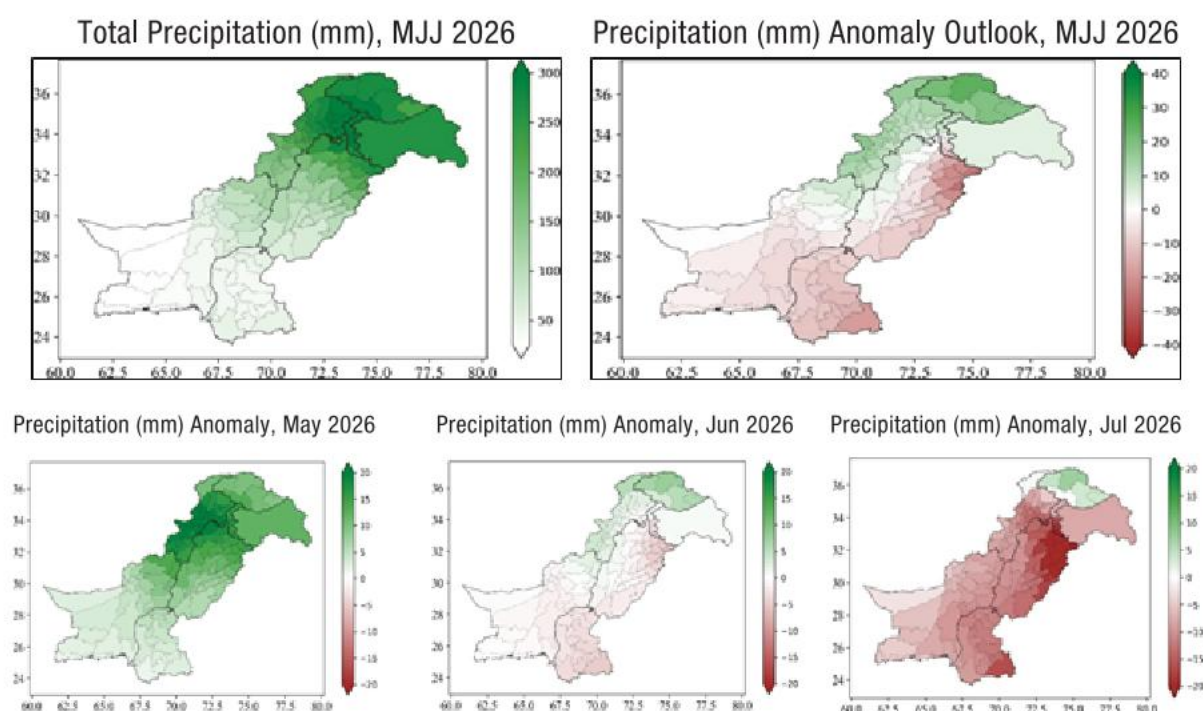


Figure 23: Precipitation Outlook for July to September 2026 (JAS 2026)

1.7.1.1 Month-wise Situation - Precipitation

- In July 2026, widespread below-normal precipitation is expected across most of Pakistan, with the most pronounced negative anomalies over Punjab's agricultural plains, indicating potential stress on water availability during peak cropping periods.
- In August 2026, the country is expected to continue experiencing below-normal rainfall conditions, though with slightly reduced intensity compared to July, particularly across central Punjab and Sindh.
- In September 2026, a gradual shift towards near-normal rainfall conditions is anticipated in northern Pakistan, while central and southern Punjab are likely to remain under slightly below-normal precipitation conditions.
- Overall, the JAS 2026 outlook highlights a risk of weak monsoon performance across Punjab, with implications for agriculture, water resources, and flood dynamics, although localized variability and short-duration rainfall events may still generate isolated flooding in vulnerable districts.

Chapter 2:

Lessons Learned From Monsoon 2025 and Strategic Interventions



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2 Lessons Learnt — 2025

PDMA Punjab conducted a structured Lessons Learnt exercise following the flood response phase. A standardized format for After-Action Reviews (AARs) and SWOT Analysis (Strengths, Weaknesses, Opportunities, and Threats) was circulated to Deputy Commissioners and relevant line departments in flood-prone districts. The responses received from districts and provincial stakeholders were carefully reviewed, consolidated, and analysed to identify both cross-cutting challenges and area-specific operational issues.

The analysis highlighted the importance of early preparedness, timely and clear communication, strategic pre-positioning of resources, strengthened inter-departmental coordination, enhanced data integration, and institutional agility to adapt to rapidly evolving flood scenarios.

(Note: Detailed lessons learnt – 2025)

CHALLENGES IDENTIFIED	ACTIONS TAKEN	EXPECTED OUTCOME
Lack of updated and complete data on flood-prone areas, population, and infrastructure. This made it difficult for line departments to clearly identify which areas and communities were most at risk during flooding situations.	Multi Hazard vulnerability risk mapping and is currently being updated, with around 60% of the work completed so far. This includes identifying flood-prone settlements, critical infrastructure, and vulnerable populations (Details are provided in Section 3.2.).	Line Departments will have a clearer and more accurate understanding of risk areas, allowing better planning, faster response, and targeted evacuation before floods occur.
No centralized disaster data system existed, which meant that different departments were working with separate and unlinked information sources during emergencies.	Development of an Integrated Disaster Management System (IDMS) is underway to bring all disaster-related data into one centralized digital platform accessible to relevant departments.	All disaster-related information will be available in one place in real time, improving coordination, decision-making, and efficiency during emergencies.
Manual reporting systems caused delays in sharing important information between departments, especially during fast-moving flood situations.	The reporting system is being shifted from manual to digital formats through IDMS to ensure faster collection, processing, and sharing of disaster-related information.	Information will be shared quickly and accurately, reducing delays in response and improving overall coordination.
Lack of real-time monitoring systems made it difficult for decision-makers to track flood situations as they were unfolding.	GIS-based live dashboards are being developed under the IDMS to provide real-time visualization of flood situations and affected areas.	Line Departments/ Authorities will be able to monitor the situation instantly on maps and make quicker and better-informed decisions.
Weak communication networks in remote and flood-affected areas created difficulties in sending warnings and receiving updates during emergencies.	Satellite communication systems are being expanded and strengthened to ensure uninterrupted communication in remote and disaster-hit areas (Details are provided in Section 3.3).	Communication will remain functional even in remote areas, improving coordination and emergency response.
Outdated and incomplete land records created problems in evacuation planning, damage estimation, and identification of affected households.	Coordination with the Punjab Land Records Authority (PLRA) has been initiated to digitize and update land records.	Better land data will improve evacuation planning, speed up damage assessment, and enhance relief distribution.

2.2 Evacuation and Rescue Operations

CHALLENGES IDENTIFIED	ACTIONS TAKEN	EXPECTED OUTCOME
Evacuations were delayed in some areas, especially during night-time flooding, which increased risks for affected communities.	Modern rescue and emergency response equipment worth PKR 1.3 billion is being procured to strengthen evacuation capacity. (Details are provided in Section 3.3)	Rescue teams will be able to respond more quickly and safely, reducing delays and saving more lives.
Private boat operators sometimes charged excessive fares from affected people during emergencies, creating financial burden and unfair practices.	Boat operators are being registered, mapped, and regulated to ensure transparency and control during emergencies.	Rescue operations will become fair, regulated, and accessible to all affected people without exploitation.
There was a shortage of trained boat operators, which reduced the efficiency of water-based rescue operations in flooded areas.	Training and hiring programs for professional boat operators are being introduced to increase the number of skilled responders.	A sufficient number of trained operators will be available, improving speed and efficiency of rescue operations.
The number of female rescuers was very limited, making it difficult to ensure gender-sensitive evacuation and support for women and children.	Recruitment of female rescuers is being carried out to improve gender balance in emergency response teams.	Women and children will receive safer, more comfortable, and culturally appropriate evacuation support.
In some cases, authorities had limited power to enforce mandatory evacuation in high-risk areas, causing delays in moving people to safety.	Policy-level improvements are being considered to strengthen evacuation authority of district administrations in emergency situations.	High-risk populations will be evacuated on time, reducing loss of life during extreme events.

2.3 Community Preparedness

CHALLENGES IDENTIFIED	ACTIONS TAKEN	EXPECTED OUTCOME
Many communities lacked proper awareness about flood risks, evacuation routes, and emergency procedures, which reduced their preparedness.	Awareness campaigns are being conducted in rural and vulnerable communities to educate people about disaster preparedness and response.	Communities will have better knowledge of what to do before, during, and after floods.
People often resisted evacuation because they were worried about protecting livestock, homes, and other assets.	Community-based evacuation planning exercises are being introduced to involve people in planning and reduce fear and resistance.	More people will evacuate on time, reducing loss of life and improving safety.
There were very few trained volunteers available at village level to help during the early stages of flooding.	Volunteer networks are being created and trained in vulnerable areas to support emergency response efforts.	Local help will be available immediately before official teams arrive.
First response capacity at community level was weak, leading to delays in initial rescue and assistance.	Training programs for community-based responders are being implemented to strengthen local emergency response capacity.	Faster initial response will reduce damage and improve survival during early flood stages.

2.4 Coordination Gaps

CHALLENGES IDENTIFIED	ACTIONS TAKEN	EXPECTED OUTCOME
Coordination between provincial and district control rooms was weak, which caused delays in communication and decision making.	District Disaster Management Units (DDMUs) are being strengthened to improve coordination between provincial and district levels.	Faster communication and improved decision-making during emergencies.
Some districts lacked strong local disaster management structures, affecting response efficiency at ground level.	DDMUs are being established and strengthened in all districts for better local disaster governance.	Strong local-level systems will ensure quicker and more organized response.
NGOs were operating independently without proper coordination, leading to duplication of efforts in some areas.	NGO registration and monitoring systems are being improved to ensure proper coordination with government response plans.	Better coordination will reduce duplication and ensure efficient use of resources.

2.5 Institutional Capacity Gaps

CHALLENGES IDENTIFIED	ACTIONS TAKEN	EXPECTED OUTCOME
There was a shortage of technical staff in key areas such as GIS, planning, and emergency coordination, which limited operational efficiency.	Hiring of technical experts has been initiated to strengthen PDMA's technical capacity.	Better technical expertise will improve planning, analysis, and response.
Limited use of advanced GIS and data analysis tools reduced the quality of decision-making during emergencies.	Specialized technical operational units are being established within PDMA for GIS and data analysis.	Data-driven and more accurate decision-making during disasters.
Many districts did not have warehouses or prepositioned relief supplies, causing delays in providing emergency assistance.	Regional Crisis Centers and warehouses are being established in vulnerable districts for prestocking relief items.	Faster availability and distribution of relief goods during emergencies.

2.6 Relief Camp Management

CHALLENGES IDENTIFIED	ACTIONS TAKEN	EXPECTED OUTCOME
Relief camps often lacked basic facilities such as clean water, proper shelter, sanitation, and hygiene arrangements.	Dedicated relief camp management teams are being formed to ensure proper planning and supervision.	Relief camps will be better organized, safer, and more comfortable for displaced people.
Livestock affected by floods did not receive sufficient care, fodder, or veterinary services in many areas.	The Livestock Department has been prepared and instructed to remain active during emergencies.	Better protection and care of livestock during flood situations.

Chapter 3:

Monsoon Preparedness and Operational Readiness 2026



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3 Provincial Preparedness for Monsoon Season 2026

PDMA Punjab has undertaken the following key steps to strengthen provincial preparedness for the Monsoon Season 2026:

1. Implementation of the Activity Calendar: Ensuring timely execution of activity calendar in accordance with the approved timelines
2. Procurement of Emergency Rescue and Relief (R& R) equipment: Strengthening operational readiness through the procurement of rescue equipment, relief items, and other essential emergency response resources.
3. Updation of Flood Risk Mapping (Multi Hazard Vulnerability Risk Assessment): Updating Multi-Hazard Vulnerability and Risk Assessment (MHVRA) covering all rivers, nullahs, and hill torrents across Punjab.
4. Strategic extension of Warehouses: Enhancing warehousing infrastructure in vulnerable districts to ensure rapid mobilization and efficient distribution of relief supplies during emergencies.

3.1 Implementation of Activity Calendar 2026

The Activity Calendar 2026 as shown in Table 8 is a roadmap for coordinating monsoon preparedness, response readiness, and early warning activities across Punjab.

The Activity Calendar is divided into three phases:

- i. Contingency Planning
- ii. Preparedness.
- iii. Early Warning.

Table 8: Activity Calendar for 2026, PDMA Punjab

Sr#	Activity	Responsibility	Status	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1. CONTINGENCY PLANNING															
1.1	District flood contingency plans	DCs	Completed		30th Mar										
1.2	Departmental flood contingency plans	All Secretaries	Completed		30th April										
1.3	Provincial flood contingency plan	PDMA	Completed				15th May								
2. PREPAREDNESS															
2.1a	1st mock exercise	PDMA	Completed				April								
2.1b	2nd mock exercise	PDMA, DRFs	Completed					May							
2.1c	3rd mock exercise	PDMA, DRFs	Will be Completed by 30th June						June						
2.2	DDMA meetings (ongoing)	DCs	In Progress	Ongoing Process											
2.3	TPV, readiness certs & pre-positioning	Commissioners, PDMA, DDMAAs	Completed						15th June						
2.4	Inspection of flood protection bunds	Army, PID, DCs	Completed			Mar till 10th May									
2.5	Army survey board	PDMA, PID, All Corps	Completed		Feb till 30th April										
2.6	SOPs on urban flooding	HUD, PHED & LGs	Completed												
2.7	De-silting of nullahs & channels	DDMAAs, WASAs, MCs	Completed			Mar to 15th June									
2.8	Removal of encroachments	DDMAAs, PID, Police	Completed					30th May							
2.9	Pre-qualification of firms/vendors	PDMA, DDMAAs	Completed					15th June							
3. EARLY WARNING															
3.1	Operationalization of control rooms/DEOCs	PDMA, DDMAAs	Completed									15th June to 15th October			
3.2	Establishment of flood forecasting center	PDMA, PID, MET	Completed									15th June to 15th October			

COLOR CODING

Contingency Planning (Section 1)

Preparedness Activities (Section 2)

Early Warning (Section 3)

Current Month (June)

3.1.1 District Contingency Plans

PDMA Punjab has followed a structured workflow for the consolidation of District Contingency Plans (DCPs) as depicted in Figure 24. A standardized template for the DCP was developed by PDMA Punjab and shared with all districts. The submitted plans from all districts underwent a technical review process to ensure completeness, consistency, and alignment with provincial guidelines. Following incorporation of the review comments, the plans were finalized and approved by PDMA Punjab. Relevant information from the approved DCP was then consolidated to support the development of the Provincial Contingency Plan.

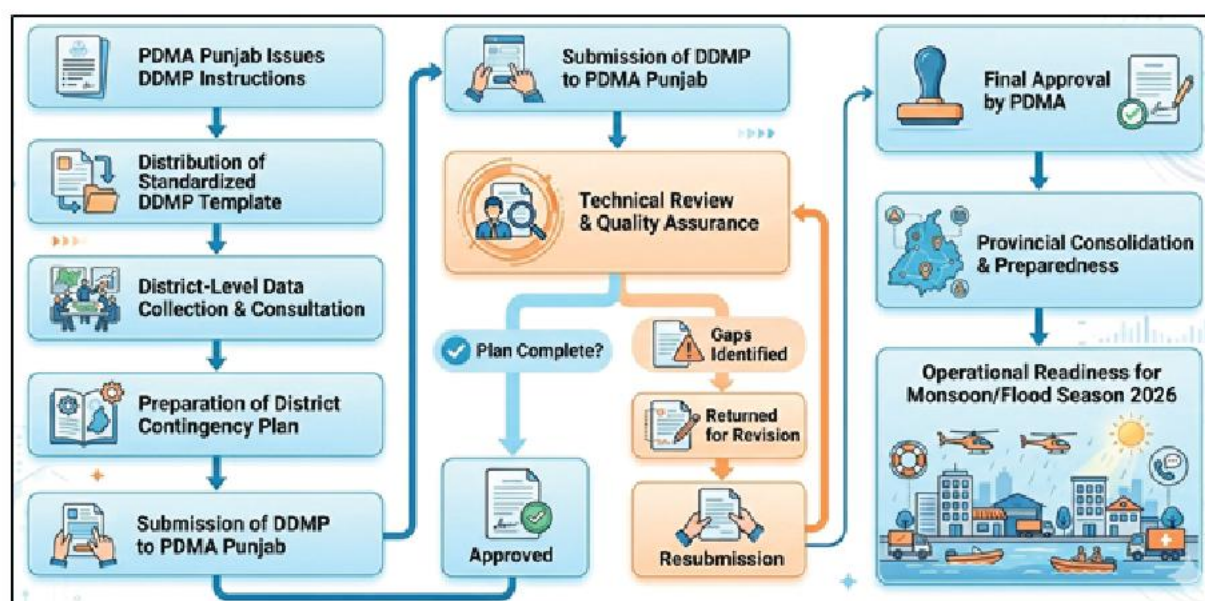


Figure 24: District Contingency Planning Workflow

The main contours of District Contingency Plans are:

- i. District-wise hazard profiling.
- ii. Identification and mapping of critical infrastructure, including bridges, roads, embankments, irrigation structures, schools, hospitals, utility networks, and vulnerable settlements.
- iii. Mapping of vulnerable populations, including women, children, elderly persons, and persons with disabilities.
- iv. Planning for rescue, evacuation, and emergency response operations.
- v. Stocktaking of rescue and relief equipment.
- vi. Identification of evacuation routes.
- vii. Identification of relief camps, including capacities and available facilities.
- viii. Inventory and mapping of privately owned rescue boats and other locally available emergency response resources.
- ix. Mapping of NGOs, CBOs, humanitarian partners, volunteer groups, and other support organizations.
- x. Establishment of coordination mechanisms at provincial, divisional, district, and tehsil levels.
- xi. Compilation of contact directories of key stakeholders and emergency focal persons.

3.1.2 Departmental Contingency Plans

3.1.2.1 Rescue 1122

The Rescue Flood Contingency Plan 2026 outlines extensive preparedness measures which have been undertaken to strengthen emergency response capacity and enhance readiness for flood-related emergencies across Punjab for season 2026. Figure 25 shows the flood warning dissemination and emergency response escalation mechanism which is followed during a flood emergency in Rescue. It shows how information and resources flow from the provincial level down to the district and community levels, and how additional support is mobilized when local capacities become overwhelmed.



Figure 25: Response Action Plan - Rescue 1122

The preparedness measures undertaken by Rescue 1122 are summarized below:

- District Emergency Board (DEB) and District Disaster Management Authority (DDMA) meetings have been conducted to review preparedness arrangements, identify potential gaps, and improve inter-agency coordination at the district level.
- Rescue 1122 has coordinated closely with allied departments and conducted Flood Mock Exercises and Third-Party Validations (TPVs) to assess operational readiness and response effectiveness. Communication systems, emergency response protocols, and operational procedures have been reviewed and tested to ensure efficient coordination during emergency situations. Physical inspections of vulnerable and flood-prone areas have also been carried out to identify risks and facilitate preparedness planning.

- Flood-fighting equipment and emergency resources were pre-positioned at strategic locations to facilitate rapid deployment during flood events.
- All District Emergency Officers prepared and submitted flood evacuation plans, while rescue staff were deployed in District Emergency Operation Centers (DEOCs) to maintain round-the-clock readiness. Mechanisms for timely information sharing and coordination during rain and flood emergencies were strengthened, and vulnerable areas were identified and mapped to support the strategic deployment of personnel and resources.
- In addition, Community Emergency Response Team (CERT) trainings were conducted in vulnerable communities to enhance local preparedness and community-based response capacities.
- To improve water rescue capabilities, rescue boats were registered for operational tracking and preparedness purposes, and the number of trained boat operators was increased across Punjab.
- Special arrangements were made for night-time rescue operations, including the provision of lighting systems, navigation support, and communication facilities to ensure safe and effective response during low-visibility conditions.
- Furthermore, on-site workshops were established for the maintenance and repair of rescue boats and engines, while measures were taken to ensure the operational efficiency and timely maintenance of all rescue equipment throughout the flood season.

3.1.2.2 Irrigation Department

The Irrigation Department, as the technical organization for flood management in Punjab, has prepared a comprehensive Flood Contingency Plan 2026 to ensure effective flood monitoring, forecasting, mitigation, and protection of critical irrigation and flood protection infrastructure across the province. The Activity calendar of Irrigation department as shown in Table 9, shows that flood-fighting plans have been prepared by all 59 Irrigation Divisions and submitted to PDMA Punjab. Joint inspections of flood protection structures have been completed, with further detailed assessments by Executive Engineers, Superintending Engineers, Chief Engineers, and the High-Level Safety and Structural Evaluation Unit (HSSEU) ongoing to ensure the structural integrity and operational readiness of flood defences ahead of the monsoon season.

Activity	Timeline	Remarks
Draft Flood Fighting plans by 59 Irrigation Divisions	15 th March	Completed
Review by CE D&F & Distribution	30 th April	Completed
Inspection by joint Departmental Team	30 th March	Completed
Inspection by XENs, SEs & CEs concerned	30 th April	Completed
Inspection by Hydraulic Structure Safety Evaluation Unit (HSSEU) Teams.	30 th April	Completed
Identification of shortcoming and Execution	30 th June	Identification completed, Execution On-Going
Painting of gauges etc.	15 th June	On-Going
Establishment of Flood Emergency Cell in Irrigation Department and Flood Warning Centre at Meteorological Department Jail Road	15 th June	Flood Emergency Cell Notified
Operation of wetting channels	15 th -30 th June	-
Simulation exercises with PDMA	30 th June	-
Establishment of Flood Fighting Camps	15 th July	-

On the infrastructure and restoration front, 197 short-term restoration works have been awarded and are under active execution, with physical progress at 85.1%, targeted for completion by 30 June 2026 as depicted in Figure 26.

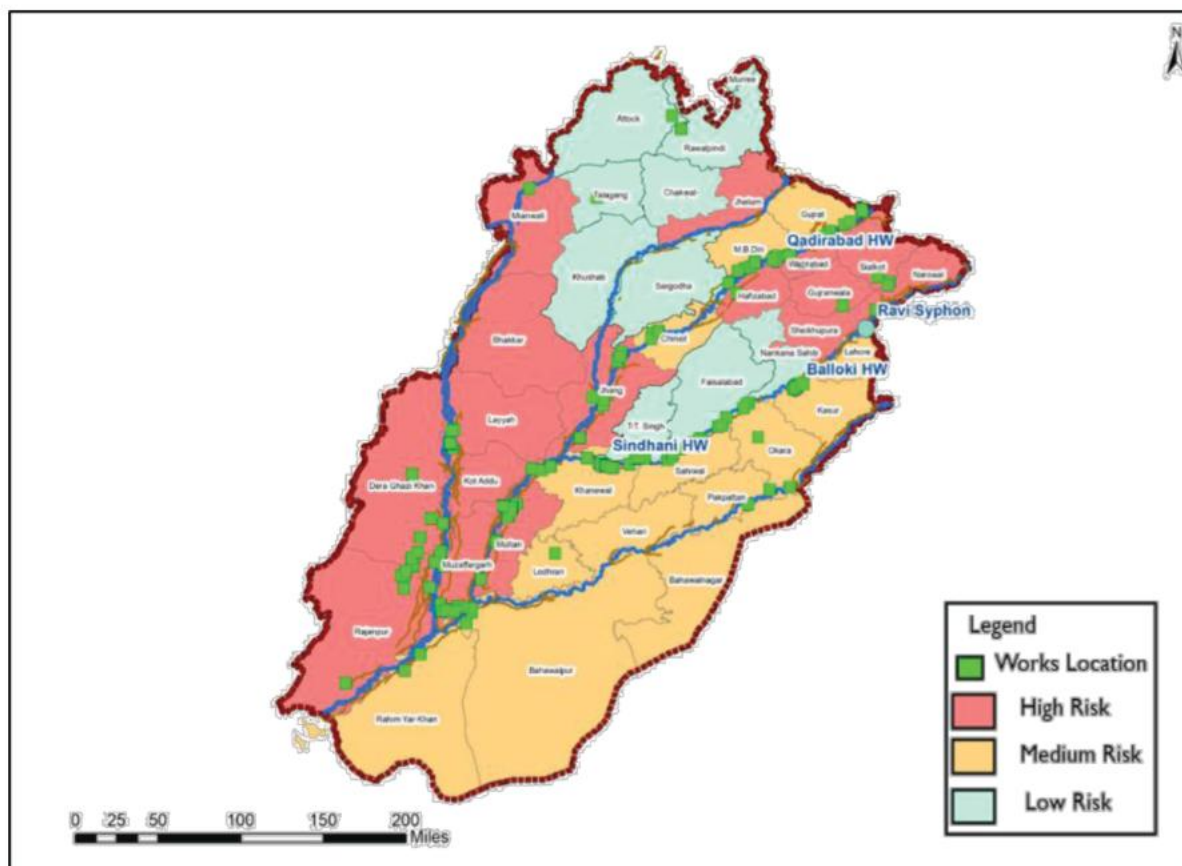


Figure 26: Execution Work Map of Irrigation Department

Desilting operations are underway across 409 drains as depicted in Table 10, approx. upto 78% drains have been desilted and expected to be completed by the 30th of June.

Table 10: Desilting of Drains (Source: Irrigation Department Date: 16.06.2026)

No. of drains	Length (km)	Work commenced	Funds released (million)	Length desilted to date (km)	Completion date
409	2880	All drains	2435.68 m	2581 (89.57%)	30th June

Timely completion of these actions will be undertaken to ensure department's full preparedness to execute an effective, coordinated flood response during Monsoon 2026.

3.1.2.3 Agriculture Department

The Agriculture Department contingency plan outlines a range of preparedness, response, and recovery measures aimed at minimizing the impacts of floods on the agriculture sector during the Monsoon/Flood Season 2026.

- The Department is actively conducting awareness campaigns among farming communities through field formations, farmer gatherings, SMS alerts, and WhatsApp groups to promote pre-flood preparedness and encourage the adoption of water-resilient crops in flood-prone areas.
- To support timely decision-making by farmers, weather advisories and early warnings related to heavy rainfall and flood events are being disseminated regularly. Farmers are also being advised on the safe storage of seeds, fertilizers, pesticides, agricultural machinery, and other farm inputs to reduce potential losses during flood emergencies.
- The Department is maintaining close coordination with PDMA, DDMA, district administrations, and other relevant stakeholders to support flood preparedness and response activities. Field formations are assisting district administrations in evacuation, rescue, and relief operations where required, while coordination is also being maintained with the Livestock and Dairy Development Department to facilitate the provision and distribution of fodder in flood-affected areas.
- During the recovery phase, the Department will provide post-flood advisory services to affected farmers, including guidance on land rehabilitation, de-silting of agricultural fields, soil testing, and recommendations regarding suitable crops, vegetables, and fodder cultivation. These measures are aimed at facilitating the early restoration of agricultural activities and enhancing the resilience of farming communities against future flood events.

3.1.2.4 Urban Flood Management and WASAs Preparedness (HUD & PHED)

The WASAs contingency plans outline a range of preparedness measures as depicted in Table 11 undertaken to address urban flooding and drainage-related emergencies during the Monsoon/Flood Season 2026.

- All WASAs have developed contingency plans to ensure timely response to urban flooding incidents and minimize disruption to public services during periods of heavy rainfall.
- Two cycles of de-silting of sewerage networks and drains has been completed, while de-silting activities are currently underway in 36 cities to improve stormwater drainage capacity and reduce the risk of waterlogging.
- The operational readiness and functionality of all available machinery have been ensured, and procurement of additional machinery is in progress to further strengthen emergency response capabilities. Procurement for 16 cities is being undertaken under the Provincial Development Programme (PDP) and Local Development Programme (LDP), while additional machinery for 22 cities is being procured through non-development funds.
- To facilitate efficient disposal of rainwater during intense rainfall events, disposal stations have been made fully operational across WASA jurisdictions. Critical water ponding points in 16 cities have already been eliminated through infrastructure improvement works carried out under PDP/LDP schemes. Simultaneously, the identification and assessment of remaining critical ponding locations in other cities are being undertaken for necessary remedial interventions.
- Monitoring and control rooms have been established and made operational to ensure real-time monitoring of rainfall events and prompt coordination of emergency response activities. Furthermore, Emergency Relief Camps are being established and will be fully operational by 15 June 2026 to support affected communities and facilitate emergency response during urban flooding incidents.

Table 11: Preparedness Activities of WASA (Source: WASA Date: 06-06-2026)

Sr.	Description	Status
1	Contingency Plans	Prepared
2	Desilting of Sewer and Drains	Two cycles completed for 05 WASAs (in progress for 36 cities)
3	Functionality of Mobile Machinery, Dewatering Sets and Generators	- Ensured (for available machinery) - Additional Machinery for 16 cities being procured under PDP/LDP - Additional Machinery for 22 cities being procured through non - development funds
4	Functionality of Disposal Stations	Ensured
5	Critical Ponding Points	- For 14 cities identified critical points being eliminated under PDP/LDP. - For remaining WASAs, critical points identified.
6	Monitoring Control Room	Established
7	Emergency Relief Camps	To be Established in May
8	Mock Exercises	Being conducted in April & May
9	Review of Pre-Monsoon Plans at Department level	Reviewed by Punjab WASA and HUD&PHED

To enhance preparedness for the monsoon season and improve urban flood response capabilities, the Government of Punjab is undertaking a significant expansion of operational machinery available as depicted in Table 12. The initiative aims to strengthen drainage maintenance, dewatering operations, sewerage management, emergency response, and field support activities across major urban centers. The augmentation of equipment will enhance the capacity of WASAs to respond promptly to waterlogging incidents, maintain critical drainage infrastructure, and ensure uninterrupted municipal services during periods of heavy rainfall, thereby contributing to more effective urban flood management and public safety.

Table 12: Equipment and Machinery Available in WASAs

Machinery Category	Existing Machinery Handed Over to WASA	Under Procurement	Grand Total
Dewatering Sets	207	185	392
Sucker Machines	59	118	177
Sewer Jetting Machines	47	92	139
Sewerage Desilting Machines	12	91	103
Dumpers	79	53	132
Truck Mounted Cranes	13	10	23
Water Bowsers	8	66	74
Tractors with Trolley	-	100	100
Tractors (Backhoe & Front Blade)	-	68	68
Wheel Excavators	-	29	29
Winch Machines	-	59	59
Rickshaws	-	70	70
Grand Total	425	941	1,366

To further strengthen preparedness, WASAs have been directed to complete all ongoing de-silting, drainage improvement, and machinery procurement activities before the commencement of the monsoon season. Efforts are also underway to identify and address all remaining critical waterlogging points to minimize urban flood risks and enhance the resilience of urban centers across Punjab.

3.1.2.5 Livestock and Dairy Development Department

The Livestock & Dairy Department Flood Contingency Plan – 2026 outlines comprehensive preparedness, response, and recovery measures for flood-prone districts of Punjab.

- To ensure effective coordination and timely response during flood emergencies, a Provincial Flood Relief Cell has been established at the office of Directorate General (Extension), Lahore, while District Flood Cells have been operationalized in all vulnerable districts.
- A 24/7 monitoring and reporting mechanism has also been activated for the monsoon season, with close coordination being maintained with PDMA, district administrations, and other relevant departments.
- The Department has deployed a total of 3,374 veterinary professionals, including Veterinary Officers, Veterinary Assistants, Artificial Insemination Technicians, and Rapid Response Teams, across flood-prone districts to support emergency response operations. Extensive emergency infrastructure has been earmarked and kept ready for deployment, including 455 Flood Relief Camps, 1,022 Veterinary Hospitals, 72 Livestock Sahulat Centres, 99 Mobile Veterinary Dispensaries, 21 Mobile Veterinary Laboratories, and 5 Poultry Diagnostic Laboratories.
- To reduce the risk of disease outbreaks during the monsoon season, a province-wide pre-flood vaccination campaign is underway and has achieved approximately 80 percent completion. Disease surveillance mechanisms have been strengthened through the ADRSinfo mobile application, stockpiling of vaccines and medicines, and maintenance of cold-chain facilities to ensure uninterrupted veterinary services during emergencies. The Department has also finalized feed and fodder arrangements through coordination with registered Wanda and silage manufacturers. District-wise requirements have been assessed to ensure the timely availability and distribution of livestock feed in flood-affected areas.
- In addition, awareness and early warning campaigns are being conducted through Farmer Days, Kissan Livestock Bethaks, SMS alerts, robo-calls, social media platforms, and a toll-free helpline to disseminate advisory information and preparedness messages among livestock farmers.

Mobile Veterinary Dispensaries, Mobile Veterinary Laboratories, and Rapid Response Teams have been placed on standby to provide emergency veterinary treatment, vaccination, deworming, disease control, and surveillance services in affected areas. Furthermore, arrangements have been made for livestock loss assessment, restoration of veterinary services, disease monitoring, and rehabilitation activities during the post-flood recovery phase to support the rapid recovery of livestock-dependent communities.

3.1.2.6 Local Government & Community Development Department Preparedness

The Local Government has undertaken the following preparedness measures:

- Flood Emergency Cells with dedicated focal persons have been established in all local governments.
- Inspection and repair of all dewatering pump sets will be completed prior to the onset of the monsoon.
- Essential commodities, emergency supplies, and response equipment have been pre-positioned at identified safe, high-ground locations in the vicinity of vulnerable areas.
- Municipal authorities have been directed to undertake pre-monsoon drain cleaning, ensure machinery readiness, and establish local waterlogging response teams. As of the date of this report, 88.77% of drain desilting has been completed. The details are in Table 13.

Table 13: Drain Desilting Progress (Source: Local Government Department, Punjab, Date = 16.06.2026)

Total Length of Drains (Km)	Total Desilted Drain (Km)	Percentage (%)
677	601	88.77%

- Survey of bunds, embankments, drains, and nallahs has been conducted; structural repair or demolition of dangerous buildings has been carried out proactively.
- inventory of all flood-relief equipment has been compiled and updated,
- Continuous monitoring of low-lying and flood-prone areas is being ensured.
- Timely drainage of rainwater is being implemented to prevent urban flooding.

3.1.2.6.1 Punjab Development Programme (PDP) — Flagship Infrastructure

The Punjab Development Programme (PDP) is the department's flagship infrastructure intervention. It covers 52 cities at a total cost of Rs. 305 billion, with 51 cities having received approval, contract award, and being under active execution as depicted in Figure 27.

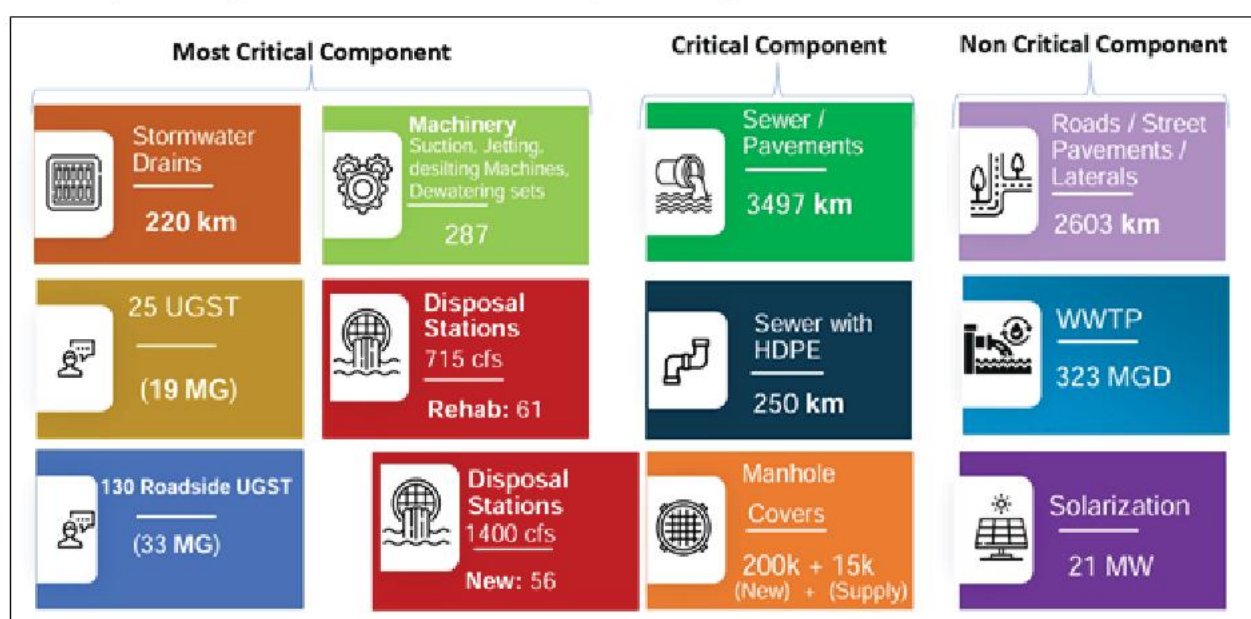


Figure 27: Scope of PDP

The newly procured equipment deployed under the Punjab Development Programme is presented in Table 14

Table 14: Newly Procured Equipment

Machinery Type	Number of Units
Jetting / Suction Machines	91
Desilting Machines	77
Dewatering Sets	100

Source: Local Government Department, Punjab — PDP (2026)

3.1.2.7 Population and Health Department

The Population & Health Department contingency plan outlines comprehensive preparedness measures to ensure the continuity of essential healthcare services and an effective public health response during the Monsoon/Flood Season 2026. District Flood Contingency Plans have been finalized, while District Flood Control Rooms and Emergency Response Teams are being operationalized across flood-prone districts to facilitate coordinated emergency response and timely medical assistance.

To strengthen emergency medical preparedness, adequate stocks of essential medicines and emergency supplies have been pre-positioned. These include Oral Rehydration Salts (ORS), Aqua Tabs for water purification, Anti-Snake Venom, and Anti-Rabies Vaccines to address common health risks associated with flooding. Disease surveillance and outbreak monitoring systems have also been activated in vulnerable districts to enable early detection and timely response to communicable diseases and potential public health emergencies.

The Department has earmarked Mobile Health Units, Clinics on Wheels, Field Hospitals, and Clinics on Boats for deployment in flood-affected and hard-to-reach areas to ensure uninterrupted access to healthcare services. In addition, trainings, mock exercises, and coordination meetings with district administrations, PDMA, and other stakeholders are being conducted to enhance operational readiness and inter-agency coordination.

Preventive public health measures are also being implemented, including vector control activities and awareness campaigns on flood-related diseases. These initiatives aim to reduce the risk of disease outbreaks, promote community awareness regarding health and hygiene practices, and strengthen the overall resilience of vulnerable populations during flood emergencies.

3.1.3 Mock Exercises in Vulnerable Districts

The following three structured mock drills has been conducted by involving different line departments such as District Administration, Rescue 1122, Livestock, Agriculture, Police etc.

3.1.3.1 First Dry Mock Drill – April 2026

The First Dry Mock Drill focuses on assessing the functional readiness and operational effectiveness of flood response equipment and machinery available at the district level. The exercise involves a comprehensive inspection of all rescue, evacuation, communication, and relief-related resources to identify any technical deficiencies before the onset of the monsoon season. Necessary repairs, servicing, maintenance, calibration, and overhauling of equipment are carried out to ensure that all assets remain fully operational and can be deployed without delay during emergencies. The drill also provides an opportunity for relevant departments to verify equipment inventories, test the functionality of critical machinery, and assess logistical arrangements for rapid mobilization. Through this process, districts can identify gaps in preparedness, improve resource management, and strengthen their overall response capacity for potential flood and rain-related emergencies. Figure 28 to Figure 31 shows the First Mock Exercise of different districts.



Figure 28: First Dry Mock Exercise, Kot Addu



Figure 29: First Dry Mock Exercise, Narowal



Figure 30: First Dry Mock Exercise, Bahawalnagar

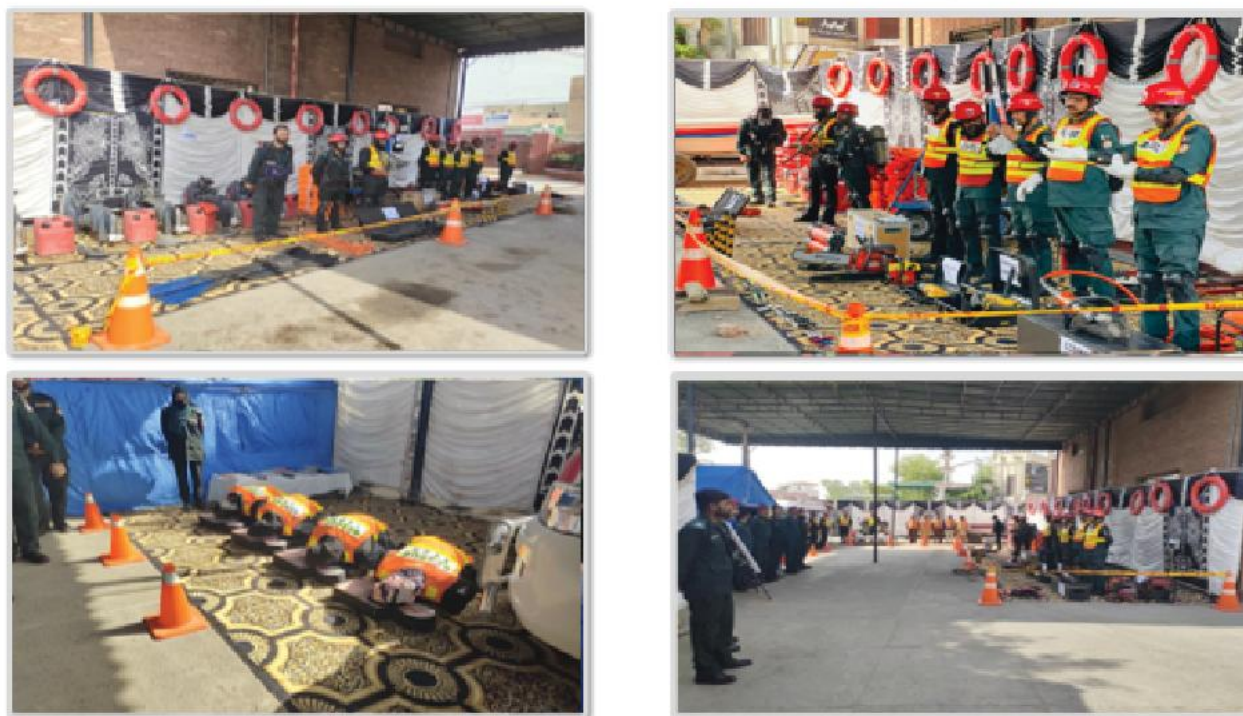


Figure 31: First Dry Mock Exercise, Jhang

Readiness certificates are issued to confirm that equipment and machinery are functional and available for immediate deployment during emergencies.

3.1.3.2 Second Mock Drill (Full-Scale Operational Simulation) – May 2026

The Second Mock Drill involves a full-scale operational simulation of a flood emergency scenario designed to evaluate the practical implementation of disaster response plans and inter-agency coordination mechanisms. Under simulated flood conditions, all relevant departments activate their emergency response arrangements and test their preparedness to respond to various challenges that may arise during an actual flood event. The exercise assesses the effectiveness of command-and-control systems, communication channels, resource mobilization procedures, evacuation plans, search and rescue operations, relief distribution mechanisms, and emergency reporting protocols.

During the drill, departments coordinate through established incident management structures and simulate real-time decision-making processes to ensure seamless information sharing and timely response actions. Rescue teams, health services, local administrations, irrigation authorities, law enforcement agencies, municipal services, and other stakeholders perform their assigned roles in accordance with contingency plans. The exercise also tests the functionality of DEOCs, public warning systems, and field-level coordination arrangements.

The mock drill provides an opportunity to identify operational gaps, assess response timelines, evaluate resource deployment capabilities, and enhance coordination among participating agencies. Lessons learned from the exercise are documented and incorporated into preparedness plans to strengthen overall disaster management capacity and improve readiness for the monsoon season and potential flood emergencies. Figure 32 to Figure 35 shows the Second Mock Exercise of different districts



Figure 32: Second Mock Exercise, Chiniot



Figure 33: Second Mock Exercise, Khanewal



Figure 34: Second Mock Exercise, Rajanpur



Figure 35: Second Mock Exercise, Mianwali

The exercise helps identify gaps in communication, resource mobilization, and inter-departmental coordination while evaluating decision-making processes and the readiness of personnel and resources for rapid response.

3.1.3.3 Third Mock Drill (Review and Gap Assessment) – June 2026

The Third Mock Drill focuses on reviewing the progress achieved since the earlier exercises and addressing any remaining preparedness gaps. Rescue, relief management, health, livestock, agriculture, and other relevant departments assess the readiness of their equipment, relief stocks, medical supplies, and field response arrangements. The exercise ensures that all necessary resources and operational mechanisms are in place to provide effective services during potential flood emergencies. Figure 36 & Figure 37 shows the First Mock Exercise of different districts.



Figure 36: Third Mock Exercise, Sialkot



Figure 37: Third Mock Exercise, Sheikhupura

3.1.4 Preparatory Meetings

A series of high-level preparatory meetings were conducted to review readiness measures, strengthen interdepartmental coordination, and ensure timely implementation of preparedness activities across the province.



Figure 38: Preparatory Meetings Chaired by High Officials regarding Flood Preparedness

3.1.5 Third Party Validation (TPV)

To ensure the accuracy, transparency, and operational readiness of flood response arrangements, an Inter-District Third-Party Validation (TPV) exercise is conducted as part of Monsoon Preparedness 2026. In this exercise, one district will be assigned to validate the preparedness status, availability, and functionality of rescue equipment, relief resources, machinery and emergency stocks, at another district as depicted in Figure 39. The validation teams will physically verify the reported resources and assess their operational condition, deployment readiness, and compliance with prescribed preparedness standards.



Figure 39: Bahawalpur TPV conducted by Bahawalnagar

3.1.6 Inspection of Flood Protection Bunds

Flood protection bunds are inspected before the flood season to ensure their safety, stability, and operational readiness as depicted in Figure 40. The Punjab Irrigation Department conducts inspections to identify vulnerable locations and undertake necessary repair and strengthening measures, while inspection reports are shared with PDMA Punjab. Joint inspections by the Pakistan Army, Punjab Irrigation Department, and District Administration are also conducted to verify the condition of critical bunds and strengthen flood preparedness. In addition, division-wise flood contingency plans for flood bunds are shared with PDMA Punjab and incorporated into the annual activity calendar.



Figure 40: Inspection of Flood Protection Bunds at Jalalpur Pirwala for Pre-Monsoon Preparedness

3.1.7 Army Survey Board

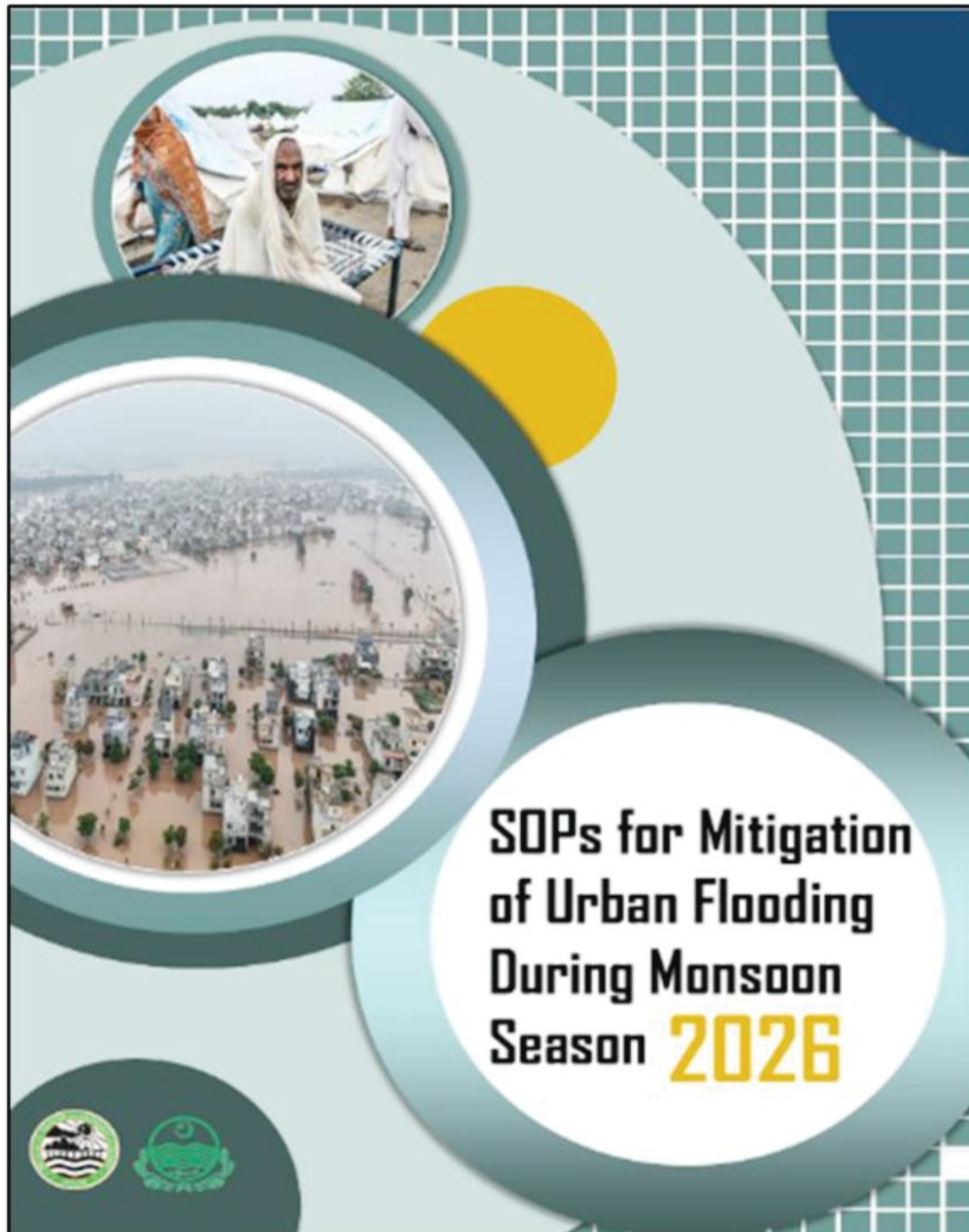
Army Survey Board is constituted under the convenorship of the concerned unit's Lieutenant Colonel, with PDMA Punjab and representatives of relevant departments as members. The board physically inspects the flood relief equipment, identifies repair and maintenance requirements, and prepares recommendations. After countersignature by the Director General PDMA Punjab, funds are transferred to HQ Engineer 04 Corps for repair and maintenance of the surveyed equipment.



Figure 41: Army Survey Board and PDMA team inspecting flood relief equipment for maintenance and preparedness

3.1.8 SOPs on Urban Flooding

Urban flooding during monsoon rains continues to pose significant risks to major cities across Punjab, leading to severe urban flooding, disruption of essential public services, damage to infrastructure, and threats to human life and property. To mitigate these risks and ensure a coordinated response, PDMA Punjab has issued Standard Operating Procedures (SOPs) for mitigation of urban flooding which outline the roles, responsibilities, and operational framework for all relevant provincial departments, city authorities, and district administrations as depicted in Figure 42.



3.1.9 Desilting of Nullahs and Streams

Desilting of nullahs, streams, drains, sewerage channels, and storm-water drains is completed before the monsoon season. Blocked or poorly maintained drainage systems increase the risk of urban flooding, water stagnation, road closures, damage to houses, disease dissemination and disruption of public services.

Local Government, WASAs, Municipal Corporations, District Councils, Irrigation Department, and other relevant agencies remove silt, solid waste, vegetation, encroachments, and other obstructions from drainage channels. Special attention is given to known choking points, low-lying urban areas, underpasses, markets, hospitals, schools, and residential localities.

DDMAs monitor the progress of desilting activities and maintain photographic evidence where required. Completion certificates or progress reports are submitted to the Deputy Commissioner and shared with PDMA Punjab.

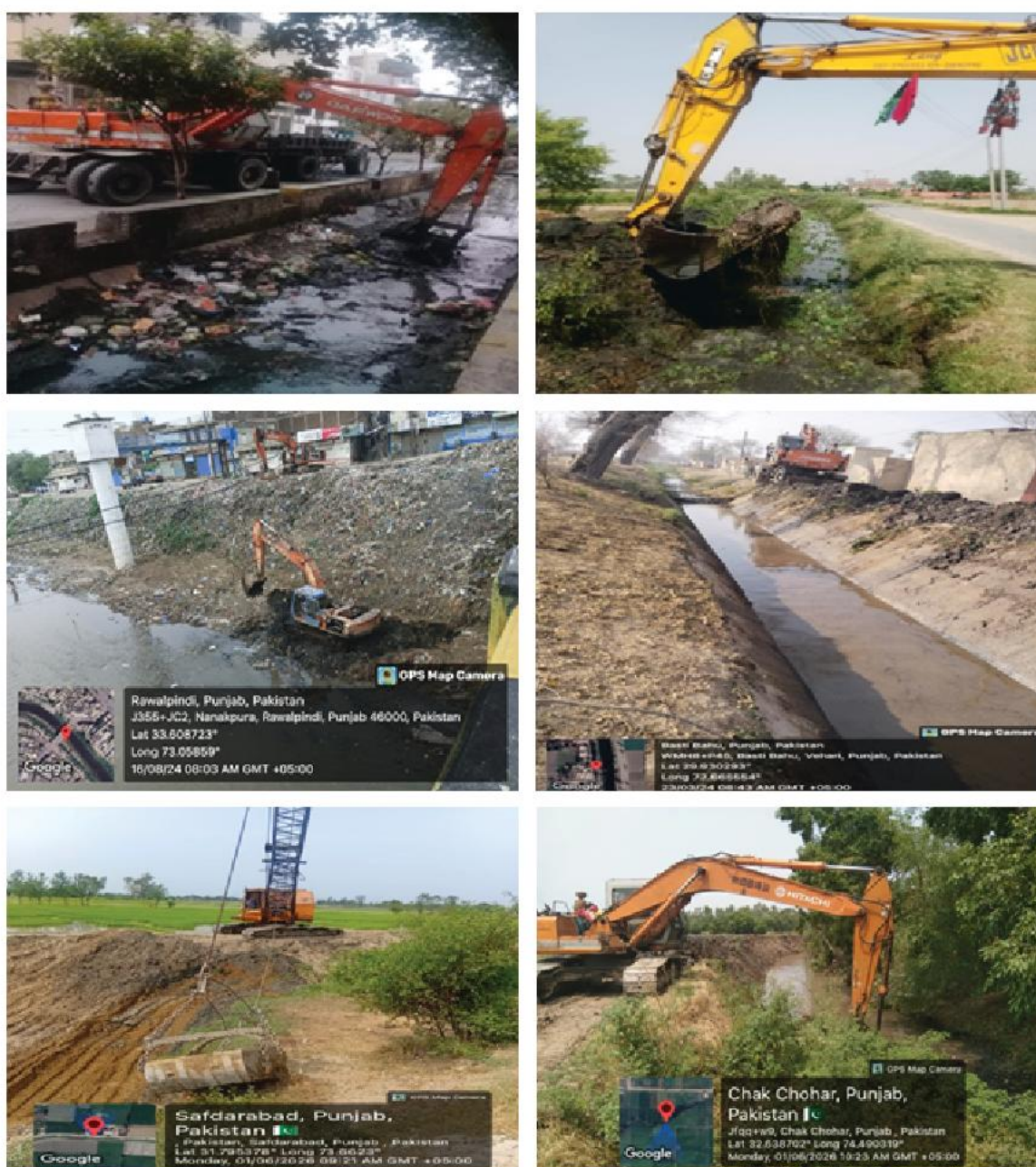


Figure 43: Desilting Campaign in various Districts of Punjab before Monsoon Season

3.1.10 Role of PEOC

The PEOC serves as the central hub for disaster preparedness and emergency response in Punjab. It coordinates real-time monitoring, early warning dissemination, and operational management during emergencies. The PEOC maintains continuous communication with the NDMA, district-level DEOCs, and relevant line departments to ensure a synchronized response as depicted in Figure 44.



Figure 44: Working Mechanism and Coordination of PEOC with other Departments

During the pre-monsoon and monsoon periods, the PEOC serves as Punjab's central coordination hub.

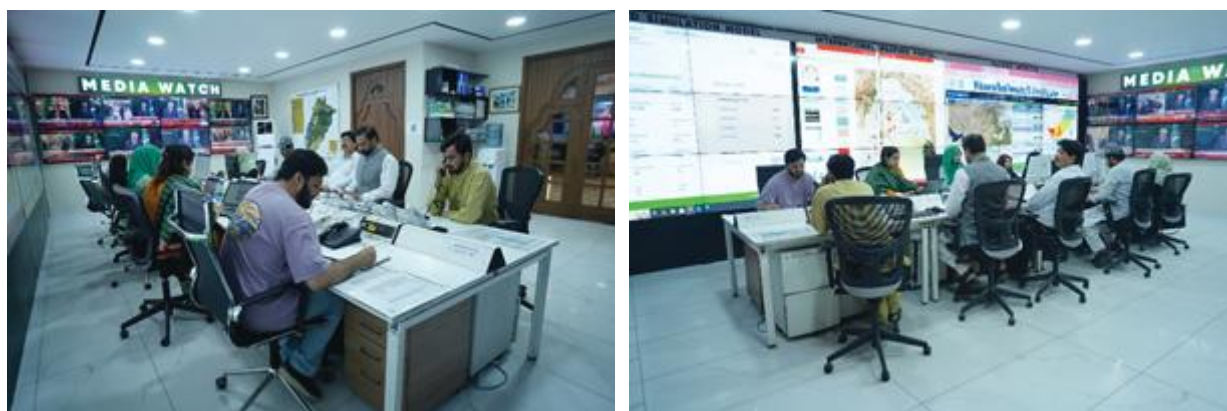


Figure 45: Provincial Emergency Operation Center (PEOC)

The different reports prepared in PEOC are presented in Figure 46. Figure 46(a) shows the weather alerts and advisories issued in response to alerts received from PMD office and other relevant stakeholders. Figure 46(b) presents the overall weather situation report prepared for the Chief Minister office and other relevant stakeholders. Figure 46(c) shows the field situation report, which compiles on-ground weather and impact information collected through telephonic coordination with District Emergency Operation Centers (DEOCs) across the province.

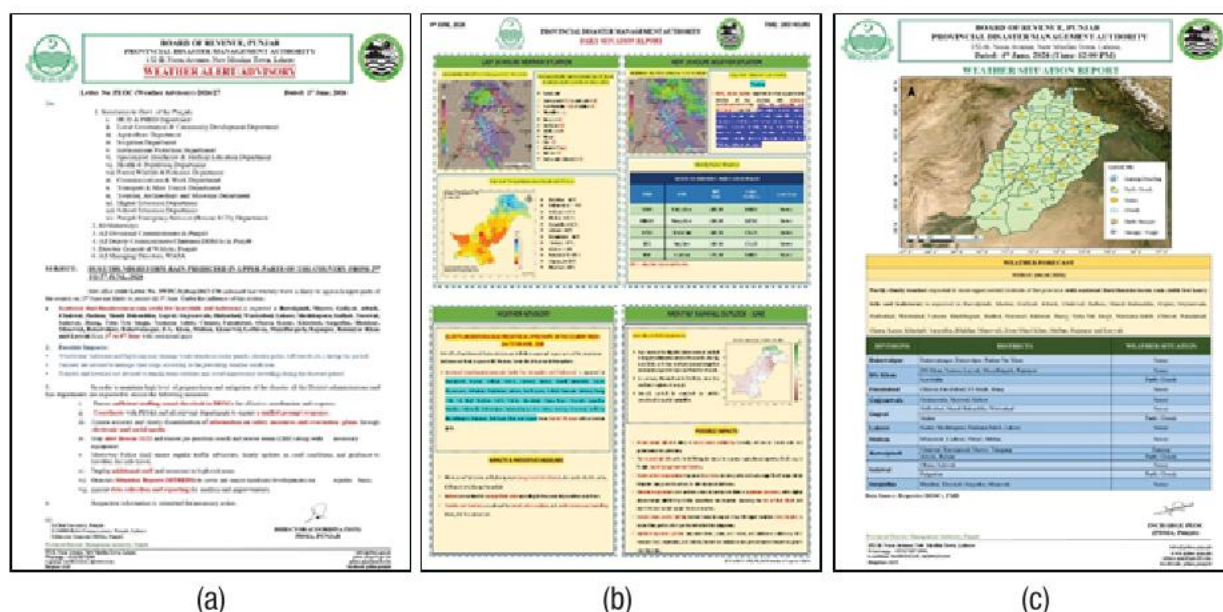


Figure 46: Reporting Mechanism of PEOC, (a) Weather Advisory/Alert, (b) Daily Situation Report, (c) Weather Situation Report

3.2 MHVRA: Multi-Hazard Vulnerability and Risk Assessment

The Multi-Hazard Vulnerability and Risk Assessment (MHVRA) is a key risk-informed planning tool used by PDMA Punjab to support evidence-based disaster risk management, early warning, preparedness, and emergency response across the province. It identifies hazard-prone areas, vulnerable communities, exposed infrastructure, and potential impacts of multiple natural, climate and humanly induced hazards.

PDMA Punjab has previously completed MHVRA studies for 20 districts. Building on this, the assessment is being upgraded and expanded to cover all major rivers, tributaries, nullahs, and hill torrent catchments across Punjab, providing a province-wide understanding of riverine floods, flash floods, hill torrents, and related risks.

The MHVRA generates detailed risk information across approximately 280 parameters, enabling district administrations and departments to prepare risk-based contingency plans, identify evacuation routes, locate relief sites, prioritize vulnerable areas, and strengthen early warning and response systems as depicted in Figure 47.

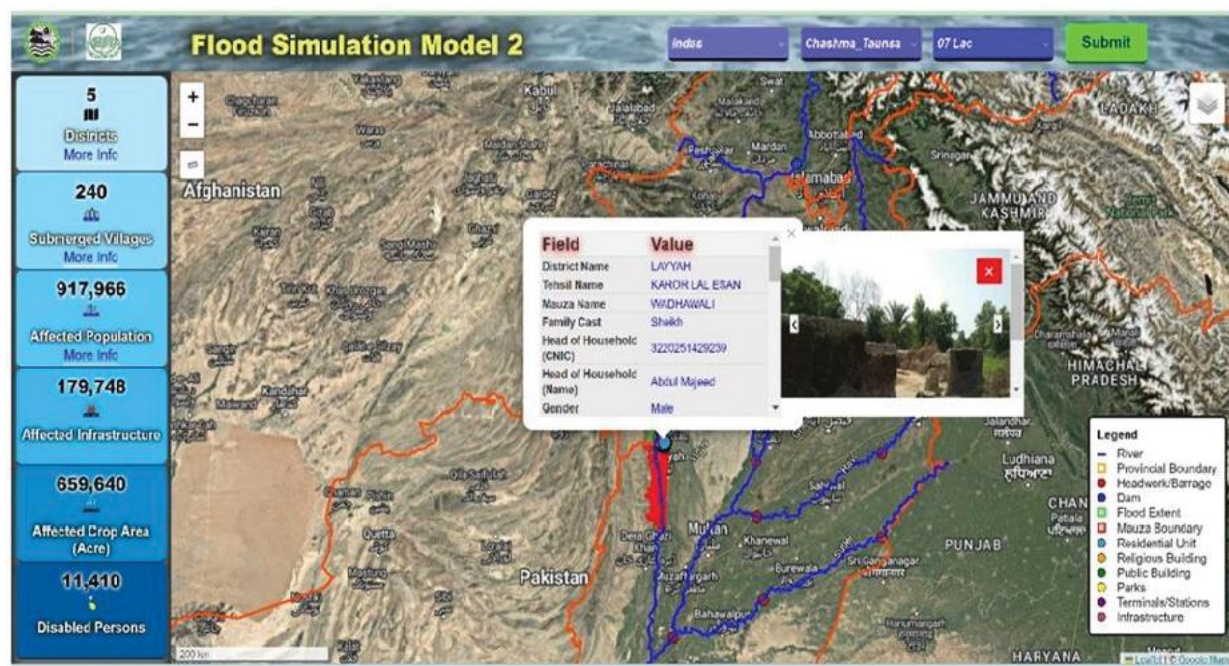


Figure 47: Flood Risk Mapping (MHVRA)

The findings are directly integrated into the Punjab Monsoon Contingency Plan 2026 and support inter-agency coordination, resource allocation, and targeted preparedness measures. Through this expansion, the MHVRA strengthens proactive risk reduction and builds long-term resilience against flood and climate-related hazards across Punjab.

3.3 Procurement of Rescue and Relief Equipment (R&R)

The procurement of rescue, relief and flood fighting equipment has been completed prior to the onset of the monsoon season to strengthen preparedness and response capacities across Punjab. PDMA Punjab has procured a following R & R equipment given in Table 15.

Table 15: Rescue and Relief Equipment Procurement by PDMA Punjab

Sr.	Description	Quantity
1	Tents	30,000
2	Life Jackets	10,000
3	Life Rings	1,000
4	Out Board Motor (OBM) (40 & 60 HP)	40
5	Plastic Mats	10,000
6	Mosquito Nets	10,000
7	Transportation	Framework Contract
8	Food Hampers	Framework Contract

Furthermore, PDMA Punjab has endorsed Rs. 1.355 billion for the procurement of rescue equipment for Rescue 1122 to further strengthen the province's flood and emergency response capacity as shown in the Table 16.

Table 16: Rescue Equipment for Rescue 1122

Sr. No.	Equipment	Qty
1	Boat Carrying Trucks	10
2	Aluminum Air Boats (16ft–20)	9
3	Boats Fiberglass/ Aluminium (19ft)	150
4	Inflatable Boat (10 persons)	50
5	Outboard Motor (OBMs) 60HP	60
6	Landing Crafts (L: 35ft)	10
7	Jet Ski with Rescue Board	9
8	Water Rescue Drone (Flying Lifebuoy)	9
9	Remote Controlled Self-Propelled Lifebuoy	9
10	Surveillance Drones	40
11	Life Jackets (Adult)	12,000
12	Life Jackets (Minors)	6,000
13	Portable Toilets with Bladders	50
14	Global/Digital Walkie Talkies	900
15	Digital Base Radios	72
16	Digital Base Repeaters	36
17	Digital Manpack Repeaters	72
18	GPS Navigation Device	540
19	Portable Tracker for Boats	900
20	Multi Charger for Walkie Talkie (10 Ports)	72

3.4 Resource Inventory and Warehouse Facilities

To strengthen logistical preparedness and enhance emergency response capacity across Punjab, the PDMA, Punjab has prioritized the establishment and operationalization of humanitarian warehouses at strategic locations. Considering past monsoon experiences and increasing logistical demands, PDMA has initiated the expansion of its warehousing infrastructure to additional high-risk districts across the province, to minimize response time.

3.4.1 Existing Warehouses: Lahore and Muzaffargarh

PDMA currently operates two Humanitarian Response Facilities (HRFs) with capacities of 4,400 MT and 3,200 MT, located in Lahore and Muzaffargarh, respectively as depicted in Figure 48. These facilities were constructed by the United Nations World Food Programme (WFP) in 2016 and have since played a vital role in the storage and dispatch of essential relief items, including tents, food packs, medical kits, and rescue equipment during monsoon-related emergencies

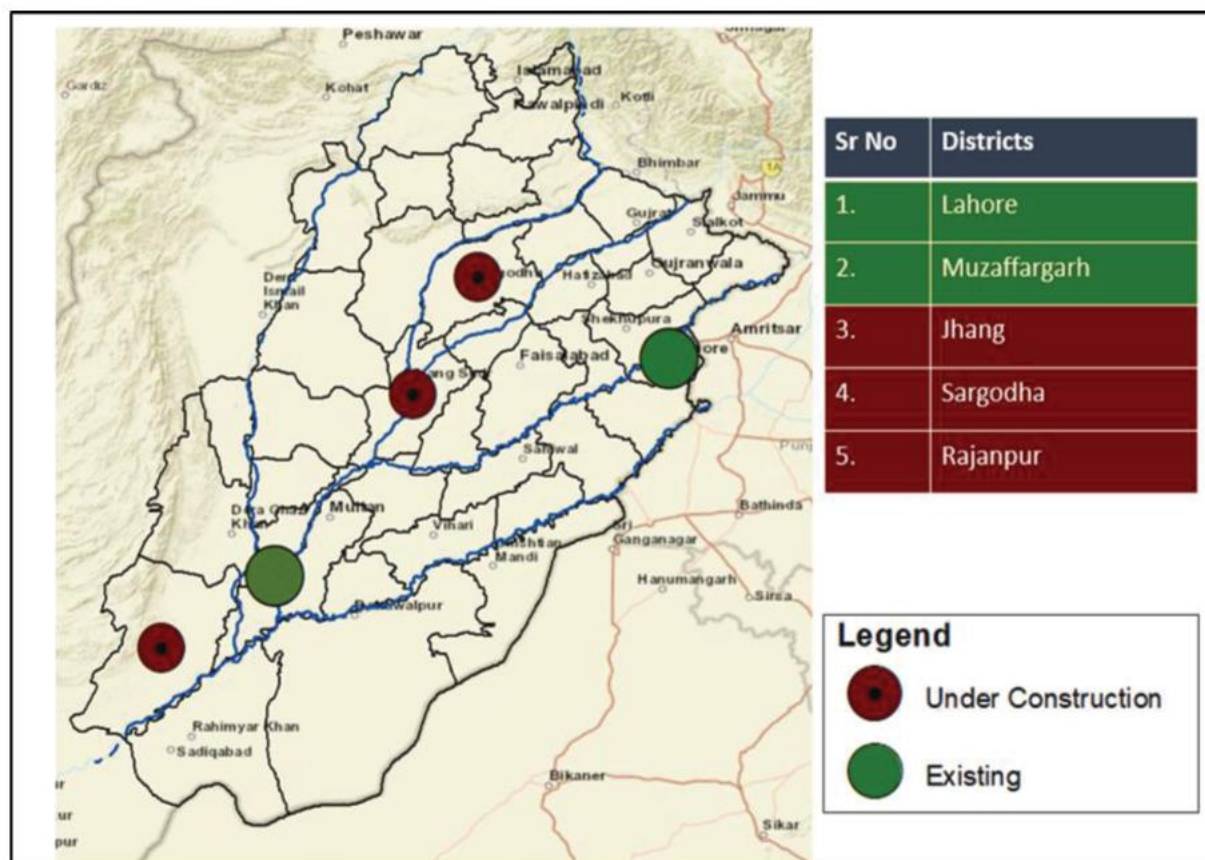


Figure 48: Location Information of Warehouses PDMA

The available inventory includes rescue equipment, shelter and non-food items (NFIs), water and sanitation supplies, and essential relief commodities. As shown in the Table 17, a total of 5 inflatable boats, 42 dewatering pumps, 585 life jackets, and 722 life rings are available to support rescue and evacuation operations. In addition, substantial stocks of tents (5,832), blankets (26,795), quilts (14,580), mosquito nets (5,765), and mattresses (1,764) are maintained to provide temporary shelter and relief assistance to affected populations.

The inventory also includes 25 water filtration plants, 7,000 jerry cans, 1,100 hygiene kits, 2,488 female dignity kits, and 14 portable washrooms, which are essential for maintaining water, sanitation, and hygiene (WASH) services during emergencies. These pre-positioned resources enhance PDMA Punjab's capacity to respond rapidly and effectively to disaster situations across the province.

Table 17: Resource Inventory in Existing Warehouses

Sr#	Item Description	Lahore	Muzaffargarh	Total
1	Inflatable Boats	1	4	5
2	Dewatering Pump	39	3	42
3	Life Jacket	266	319	585
4	Sandbag	15,000	-	15,000
5	Tent	1,075	4,757	5,832
6	Mosquito Net	1,227	4,538	5,765
7	Plastic Mat	1,973	-	1,973
8	Quilt	9,590	4,990	14,580
9	Blanket	8,513	18,282	26,795
10	Jerry Can 20 Liter	2,000	5,000	7,000
11	Mattresses (New+old)	789	975	1,764
12	Portable Washroom	14	-	14
13	Life Ring	412	310	722
14	Water Filtration Plant	9	16	25
15	Female Dignity Kit	2,488	-	2,488
16	Hygiene Kit	600	500	1,100

These warehouses form the backbone of PDMA's pre-positioning and response strategy under the Punjab Monsoon Contingency Plan 2026, ensuring that relief assistance is both readily available and strategically positioned for timely delivery to affected populations.

3.4.2 Under-Construction Warehouses: Sargodha, Rajanpur, and Jhang

To reduce response time and address logistical gaps in vulnerable and underserved regions, PDMA Punjab is constructing three additional humanitarian warehouses in Sargodha, Rajanpur, and Jhang as depicted in Figure 48 and Figure 49.

- Sargodha: Will serve central Punjab and support adjoining districts including Khushab, Bhakkar, and Mianwali.
- Jhang: Positioned to enhance emergency logistics in central-western Punjab, providing access to Faisalabad, Chiniot, and Toba Tek Singh.
- Rajanpur: Strategically located to strengthen response in flood-prone southern districts, particularly those affected by hill torrents.



Figure 49: Status of Completion of Warehousing Facilities

These sites have been identified based on vulnerability mapping, risk exposure, population density, and logistical accessibility and are being developed in accordance with international humanitarian storage standards.

3.4.3 Regional Crisis Centres (RCC)

Recognizing the critical importance of logistics in disaster response, PDMA Punjab is expanding its disaster management infrastructure across the province. The objective is to ensure the strategic pre-positioning of emergency supplies, rescue equipment, relief goods, and operational resources in key locations to enable rapid deployment during emergencies. As part of this initiative, nine RCC with warehousing facilities are planned at the following locations as shown in the Figure 50:

- Faisalabad
- Dera Ghazi Khan
- Multan
- Sahiwal
- Bahawalpur
- Rawalpindi
- Mianwali
- Gujrat
- Gujranwala

Warehousing Facilities

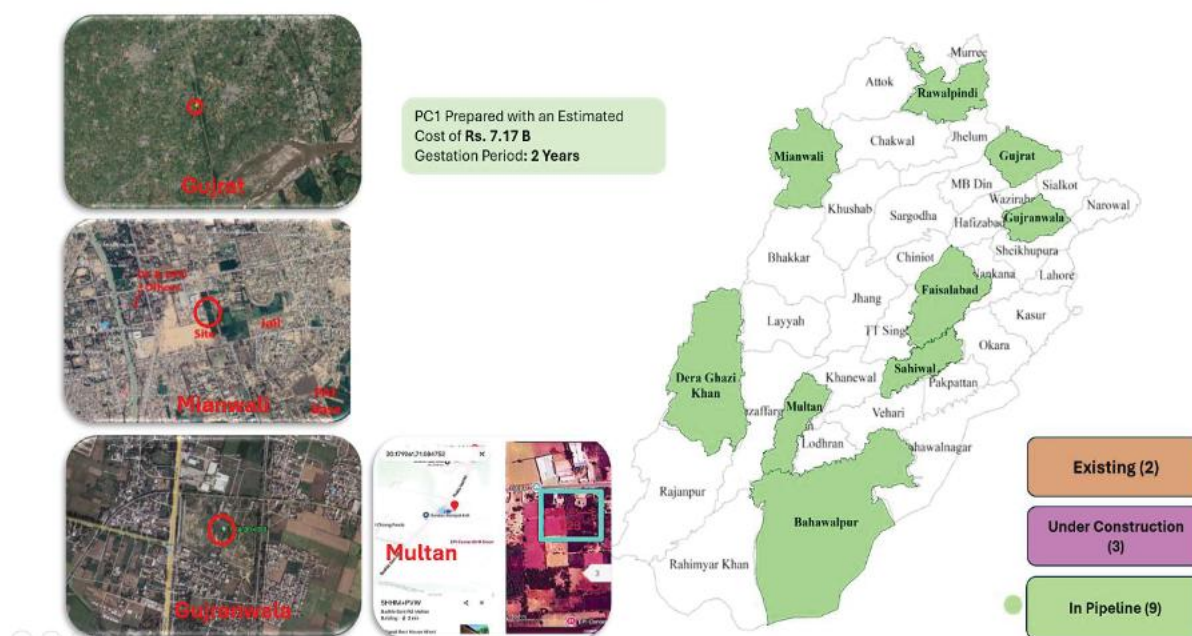


Figure 50: Warehousing Facilities in Pipeline

These facilities will function as permanent disaster management assets, supporting preparedness activities, emergency response operations, training exercises, resource management, and coordination of humanitarian assistance throughout the year.

Chapter 4: Guidelines and SOPs for Evacuation, Relief Camp Management, WASH, and Hygiene



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4 Evacuation

Evacuation is a critical life-saving measure undertaken to move populations from high-risk areas to safer locations before or during a disaster. The process will be coordinated by district administrations with the support of Rescue 1122, Civil Defence, Punjab Police, Health Department, and other relevant agencies under the guidance of PDMA Punjab. Priority evacuation will be accorded to injured persons, persons with disabilities, pregnant and lactating women, elderly individuals, children, and other vulnerable groups. Medical triage of casualties will be carried out by Health Department and Rescue 1122 personnel using the standard color-coding system to ensure that critically injured individuals receive immediate evacuation and medical care. Communities at risk will be informed in a timely manner regarding evacuation orders, designated routes, safe shelters, and transportation arrangements through multiple communication channels, including public announcements, sirens, electronic media, and local networks. All evacuation operations will be conducted in an organized manner and documented to support effective response, accountability, and post-disaster recovery planning.

4.1 Guidelines For Evacuation

- Search and Rescue (SAR) will be the highest priority during the first 12 hours of a disaster.
- Relief camps will be established at pre-identified safe locations included in district contingency plans.
- Camps will provide shelter, healthcare, safe water, sanitation, and relief assistance.
- Evacuation routes and shelters will be identified and communicated in advance.
- Government and private transport resources will be mobilized to support evacuations.
- Rescue 1122, Civil Defence, and partner agencies will conduct coordinated rescue and evacuation operations.
- The safety of responders will be ensured throughout operations.
- Families will be evacuated together wherever possible.
- Unaccompanied children will be evacuated only when necessary and managed under child protection protocols.
- The best interests of the child will guide all evacuation and sheltering decisions involving children.

4.2 Assessment

Following evacuation and search and rescue operations, rapid damage and needs assessments will be undertaken to determine the extent of losses and identify the immediate requirements of affected populations. Initial assessments will be conducted within 48–72 hours of a disaster to support timely decision-making and the provision of life-saving assistance, including shelter, food, water, sanitation, healthcare, and other essential services. These assessments will be followed by detailed sectoral assessments to guide relief, recovery, and rehabilitation interventions.

The assessment process will be carried out by district administrations and relevant line departments under the overall coordination of PDMA Punjab. In large-scale emergencies affecting multiple districts, PDMA may deploy multi-sector assessment teams to support and coordinate field assessments. The assessments will cover damages to human lives, housing, infrastructure, agriculture, livestock, and public services. To ensure transparency and uniformity, District Administrations will constitute Damage Assessment Committees and utilize standardized assessment tools and reporting formats developed by PDMA. The consolidated assessment reports will provide the basis for relief assistance, rehabilitation planning, and compensation measures for disaster-affected communities.

Following a disaster, District Administrations submit damage and loss information to PDMA Punjab through prescribed assessment proformas covering various sectors. Sample proformas used for damage assessment and reporting are provided below.

4.2.1 Proformas

District: _____ Deceased Persons-Proforma-1

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

District: _____ Injured Persons-Proforma-2

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

District: _____ Crops Damage Assessment-Proforma-3

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

District: _____ House Damage Assessment-Proforma-4

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

Cattle Head Perished-Proforma-5

District: _____

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

4.3 Relief Management

Relief management aims to provide timely life-saving assistance to disaster-affected populations through the fair and organized distribution of food and non-food items. Essential relief supplies may include food, clothing, blankets, hygiene kits, cooking utensils, water containers, and temporary shelter materials.

Special consideration will be given to vulnerable groups, including children, persons with disabilities, elderly individuals, and women-headed households, to ensure equitable access to assistance. Relief distribution mechanisms will be safe, accessible, transparent, and responsive to the needs of affected communities.

4.3.1 Relief Camps

Relief camps will be established at safe, accessible locations identified by District Administrations and incorporated into district contingency plans. Camps will provide temporary shelter and essential services, including water, sanitation, healthcare, food assistance, protection, and security for displaced populations. The day-to-day management of relief camps will be the responsibility of District Administrations, with support from relevant line departments and humanitarian partners. Camp layouts will be planned to ensure safety, accessibility, adequate living space, water supply, waste management, and protection of affected communities. Law enforcement agencies will maintain security, while child protection measures will be implemented to safeguard children from exploitation, abuse, and family separation.

Table 18 presents the minimum service standards for the establishment and management of relief camps to ensure the safety, dignity, and well-being of displaced populations. These standards cover key requirements related to shelter, water, food, sanitation, healthcare, and child protection services. District Administrations and humanitarian partners will strive to adhere to these standards to provide a safe, accessible, and habitable environment for affected communities.

Table 18: Specifications of facilities provided at tent village camps, Source: PDMA Contingency Plan 2014

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

Relief camps will preferably be established at pre-identified safe locations that will remain accessible during flood emergencies. The selected sites will be located away from flood-prone areas, stagnant water, damaged infrastructure, and other secondary hazards while ensuring accessibility for emergency vehicles, ambulances, and relief supply chains.

4.3.1.1 Registration and Camp Management

All affected families entering the camp will be properly registered, and special attention will be given to vulnerable groups including women, children, elderly persons, pregnant women, lactating mothers, and persons with disabilities. Separate registration counters and facilitation mechanisms will be established for vulnerable populations. Camp data including family size, CNIC, place of origin, shelter allocation, and special needs will be maintained through standardized registration systems.

Camp layout will be organized with designated areas for shelters, food distribution, health facilities, water points, sanitation facilities, child-friendly spaces, women-friendly spaces, warehouses, livestock areas, and administrative offices. Minimum standards of 3.5 square meters covered shelter area per person and adequate spacing between tents will be ensured to maintain privacy, ventilation, and fire safety. Temporary shelters will protect occupants from rain, heat, humidity, and harsh weather conditions. Priority shelter allocation will be provided to vulnerable households. Adequate lighting arrangements, including solar lights or emergency lights, will be ensured near toilets, pathways, and women's areas to improve security during nighttime.

4.3.1.2 Food and Relief Distribution

Food assistance will be provided in accordance with minimum humanitarian standards, ensuring approximately 2,100 Kcal per person per day. Initially, cooked food will be provided during the first phase of the emergency response, followed by organized dry ration distribution where feasible. Food distribution mechanisms will be transparent, orderly, and supported through token systems, designated counters, and crowd management measures.

4.3.1.3 Health and Protection Services

Health services will be established through Basic Health Units or medical camps staffed by doctors, paramedics, LHVs (Lady Health Visitors), and vaccinators. Essential medicines, first aid, maternal and child healthcare, immunization, psychosocial support, and disease surveillance services will be ensured within each camp. Ambulance services and referral mechanisms to nearby hospitals will always remain operational.

4.3.1.4 Water and Sanitation

In relief camps, the source of water must be carefully considered. It is essential to ensure that both the quantity and quality of water meet potable water standards. Multiple water points should be established to provide equitable access for all camp residents. Ideally, the distance between a water point and any shelter or household should not exceed 100 meters. Water supply facilities should be planned in such a way that each water point serves a manageable number of users, ensuring adequate access and minimizing congestion.

4.3.1.5 Security and Coordination

Security arrangements within the camp will be maintained through the deployment of police personnel, community volunteers, and security staff at entry and exit points. Public awareness regarding relief entitlements, health advisories, distribution schedules, and camp rules will be disseminated through announcements, notice boards, SMS alerts, and community meetings. Daily situation reports covering camp population, relief distribution, health status, resource gaps, and operational challenges will be submitted by the Camp Manager to the DDMA and PDMA Punjab.

4.3.1.6 Closure of Relief Camps

Relief camp closure will only be initiated after improvement in flood conditions and the restoration of safe living conditions in the affected areas. The closure process will be conducted in a safe, voluntary, dignified, and coordinated manner in consultation with affected communities. Transport support will be arranged for returning families where required. Prior to closure, de-registration of camp residents, recovery of camp records, safe disposal of waste, dismantling of temporary infrastructure, and environmental restoration of camp sites will be ensured. Lessons learned and operational gaps identified during camp operations will be documented by the DDMA and shared with PDMA Punjab for future preparedness and improvement of flood response mechanisms.

Chapter 5:

Coordination and Collaboration with Humanitarian Partners



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5 Coordination with Humanitarian Partners

To strengthen coordination with humanitarian partners, PDMA Punjab has established a Humanitarian Coordination Cell. The Cell supports the development of project concepts and interventions, NOC processing, and ensures alignment of humanitarian activities with provincial priorities and disaster response needs.

5.1 Sector Wise Interventions of Humanitarian Partners

UNOCHA, in collaboration with PDMA Punjab, has developed a comprehensive humanitarian database and 5W Matrix covering humanitarian organizations operating across Punjab. The 5W Matrix provides structured and consolidated information on “Who is doing What, Where, When, and for Whom” in the humanitarian and disaster management sector.

The sector-wise distribution of humanitarian partner organizations. Figure 51 shows that Food Security & Livelihoods and WASH have the highest number of partners, followed by Shelter/NFI and Health. Nutrition and Protection-GBV receive moderate support, while Education, Protection, Multipurpose Cash Assistance, and SRH have comparatively fewer organizations engaged.

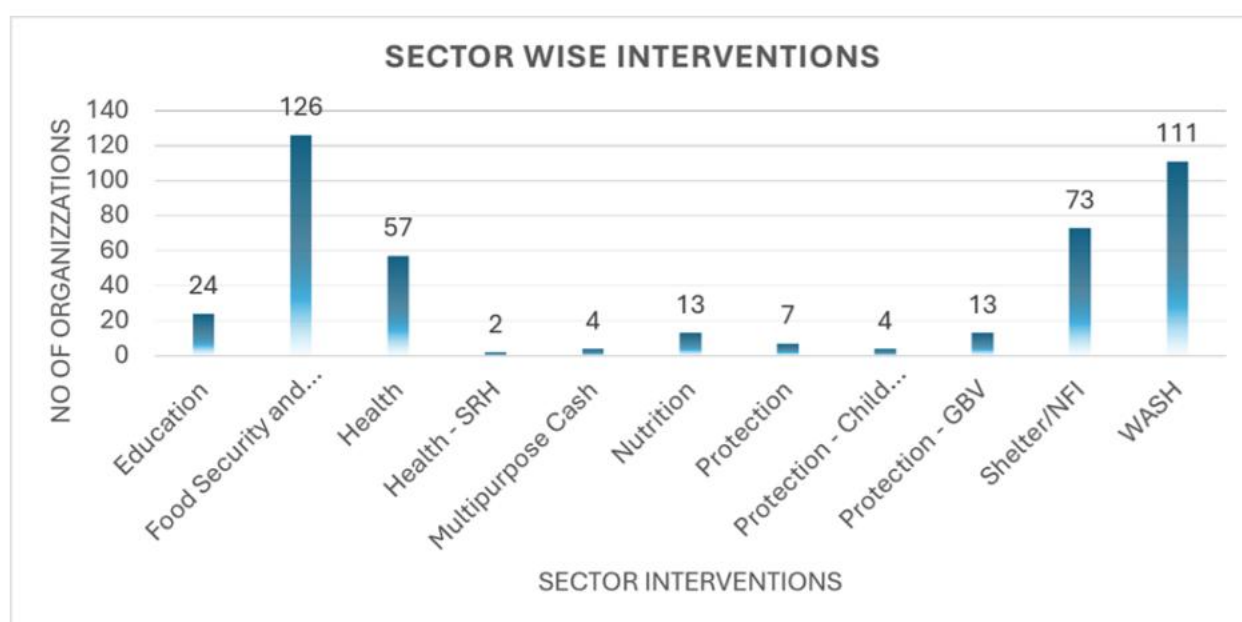


Figure 51: Sector Wise Interventions of Humanitarian Partners

This mapping underscores the importance of coordinated planning to optimize partner efforts, avoid duplication, and ensure that underserved sectors receive adequate attention during emergency response operations.

5.2 Information Sharing and Early Warning Coordination

Effective information sharing and early warning dissemination is the important component of humanitarian coordination during monsoon emergencies. PDMA Punjab maintains information-sharing mechanisms with humanitarian partners for timely dissemination of forecasts, alerts, advisories, operational updates, and situation reports.

5.3 Recovery, Rehabilitation, and Resilience Building

Humanitarian organizations have done rehabilitation efforts in Punjab after flood 2025 as depicted in Figure 52. Their interventions include emergency shelter, food and non-food assistance, healthcare services, rehabilitation of water and sanitation facilities etc



Figure 52: Recovery, Rehabilitation, and Resilience Building efforts of Humanitarian Partners

Contact Point for Humanitarian Coordination Cell

Email: ngocell.pdmapunjab@gmail.com

Focal Person:

Mr. Nisar Ahmad Sani

Director Operations

WhatsApp 03439209201

6 Emergency Response Contact Directory

The following emergency contacts are verified as of May 2026. All contacts are to be re-validated by June 1, 2026, and updated in the PDMA EOC contact management system. Actual names and numbers to be inserted following final confirmation.

6.1 DC Contact Details

Sr No.	District	Name	Contact
1	Attock	Rao Atif Raza	0579316010
2	Bahawalnagar	Zulfiqar Ahmad	03040920084
3	Bahawalpur	Syed Hassan Raza	03410922083
4	Bhakkar	Ihsan Ali Jamali	0453921288
5	Chakwal	Sarah Hayat	0543660101
6	Chiniot	Aysha Rizwan	03040920089
7	DG Khan	M. Usman Khalid	03040920090
8	Faisalabad	Capt Nadeem Nasir	03040920078
9	Gujranwala	Naveed Ahmad	03076888805
10	Gujrat	Nur Ul Ain Qureshi	03465391803
11	Hafizabad	Abdul Razzaq	03040920069
12	Jhang	Ali Akbar Bhinder	0047-200081
13	Jhelum	Mir Reza Ozgen	03040920071
14	Kasur	M. Asif Raza	03049200062
15	Khanewal	Maleeha Rashid	03040920082
16	Khushab	Jahanzeb Hussain	03040920075
17	Kot Addu	Bilal Saleem	03352832630
18	Lahore	Capt. M. Ali Ijaz	03008447950
19	Layyah	Bilal Saleem	03352832630
20	Lodhran	M. Asif	03334288876
21	MB Din	Adeel Haider	03040920068
22	Mianwali	Asad Abbas Magsi	03040920076
23	Multan	M. Nouman Siddique	03040920081
24	Murree	Agha Zaheer Abbas Shirazi	03040922048
25	Muzaffargarh	Usman Tahir	03040920091
26	Nankana	M. Tasleem Akhtar	03040920059
27	Narowal	M. Tayyab Khan	03040920067
28	Okara	Ahmad Usman	03410922063
29	Pakpattan	Asif Raza	03040920087
30	Rajanpur	M. Imran Hussain	03040920093 0604920001
31	Rawalpindi	Hassan Waqar	0051-292539
32	RY Khan	Zaheer Anwer	03040923820 068-230286
33	Sahiwal	Capt. Sami Ullah Farroq	03040920086
34	Sargodha	Hussain Ahmad Raza	03040920074
35	Sheikhupura	Shahid Imran Marth	03040920061
36	Sialkot	Saba Asghar Ali	03040920065
37	TT Singh	Umer Abbas Mela	(046)9201001
38	Vehari	Khalid Haved Goraya	03040920094

6.2 DDMA Focal Persons/ ADCRs

ADCRs Numbers and Names

Sr. No.	DISTRICT	NAME	OFFICE	MOBILE
1	Bahawalpur	Tayyab Sami	629250046	3336205503
2	Bahawalnagar	Jam Aftab	639240209	3336159554
3	RY Khan	Qandeel Fatima	689230226	3218122221
4	DG Khan	Usman Munir	649260344	3004385035
5	Layyah	Muhammad Shahid Malik	606920107	3040092444
6	Muzaffargarh	MUHAMMAD Aavid Arshad	669200254	3217991718
7	Kot ADDU	MUHAMMAD Aavid Arshad	669200254	3217991718
8	Rajanpur	Imran Mumtaz	604920008	3004228878
9	Faisalabad	Mosa Tahir	419200306	3224466999
10	Chiniot	Ahmer Ali	647921010	3144555556
11	Jhang	Imtiaz Mohsin	479200107	3334870905
12	T.T Singh		469201011	3316536558
13	Gujrat	Waqas	539260061	3348844330
14	Hafizabad	Muhammad Tanveer Yasin	547920017	3217451107
15	M.B Din	Muhammad Jaffar	546506488	3014196126
16	Gujranwala/ Wazirabad	Shabbir Hussain Butt	559200034	3334021333
17	Narowal	Ahmad Haroon	542920063	3340584671
18	Sialkot	Abbas Zulqarnain	529250046	3475300883
19	Lahore	Muhammad Shoaib Butt	99210614	3459510044
20	Nankana Sahib	Rao Zulfiqar	569201080	3214360749
21	Sheikhupura	Usman Jalees	569200163	3325032303
22	Multan	Abu Bakar	619200073	3405599807
23	Khanewal	Khalid Abbas	659200030	3007921000
24	Lodhran	Syed Waseem Hussain	6089200121	3009679306
25	Vehari	Baber Saleem		3356640598
26	Rawalpindi	Sheryar Sherazi	519292532	3451215555
27	Attock	Waqas Aslam	579316239	3335472076
28	Sahiwal	Usama Majeed	409200078	3338271486
29	Okara	Shojain Vistro	449200039	3362566972
30	Pakpattan	Dr. Saman Abbas	457921093	3338157125
31	Sargodha	Fahad Mehboob	489230255	3349991139 3324633795
32	Bhakkar	Abdul Qadeer	4539200396	3135406772
33	Khushab	Abdul Sattar Khan	454920120	3174491700
34	Mianwali	Saria Haider	459234861	3006901354
35	Murree	Kamran		3135394922
36	Kasur	Muhammad		3004333263

6.3 Emergency Helplines for Monsoon and Flood Emergencies

Sr. No.	Department / Service	Emergency Helpline
1	PDMA	1129
2	Punjab Police	15
3	Rescue 1122	1122
4	Livestock & Dairy Development Department	0800-78686
5	Water and Sanitation Agency (WASA)	1334
6	Agriculture Department	0800-15000

Annexure – A

Most Immediate
By Fax/Email/UMS

Government of Pakistan
Ministry of Water Resources
Office of the Chief Engineering Adviser &
Chairman, Federal Flood Commission

No. FC-I (15)/2026

6-Attaturk Avenue, G-5/1,
Islamabad, the May 19, 2026

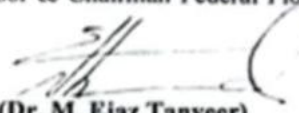
Sub: **NOTIFICATION OF LAG TIMES IN DIFFERENT REACHES OF RIVERS CHENAB, RAVI, SUTLEJ AND INDUS OBSERVED DURING MONSOON SEASON 2025**

In pursuance of the decisions taken during the meeting of the Federal Flood Commission held on 5th January 2026 and the online meeting of the Commission held on 17th March 2026 regarding lag times observed during Monsoon Season 2025 vs the one already in practice. In this context, lag times observed in different river reaches during Monsoon Season 2025, alongwith the lag times currently in practice for Rivers Chenab, Ravi, Sutlej and Indus between the specified control structures are hereby notified based on the information received from Provincial Irrigation Departments of Punjab & Sindh, PMD and WAPDA:

River	Reach	Notified Lag Times (Hours) currently in practice as per PMD Notification No. FWC-2/2019/2/IV/ dated 23 rd July 2021	Lag Times Observed during Monsoon 2025 (Hours) First Wave	Lag Times Observed during Monsoon 2025 (Hours) Second Wave
Chenab	Marala – Khanki	09	14	09
	Khanki - Qadirabad	06	04	05
	Qadirabad-Trimmu	64	112	83
	Trimmu - Panjnad	81	155	113
	Panjnad-Guddu	52	38	-
Ravi	Jassar - Shahdara	22	34	-
	Shahdara - Balloki	19	45	-
	Balloki - Sidhnai	48	89	-
Sutlej	GSW - Suleimanki	53	19	-
	Suleimanki - Islam	60	227	-
Indus	Tarbela-Kalabagh	26	-	-
	Kalabagh-Chashma	12	-	-
	Chashma-Taunsa	58	-	-
	Taunsa-Guddu	84	-	-
	Guddu-Sukkur	32	49	-
	Sukkur-Kotri	173	249	-

2. In addition to the above, it is clarified that the aforementioned lag times have been consolidated in one place to facilitate users for better estimation of lag times for estimating flood peaks at measuring stations/ control points during upcoming monsoon season. Further to the above, IRSA and WAPDA also use a lag time chart for lean period/low flows which is also enclosed (**Annexure-I**) for perusal of all for better understanding flow mechanism.

3. This issues with the approval of the Chief Engineering Advisor & Chairman Federal Flood Commission.


(Dr. M. Ejaz Tanveer)
Superintending Engineer (Floods)

Distribution (All members of Federal Flood Commission):

1. Member (I&RC), Planning Commission, Islamabad.
2. Director General, Pakistan Meteorological Department, Islamabad.
3. Member (Water), WAPDA, WAPDA House, Lahore.
4. Chief Executive Officer, Pakistan Railways, Lahore.
5. Pakistan Commissioner for Indus Waters (PCIW), Islamabad.
6. Chairman, National Highway Authority, Islamabad.
7. Chairman, Indus River System Authority, Islamabad.
8. Member (DRR), National Disaster Management Authority, Islamabad.
9. Secretary, Irrigation Department, Government of the Punjab, Lahore.
10. Secretary, Irrigation Department, Government of Sindh, Karachi.
11. Secretary, Irrigation Department, Government of Khyber Pakhtunkhwa, Peshawar.
12. Secretary, Irrigation Department, Government of Balochistan, Quetta.

Distribution (Co-opted members of Federal Flood Commission):

13. Secretary, Water Management & Irrigation Department, Govt. of Gilgit-Baltistan, Gilgit.
14. Secretary, Irrigation & Agriculture Department, Government of AJ&K, Muzaffarabad.

Special Distribution:

15. Director General (Engineer), Engineers Directorate, GHQ, Rawalpindi.
16. Director General (WR), Ministry of Water Resources, Islamabad.
17. Chief, (WR Section), Ministry of Planning, Development & Special Initiatives, Islamabad.
18. Director General, Provincial Disaster Management Authority, Govt. of the Punjab, Lahore.
19. Director General, Provincial Disaster Management Authority, Govt. of Sindh, Karachi.
20. Director General, Provincial Disaster Management Authority, Govt. of KP, Peshawar.
21. Director General, Provincial Disaster Management Authority, Govt. of Balochistan, Quetta.
22. Director General, Gilgit-Baltistan Disaster Management Authority, Gilgit.
23. Director General, State Disaster Management Authority, Govt. of AJ&K, Muzaffarabad.
24. Chief Engineer (D&F), Irrigation Department, Government of the Punjab, Lahore.
25. Special Secretary (Tech.), Irrigation Department, Government of Sindh, Karachi.
26. Chief Engineer (North), Irrigation Department, Government of KPK, Peshawar.
27. Chief Engineer (South), Irrigation Department, Government of KPK, Peshawar.
28. Chief Engineer, Merged Area, Irrigation Department, Peshawar.
29. Provincial Coordinator, Irrigation Department, Government of Balochistan, Quetta.
30. Director General, Irrigation & Small Dams, Government of AJ&K, Muzaffarabad.

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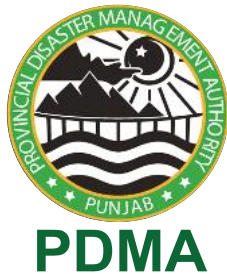
1. P.S to Secretary, MoWR, Islamabad.
2. PS to CEA&CFFC, Islamabad.
3. Master file.

TIME LAG IN DIFFERENT REACHES (Annexure-I)

Sr. No.	DESCRIPTION	REACH	TIME LAG IN DAYS				Dist. (Canal Miles)	
			Nov. to Apr.	May. to Jun	Jul to Aug	Sep. to Oct.		
I RIVERS								
	Sutlej-Cum-Bess	1	Farozpur - Suleimanki	3	2	1	2	79
		2	Suleimanki - Islam	4	3	2	3	121
		3	Islam - Panjnad	6	4	3	3	149
	RAVI	4	Madhopur - Tail M.R. Link	3	2	2	2	175
		5	Tail M.R. Link - Shahdara	1	1	1	1	55
		6	Shahdara - Balloki	2	1	1	1	64
		7	Balloki - Sidhnai	5	3	3	3	240
	CHENAB	8	Marala - Khanki	1	1	1	1	40
		9	Khanki - Qadirabad	0	0	0	0	0
		10	Qadirabad - Trimmu	4	3	2	3	160
	JHELMUM	11	Mangla - Rasul	1	1	1	1	43
		12	Rasul - Tail C. J. Link	3	2	2	2	118
		13	Tail C. J. Link - Trimmu	1	1	-	1	60
	CHENAB - CUM - JHELMUM	14	Trimmu Tail T. P. Link	4	3	2	2	119
		15	Tail T.P. Link - Panjnad	1	1	1	1	70
	PANJNAD INDUS	16	Panjnad - Mithankot	1	1	1	1	58
		17	Tarbela - Attock	0	0	0	0	25
		18	Attock - Kalabagh (Jinnah Barrage)	2	1	1	1	100
		19	Kalabagh (Jinnah Barrage) - Chashma	1	1	1	1	61
		20	Chashma - Taunsa	4	3	2	2	152
		21	Taunsa - Mithankot	3	2	2	2	129
		22	Mithankot - Guddu	1	1	1	1	59
		23	Guddu - Sukkur	2	1	1	1	130
		24	Sukkur - Kotri (G.M. Barrage)	5	4	3	3	298
II LINK CANAL								
	U.J.C	25	Head - Tail	2	1	1	1	88
	R.Q.B.S	26	Rasul - Qadirabad	1	0	0	0	30
		27	Qadirabad - Balloki	2	1	1	1	80
		28	Balloki - Suleimanki	1	1	1	1	54
	R.Q.B.S. (Sub Total)			4	2	2	2	164
	U.C.C.	29	Head - Tail	2	1	1	1	83
	M.R.	30	Head - Tail	1	1	1		63
	B.R.B.D.	31	Head - Tail	2	1	1	1	109
	T.S.M.B.	32	Trimmu - Sidhnai	1	1	1	1	44
		33	Sidhnai - Mailsi	2	1	1	1	62
		34	Mailsi - Bahawal	0	0	0	0	10
	T.S.M.B. (Sub Total)			3	2	2	2	116

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Provincial Disaster Management Authority, Punjab

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