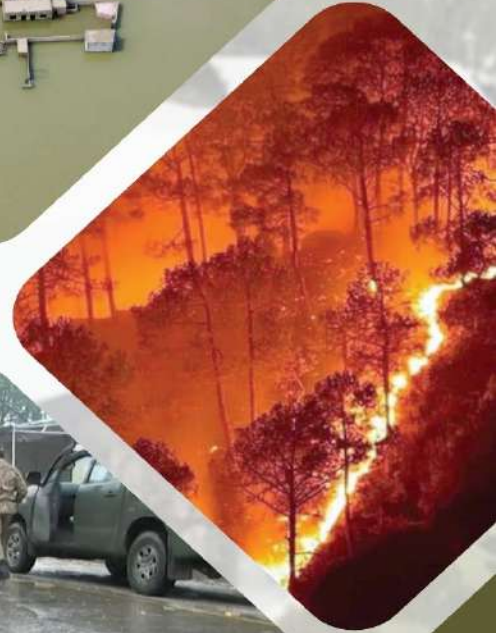




**Government of Pakistan
Prime Minister's Office
National Disaster Management Authority**



Annual Review 2024



TURNING RISK INTO READINESS AND RECOVERY INTO RESILIENCE

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OVERVIEW

Pakistan's disaster management framework follows a structured annual calendar to enhance preparedness, response, and mitigation efforts. The National Disaster Management Authority (NDMA), along with Provincial Disaster Management Authorities (PDMAs), the Capital Development Authority (CDA), and relevant line departments, coordinates comprehensive strategies for disaster risk reduction under the NDMA Act 2010.

In 2024, significant emphasis was placed on integrating modern technology for real-time monitoring, forecast-based early warnings, and data-driven decision-making. Advanced tools such as satellite imagery, Geographic Information System (GIS), and Artificial Intelligence (AI) driven predictive analytics are being leveraged to issue timely hazard advisories for floods, smog, extreme weather, and seismic risks. Proactive preparedness measures include climate-resilient infrastructure planning, enforcement of risk-sensitive development practices, and strengthening community-based disaster risk reduction. Digital platforms and geospatial analysis further support emergency response efforts.

Capacity building remains a priority, with specialized training programs such as Electronic Multi-Hazard Vulnerability and Risk Assessment (e-MHVRA) for multi-hazard vulnerability and risk assessment and for Integrated Search and Rescue (INSaR) operations. National and international simulation exercises are being conducted to ensure real-time training for early warning and response teams. In the calendar year 2024 no significant disaster took place except monsoon and summer rains followed by dry season across winter.

FOREWORD

Looking ahead, Pakistan's disaster management system will continue to evolve by leveraging advanced technology, structured planning, and strategic training to minimize risk, enhance resilience, and protect vulnerable communities. Enhanced inter-agency coordination and cross-border collaboration remain crucial to strengthening overall resilience and operational readiness.

Given the forecasted climatic shifts, NDMA is committed to further enhancing its proactive disaster management approach through innovation and strategic partnerships. The integration of digital solutions, AI-driven analytics, and geospatial mapping will play a critical role in future disaster preparedness and response efforts. By fostering a culture of preparedness and resilience, NDMA aims to safeguard lives, infrastructure, and livelihoods against emerging disaster risks.

NDMA Annual Review 2024

CHAPTER 1 – TECHNICAL EARLY WARNING (EW) WING

1. In 2024, NDMA Tech EW Wing demonstrated continuous progress in transitioning Pakistan's disaster management framework to a tech-enabled, proactive model.

- a. Tech EW wing has been continuously involved in analysis-based monitoring and disaster EW. Team has been disseminating information to the concerned departments through Seasonal Outlooks and Projections, Early Warning Systems (EWS), Simulation Exercises (SimEx), Data Portals and Collaborations, National and Global Integration, Advisory Publications etc.
- b. **Seasonal Projections, Advisories, and Alerts**. Tech EW team vigilantly monitored the prevailing global, regional, and local, weather patterns and shared the projections, advisories, and alerts for the profound hazards/ disasters with general public, and line departments in 2024.

Activity	JFM	AMJ	JAS	OND
Seasonal Projections	Winter Seasonal Outlook, Snow, Heatwave, GLOF	Drought, Fires, Monsoon Flood, Landslides	Flood, Smog/ Fog	Smog/ Fog Avalanche, Drought, Snow
Advisory	Winter Outlook Heatwave	Drought/ GLOF Monsoon Landslides/ Flood	Smog, Flood	Snow/ Fog, Snow
Alerts	Landslides/ Avalanches, Weather/ Snow Emergencies	Avalanche, Heatwave, Forest Fires	Landslides, GLOFs, Floods	Smog/ Fog, Cold & Snow emergencies

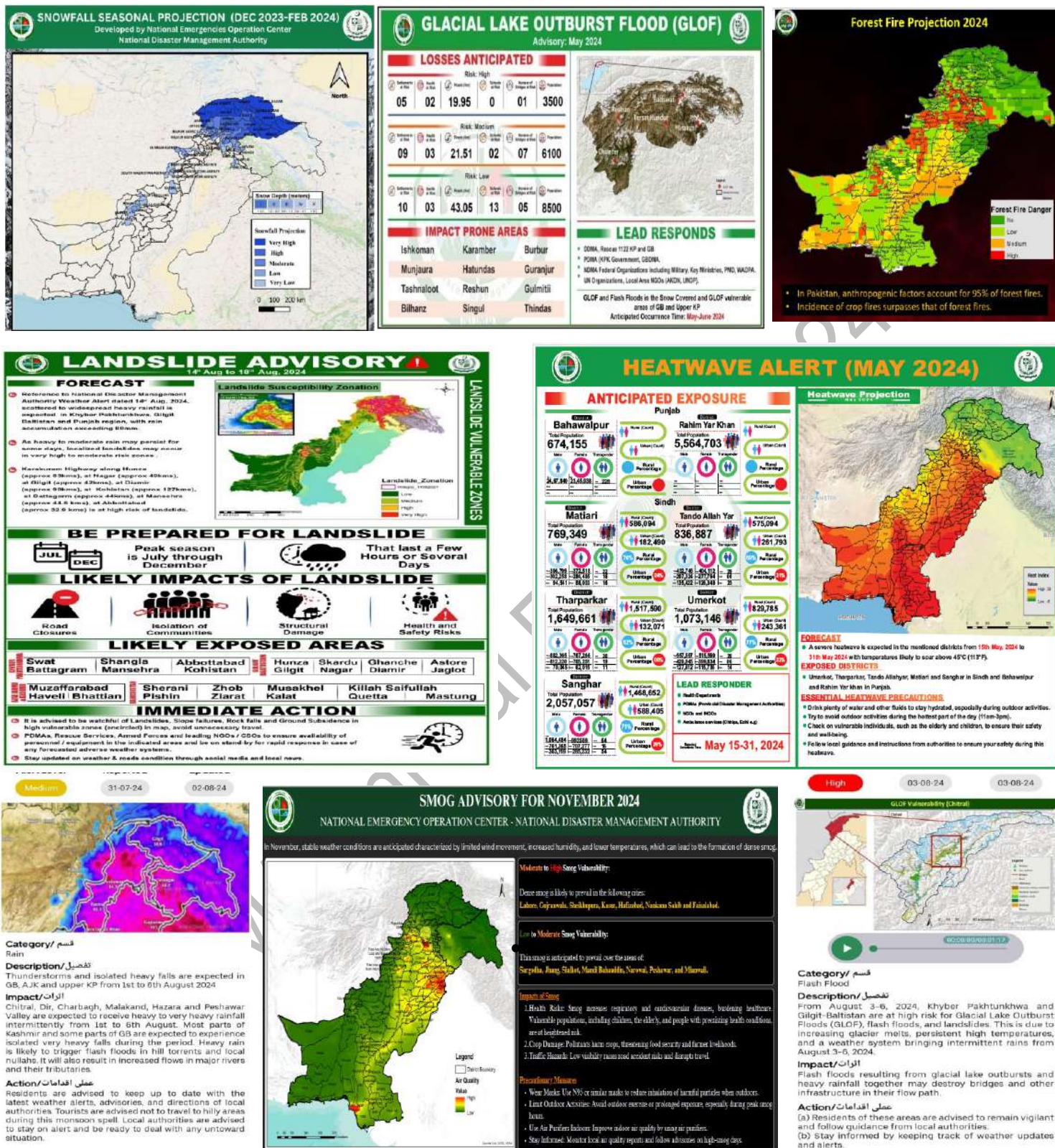




Figure: Global Weather and Disaster Alerts via GCOP and NDMA Website

- c. **Hazard Monitoring and Unfolding.** Details of advisories, guidelines, alerts and interviews with the event unfolded is shown below.

Table: Met. Advisories and Alerts and Event Confirmation

Month	Week	Advisory Issued	Alert Issued	Area	Remarks	Unfolded as Projected
June	Week 4	30 th June	30 th June	All provinces	Windstorms/ thunderstorms recorded in Gilgit, KP, Sindh and Punjab.	Yes
			2 nd July			
			4 th July			
July	Week 1	5 th July	5 th July	All provinces	Isolated rainfall recorded in all provinces.	Yes
			9 th July			
			10 th July			
	Week 2	11 th July	11 th July	All provinces	Rainfall recorded in KP and Punjab.	Yes
			12 th July			
	Week 3	15 th July	15 th July	All provinces	Rainfall recorded in Punjab and Kashmir.	Yes
			17 th July			
		19 th July	19 th July	All provinces	Isolated rainfall recorded in Sindh, KP and Punjab.	Yes
			21 st July			
			22 nd July			
			23 rd July			
	Week 4	25 th July	26 th July	All provinces	Rainfall recorded in all provinces.	Yes

Month	Week	Advisory Issued	Alert Issued	Area	Remarks	Unfolded as Projected
August			27 th July			
			28 th July			
			29 th July			
			31 st July			
	Week 1	1 st August	1 st August	All provinces	Thunderstorms/ rainfall/ isolated heavy falls recorded in all provinces.	Yes
			2 nd August			
			4 th August			
			5 th August			
		6 th August	7 th August	All provinces	Thunderstorms/ rainfall/ isolated heavy falls recorded in all provinces.	Yes
	Week 2		9 th August			
			10 th August			
		12 th August	12 th August	All provinces	Rainfall recorded in KP, Punjab, and North-eastern Balochistan.	Yes
		13 th August	14 th August	All provinces	Rainfall recorded in KP, Punjab, southern Sindh and Balochistan.	Yes
			15 th August			
	Week 3		16 th August			
		19 th August	18 th August	All provinces	Rainfall/ isolated heavy falls are recorded in all provinces.	Yes
			21 st August			
			25 th August			
		23 rd August	27 th August	All provinces	Isolated thunderstorms/ rainfall/isolated heavy falls recorded in all provinces.	Yes
	Week 4	28 th August	28 th August	All provinces	Rainfall/ scattered heavy falls are recorded in all provinces expect GB.	Yes
			29 th August			
			30 th August			
			31 st August			
September	Week 1	2 nd September	1 st September	All provinces	Thunderstorms recorded in KP, Potohar region, and certain places of Sind and Balochistan.	Yes
			3 rd September	All provinces	Unfolded as predicted.	Yes
	Week 2		13 th September	All provinces	Unfolded as predicted.	Yes

Table: GLOF Advisories and Alerts and Event Confirmation

Month	Guidelines	Advisory	Projection May-June 2024	Alert	Interview	Remarks
March	March 28					
April		April 19				
May		May 2	May 9			
		May 10				
July				July 3	July 9	Badswat, Ghizer as predicted.
				July 6		GB flood.
				July 10		
				July 16		
				July 31		
August				August 3		Booni, Chitral event unfolded as predicted.
				August 9		
				August 15		Astore flash flood.
				August 21		

Table: Flood Advisories, and Alerts and Event Confirmation

Month	Week	Alert Issued	Alert Title	Unfolding Remarks
June	Week 4	27/06/2024	Heavy Rainfall & Flooding Situation	Unfolded as predicted
		29/06/2024	Anticipated Flooding Situation	Unfolded as predicted
July	Week 1	07/02/2024	Kabul River Flood	Unfolded as predicted
		07/02/2024	Chenab River Flood	Partially Unfolded
		07/04/2024	Sialkot/Narowal Flash Flooding	Partially Unfolded
		07/04/2024	GB Flash Flood	Unfolded as predicted
		07/05/2024	Flash/Urban Flood	Partially Unfolded
		07/12/2024	Flash Floods Alert	Unfolded as predicted
		07/12/2024	Hill Torrent Flash Flooding	Unfolded as predicted.
	Week 3	17/07/2024	Flash Flood Alert	Unfolded as predicted
		18/07/2024	Flash/Urban Flood Alert	Unfolded as predicted
	Week 4	22/07/2024	Sialkot/Narowal Nullahs Flooding	Partially unfolded
		23/07/2024	Expected Flash Flooding	Unfolded as predicted
		23/07/2024	Urban Flooding in Punjab, Sindh and KP	Unfolded as predicted
		26/07/2024	Urban/Flash Floods Alert	Unfolded as predicted
		28/07/2024	Urban Flooding Alert	Unfolded as predicted
		28/07/2024	Flash Flood Expected	Unfolded as predicted.
		29/07/2024	Flash Flood Lai Nullah	Unfolded as predicted
		29/07/2024	Riverine Flood KP	Unfolded as predicted
		29/07/2024	Flood Flooding Punjab	Partially unfolded
		29/07/2024	Flash Flooding KP	Partially unfolded
		31/07/2024	Flash Flooding Sindh/ Balochistan	Event not confirmed
		31/07/2024	Flash Flood Alert GB & AJK	Unfolded as predicted
August	week1	01/08/2024	Punjab Urban Flooding Alert	Unfolded as predicted
		01/08/2024	Punjab Flash Flooding Alert	Unfolded as predicted

Month	Week	Alert Issued	Alert Title	Unfolding Remarks
		02/08//2024	D.G Khan/ Rajanpur Hill Torrents	Partially unfolded
		05/08/2024	Flash Flood Balochistan	Partially unfolded
		05/08/2024	Flash Flood DG Khan	Partially unfolded
		05/08/2024	Flash Flood Sindh	Unfolded as predicted
		05/08/2024	Medium to High Flood at Nowshera	Unfolded as predicted.
		05/08/2024	Urban Inundation in Karachi	Unfolded as predicted
		05/08/2024	Urban Inundation in Rahimyar Khan	Partially Unfolded
	Week 2	06/08/2024	Urban Flooding Punjab	Unfolded as predicted
		08/08/2024	Hydrological Outlook (48 Hrs)	Unfolded as predicted
		08/08/2024	KP Nullahs High Flows	Unfolded as predicted
		09/08/2024	Urban & Flash Flooding	Partially unfolded
		10/08/2024	KP/GB Flash Flood/GLOF	Unfolded as predicted
		12/08/2024	Flash Floods in DG Khan Division	Partially unfolded
		12/08/2024	Hydrological Outlook (Next 48 Hrs)	Unfolded as predicted
		13/08/2024	Flash Floods Expected	Unfolded as predicted
		13/08/2024	Urban Flooding Expected	Unfolded as predicted
	Week 3	15/08/2024	Flash Flood	Partially unfolded
		15/08/2024	High Flood Alert -Chenab	Partially unfolded
		15/08/2024	Flash Flooding in Lai Nullah	Unfolded as predicted
		16/08/2024	Flash Flood - Hill Torrents	Unfolded as predicted
		16/08/2024	Flood Alert GB/AJK	Unfolded as predicted
		16/08/2024	Urban Flooding Alert	
		18/08/2024	Flash Flood - GB / KP	Unfolded as predicted
		18/08/2024	Flash Flood - Punjab Hill Torrents	Partially unfolded
		18/08/2024	Flash Flood - Sindh/Balochistan Hill Torrents	Unfolded as predicted
		18/08/2024	Urban Flood - Punjab	Unfolded as predicted
	Week 4	19/08/2024	Flash Flood - Balochistan	Unfolded as predicted
		19/08/2024	Urban Flood - Punjab	Unfolded as predicted
		21/08/2024	Flash Flood KP	Partially unfolded
		24/08/2024	Flash Flood - Sindh	Unfolded as predicted
		24/08/2024	Flash Flood - Punjab	Partially unfolded
		25/08/2024	Flash Floods in Balochistan, Sindh	Unfolded as predicted
		25/08/2024	Urban Flooding Sindh	Unfolded as predicted
		26/08/2024	Flash Flood KP	Unfolded as predicted
		26/08/2024	Urban Flooding Punjab	Unfolded as predicted
		27/08/2024	Flash Flooding - Punjab Hill Torrents	Unfolded as predicted
Sep	Week 1	02/09/2024	Flash Flood - Hill Torrents DG Khan	Partially confirmed
		02/09/2024	Flash Flood Punjab	Unfolded as predicted
		02/09/2024	Urban Flooding Punjab	Unfolded as predicted
		02/09/2024	Flash Flood KP	Partially unfolded

Table: Landslides Advisories, and Alerts and Event Confirmation

Month	Week	Advisory Issued	Alert issued	Area	Remarks	Unfolded as Projected
July	Week 1	1 st July to 8 th July	7 th July	Gilgit Baltistan, Khyber Pakhtunkhwa, Balochistan	2 nd July, JSR got blocked at Brumdoor due to land sliding	Yes
				Gilgit Baltistan, Khyber Pakhtunkhwa, Balochistan	4 th July, due to Land sliding KKH got two-way Blocked at Gonolo Pari & Tata Pani in District Diamer.	Yes
	Week 2	8 th July to 15 th July	14 th July	Gilgit Baltistan, Khyber Pakhtunkhwa, Balochistan	11 th July, Due to Land sliding KKH was Blocked at Nasirabad in District Hunza.	Yes
	Week 3	15 th July to 22 nd July		Gilgit Baltistan, Khyber Pakhtunkhwa, Balochistan		
	Week 4	22 nd July to 29 th July		Gilgit Baltistan, Khyber Pakhtunkhwa, Balochistan	29 th July, Due to Land sliding Deosai road in District Skardu got partially damaged.	Yes
					29 th July, Due to Mud Flow KKH got two ways blocked in Nasir abad District Hunza.	Yes
August	Week 1	31 st July to 6 th August	31 st July	Gilgit Baltistan, Khyber Pakhtunkhwa, Balochistan		
	Week 2	14 th August to 18 th August		Gilgit Baltistan, Khyber Pakhtunkhwa, Balochistan		
	Week 3	19 th August to 24 th August		Gilgit Baltistan, Khyber Pakhtunkhwa, Balochistan	24 th August, Landslide at Malakand, tunnel road	Yes
				Gilgit Baltistan, Khyber Pakhtunkhwa, Balochistan	24 th August, Landslide at Malakand, tunnel road	Yes
	Week 4	24 th August to 28 th August		Gilgit Baltistan, Khyber Pakhtunkhwa, Balochistan	24 th August, Landslide at Malakand, tunnel road	Yes
September	Week 1	28 th August to 2 nd September		Gilgit Baltistan, Khyber Pakhtunkhwa, Balochistan	29 th August, due to land sliding JSR is one-way blocked for all types of traffic at Rondu RD 63	Yes
				Gilgit Baltistan, Khyber Pakhtunkhwa, Balochistan	29 th August, KKH got two way block for all types of traffic at RD 452 due to mudflow (near Cadet College Chillas)	Yes
				Gilgit Baltistan, Khyber Pakhtunkhwa, Balochistan	29 th August, due to land sliding KKH is two way block for all types of traffic at RD 448 (near Gonar Farm)	Yes
				Gilgit Baltistan, Khyber Pakhtunkhwa, Balochistan	30 th August, land sliding at Patrak, Upper Dir	Yes
				Gilgit Baltistan, Khyber Pakhtunkhwa, Balochistan	30 th August, land sliding at Patrak, Upper Dir	Yes
				Gilgit Baltistan, Khyber Pakhtunkhwa, Balochistan	30 th August, land sliding at Patrak, Upper Dir	Yes

Month	Week	Advisory Issued	Alert issued	Area	Remarks	Unfolded as Projected
		2 nd September to 7 th September		Gilgit Baltistan, Khyber Pakhtunkhwa, Balochistan	2 nd September, due to mud flow Two way blocked at RD 284+500 near Matta Banda.	Yes
				Gilgit Baltistan, Khyber Pakhtunkhwa, Balochistan	2 nd September, due to mud flow Two way blocked at RD 284+500 near Matta Banda.	Yes
				Gilgit Baltistan, Khyber Pakhtunkhwa, Balochistan.	6 th September, JSR got Two-way blocked for all types of traffic at RD 110 Baghicha due to land sliding	Yes

- d. **Simulation Exercises (SimExs)**. Tech EW gave the complete technical insights for four SimExs in 2024 including:-

Ser	SimEx 1 Summer Ctgys	SimEx 2 Monsoon Ctgys	SimEx 3 Industrial Disasters	SimEx 4 Winter Ctgys
(1)	GLOF	Hill Torrents & Inundation	ARL,	Snow Emergencies
(2)	Heatwave	Flash Floods	FFC, Mirpur	Smog
(3)	Forest Fires	Urban Flooding		Earthquake
(4)	Industrial Hazards	Landslides		
(5)	Drought	Riverine Flooding		

- e. **Global and National Portals Development and Upgradation**

- (1) In 2024, GIS development team worked on multiple GIS-based portals/ analytical tools focused on disaster management, environmental monitoring, and risk assessment.

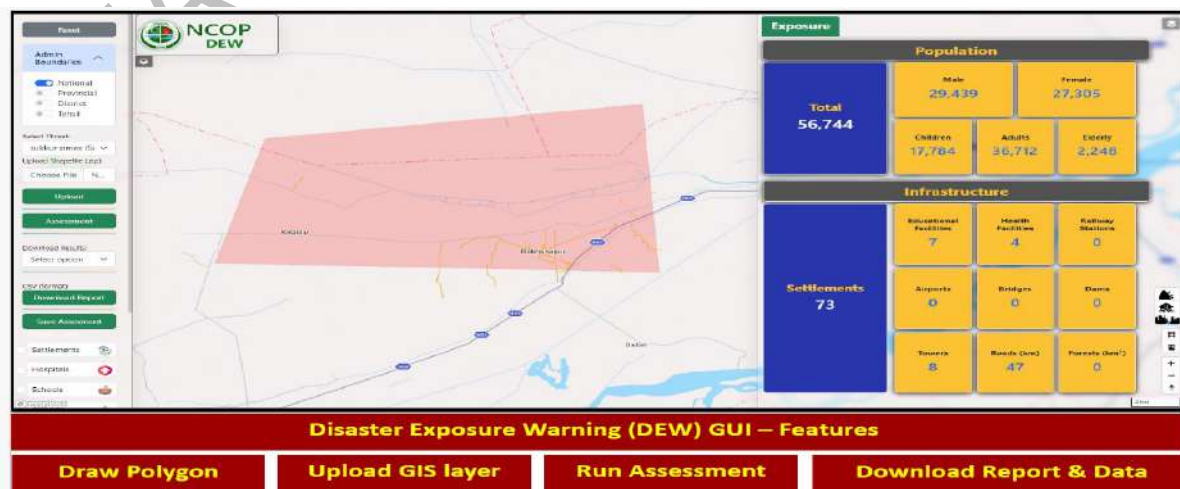


Figure: Disaster Early Warning (DEW) Calculator

- (2) Another major milestone was the development of the National Common Operating Picture (NCOP) - a geospatial web application that consolidates multiple real-time datasets, including hazard event tracking, seasonal projections (up to six months), flood monitoring via GloFAS, real-time discharge values, ocean and coastal surveillance, air quality monitoring, and weather forecasting (hourly, daily, weekly, and monthly). Later rebranded as the Global Common Operating Picture (GCOP), this web-based application features an intuitive, user-friendly interface and is fully integrated with the DEW system for enhanced hazard response.



Figure: National Common Operating Picture (NCOP)

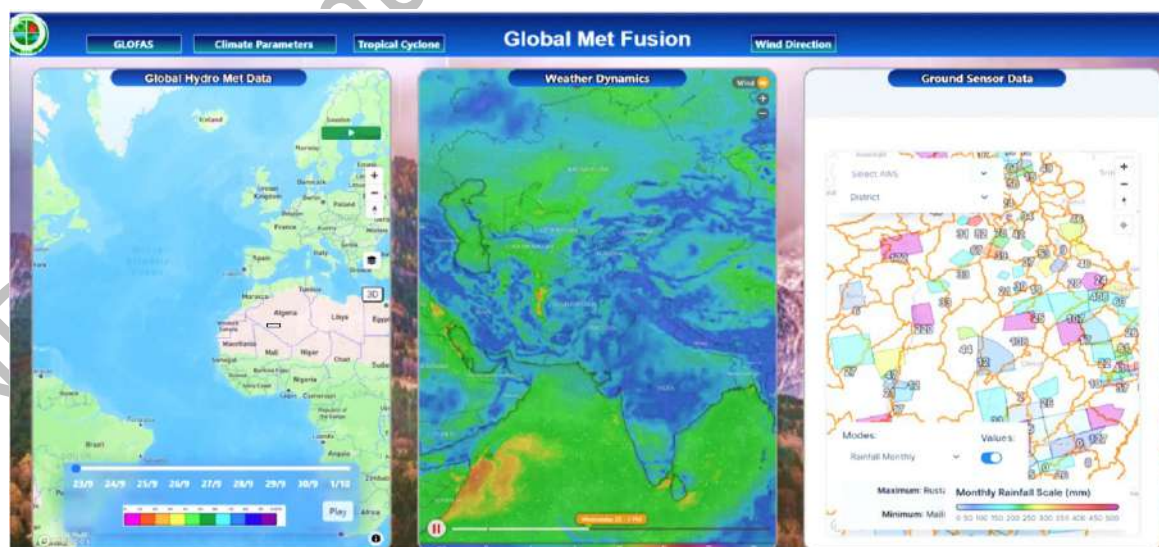


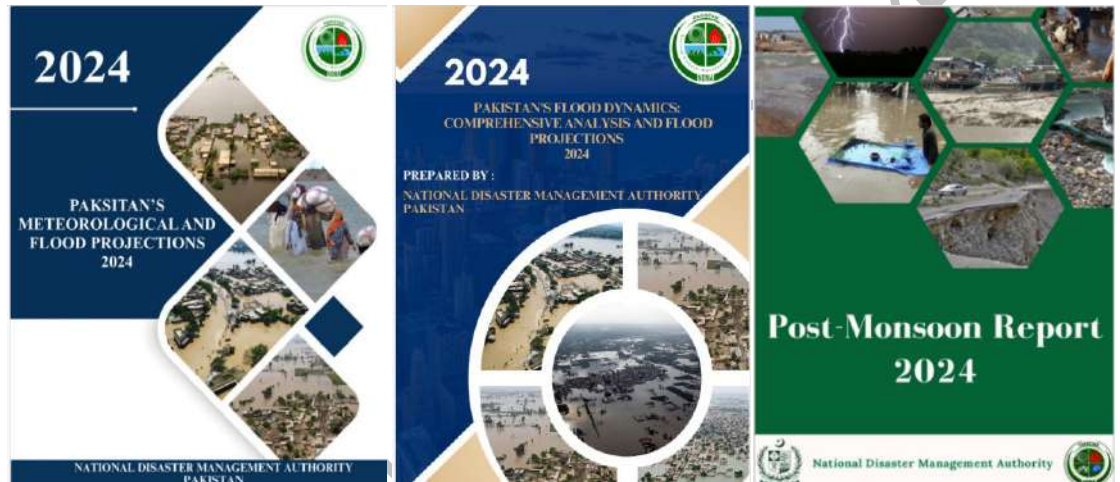
Figure: Weather Walay, In-situ Sensor Network for Continuous Monitoring

f. **Reports and Guidelines**

- (1) Tech Team conducted detailed **province-wise analysis** ahead of 2024 monsoon season, utilizing historical in-situ observations, satellite data,

reanalysis datasets, and model simulations. A **Pre-Monsoon 2024 Report** was published, providing insights into expected conditions and risks. Additionally, a **Post-Flood Impact Assessment Report** was released, evaluating aftermath of monsoon flooding.

- (2) Team has developed **comprehensive guidelines** for major hazards based on a thorough technical analysis. These guidelines are publicly shared with all stakeholders to ensure timely understanding and facilitate proactive measures for effective disaster preparedness and response.



- (3) **Global/ National Hazard Calendar.** National Emergency Operation Centre (NEOC) team has developed Global and National Hazard Calendars, providing a comprehensive overview of prevailing hazards, their intensity, and their occurrence periods. Calendars serve as essential tools for monitoring and preparedness.

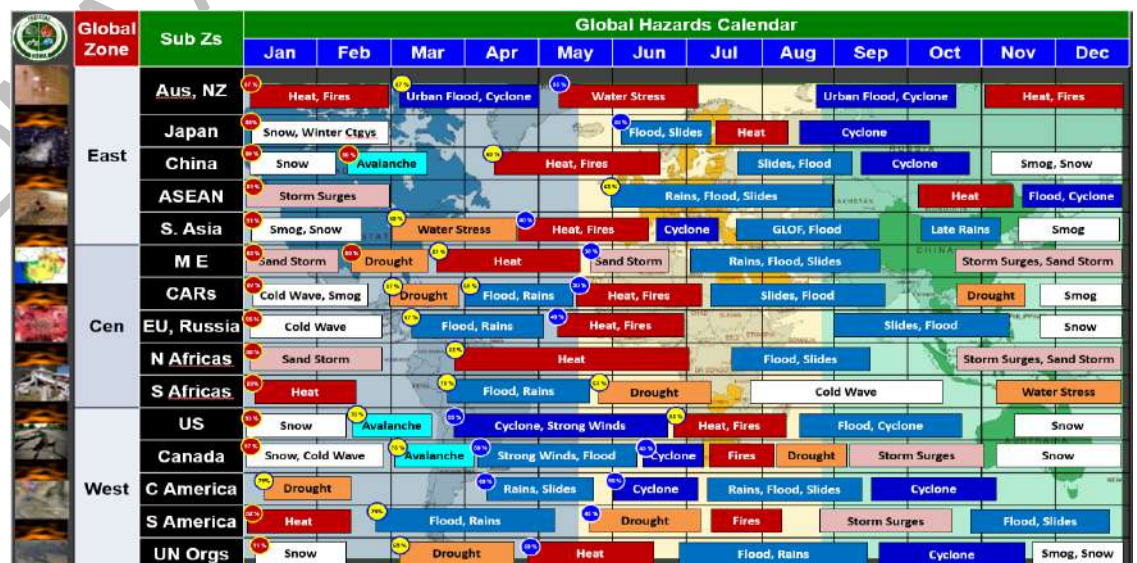


Figure: Global Hazard Calendar



Figure: National Hazard Calendar

- (4) **Integration of Three-Dimensional (3D) Technologies.** Integration of 3D technologies significantly enhances NDMA's capabilities, providing innovative solutions by the interactive representation of the events for effective disaster management. NEOC employs advanced 3D mapping tools e.g. Bledner, Autodesk Maya, 3D Max, Unity etc. to visualize disaster-prone areas, enabling better planning and response strategies.

2. **Recommendations**

a. **Strengthening International Partnerships**

- (1) Establish more robust real-time data sharing MoUs with global agencies/ countries.
- (2) Collaborate on cross-border disaster risks, such as riverine floods.

b. **Expanding NEOC's Capabilities**

- (1) Introduce AI-driven analytics to automate risk assessments and projections.
- (2) Enhance NEOC's infrastructure to cover remote regions more effectively.

c. **Capacity Building**

- (1) Train local authorities and community responders using VR simulations and 3D disaster scenario models.
- (2) Develop educational materials for public awareness about disaster preparedness.

d. **Future Improvements**

- (1) Expand 3D simulations and VR training to more stakeholders for increased disaster preparedness.
- (2) Utilization of AI based models for proactive disaster management.
- (3) Enhance indigenous response approaches by integrating local knowledge into technical systems.
- (4) Improve reliability/ coverage of communication systems in disaster-prone areas.

CHAPTER 2 – NATIONAL INSTITUTE OF DISASTER MANAGEMENT (NIDM)

1. NIDM has worked extensively to connect with universities and research institutions worldwide, fostering collaboration in disaster risk reduction and management. These linkages enhance knowledge exchange and capacity building in the field of disaster preparedness.

Capacity Building Trainings & SimEx (2024)

Ser	District	Location	Participants		
			Male	Female	Total
a.	TOT on Table Top SimEx for Balochistan Civil Services Academy (BCSA)	Islamabad	16	4	20
b.	Summer Contingencies SimEx	Nowshera	68	03	71
c.	Summer Contingencies SimEx	Rahim Yar Khan	36	04	40
d.	Summer Contingencies SimEx	Quetta	95	34	129
e.	National Monsoon SimEx	Islamabad	95	15	110
f.	National Seminar 'Disaster Resilient Pakistan'	Islamabad	319	131	450
g.	Summer Contingencies SimEx	Hunza	35	21	56
h.	Summer Contingencies SimEx	Ghizer	53	12	65
i.	Summer/ Coastal Contingencies SimEx	Thatta	53	10	63
j.	Summer Contingencies SimEx	Muzaffarabad	63	14	77
k.	Climate and Disaster Resilient Urban Planning and Development	Muzaffarabad	27	10	37
l.	Climate and Disaster Resilient Urban Planning and Development	Lahore	24	14	38
m.	Resilient Urban Planning in Climate Extremes	Peshawar	55	22	77
n.	e-MHVRA & Spatial Planning Urban Resilience	Islamabad	64	30	94
o.	Urban Resilience in Climate Extremes	Karachi	36	16	52
p.	Resilient Urban Planning in Climate Extremes	Quetta	84	13	97
q.	e-MHVRA and Urban Resilience in Climate Extremes	Gilgit	88	23	111

Ser	District	Location	Participants		
			Male	Female	Total
r.	National Training of Trainers, Pakistan Girls Guide Association	Islamabad	0	45	45
s.	1 st National Training on Anticipatory Action	Islamabad	39	15	54
Total			975	304	1279

2. NIDM has conducted extensive training and SimExs to build national capacity in disaster risk reduction, preparedness, and response. These initiatives involve diverse stakeholders, including government officials, NGOs, and academia, ensuring a holistic approach to disaster management.

Key Impact of NIDM's Capacity Building Initiatives

Ser	Impact Area	Key Achievements
a.	Institutionalization	Integrated DRR in Civil Services Training
b.	Workforce Development	Trained over 1,200 officials & volunteers
c.	Knowledge Sharing	Collaborated with global partners on disaster preparedness
d.	Community Engagement	Conducted 18+ seminars & awareness programs

CHAPTER 3 – TECHNICAL ESTABLISHMENT & MAINTENANCE (EM) WING

1. Tech (Establishment & Maintenance) Wing at NDMA primarily deals with all matters pertaining to Information and Communication Technologies (ICT). It is responsible for designing and implementing mission critical IT projects at NEOC. It pivots technical operations in order to keep the organization dynamic, digitized and evolving with futuristic outlook.

2. **Pakistan NDMA Disaster Alert Mobile App**. Tech (E&M) has launched its first Disaster Alert Mobile App in 2024, aimed at improving public safety by providing real-time disaster notifications and alerts. The app is available on Play Store and App Store, encouraging public adoption for timely disaster awareness. Key features & functionalities are as below:-



- a. **NDMA Alerts**. Real-time notifications for disasters such as floods and earthquakes etc.
 - b. **Regional Language Support**. Translations in Urdu, Pashto & Sindhi.
 - c. **Hazard Projection**. Future risk analysis for disasters and weather patterns.
 - d. **Safety Guidelines**. Detailed emergency response protocols for public awareness.
 - e. **Public Service Messages**. Alerts for health crises, extreme weather & emergencies.
 - f. **Earthquake Information**. Updates on seismic activity and expert recommendations.
3. **NDMA Website with New Features**. A new Content Management System (CMS) has been developed for NDMA's website, enabling department-wise control over content updates.
4. **EW Dashboard**. EW Dashboard is designed to provide a comprehensive and real-time overview of critical alerts and advisories. This dashboard ensures that key stakeholders have immediate access to essential information, enabling efficient disaster response and public awareness. This dashboard provides an accumulative record of:-
- a. **Advisories Issued**. Records all official advisories.
 - b. **Alerts & Warnings**. Categorized information for timely response.
 - c. **Guidelines for Public & Authorities**. Preventive measures and action plans.
 - d. **Public Service Messages**. Critical safety information dissemination.

5. **Establishment of Mobile Disaster Emergencies Operations Centre (MDEOC).** Tech (E&M) has been tasked to develop a platform for effective disaster response which requires rapid mobilization, efficient resource management, and seamless communication among various agencies. In this regard, prototype MD-EOC has been developed in 2024. This innovative, self-contained, and technologically advanced platform brought disaster management capabilities directly to affected areas, enabling proactive strategies, real-time monitoring, and coordinated operations during the critical initial 72 hours of a disaster.



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CHAPTER 4 – DISASTER RISK REDUCTION (DRR) WING

1. Disaster Risk Reduction (DRR) Wing at NDMA primarily deals with all matters pertaining to disaster risk reduction including DRR policy framework, bilateral and multi-lateral relations, provincial coordination, anticipatory action, and mainstreaming gender and vulnerable groups in disaster risk management. During 2024, DRR Wing initiated several new interventions and continued work on existing activity portfolio to enhance national resilience against disasters:-

2. Policy Directorate

- a. **Memorandum of Understanding (MoU) signed with Republic of Belarus.** In 2024, Pakistan established a significant new bilateral linkage to enhance its disaster management capacity. An MoU was signed on November 26, 2024, between NDMA and the Ministry for Emergency Situations of the Republic of Belarus.
- b. **Disaster Management Coordination Forum (DMCF).** To bolster national and provincial coordination on disaster risk management, Disaster Management Coordination Forum (DMCF) was established by NDMA; under section 9 (a) & (c) of NDM Act 2010, to enhance updated cooperation, collaborations and extend support to provincial tiers for disasters and emergency management. The Forum is chaired by Chairman NDMA, with members including Director Generals of all provincial / Stated / GB disaster management authorities and Members of NDMA.
- c. **International Conferences and Seminars.** During 2024, DRR Wing coordinated NDMA representation in the following events:-
 - (1) Engagement with Asian Disaster Preparedness Centre (ADPC) being member of its Board of Trustees:-
 - (a) **5th Meeting of the ADPC Board of Trustees (BOT).** Meeting was held on July 25, 2024, in Bangkok, Thailand.
 - (b) **Launch of Asian Disaster Readiness Fund (ADRF).** Organized by ADPC on July 30, 2024, the launch aimed to accelerate the localization process by mobilizing, managing, and allocating flexible funding for “safer and well-prepared communities through locally-led disaster risk management in Asia”.
 - (c) **2nd Special Board of Trustees Session.** Held in hybrid mode on December 16, 2024, in Bangkok, Thailand, where Chairman NDMA, participated online.

- d. **International Center for Integrated Mountain Development (ICIMOD). Policy Action Dialogue**, titled “Tackling Climate Change Impacts on Cryosphere, Water, Food Security, and DRR,” was held from September 11-13, 2024, in Islamabad, Pakistan.
 - e. **Asian Disaster Reduction Center (ADRC). Asian Conference on Disaster Reduction 2024**, themed “Proactive Solutions and Anticipatory Actions for Sustainable Resilience to Climate Crisis”, was held from November 12-13, 2024, in Hanoi, Vietnam.
 - f. **Asia-Pacific Ministerial Conference on Disaster Risk Reduction 2024. Asia-Pacific Ministerial Conference on DRR (APMCDRR) 2024** was held in Manila, Philippines, from October 14-18, 2024.
 - g. **Prime Minister of Pakistan Visit Tajikistan**. NDMA provided input for PM’s visit to Tajikistan and identified potential areas for collaborations pertaining to SimEx, exchange expertise, joint stance for Conference of the Parties (COP) - 29, regional collaboration, establishment of EWS, research and knowledge sharing, regional and international cooperation.
 - h. **International Conference: A Decade of the SFDRR - Paris, France**. UNESCO organized an "International Conference: A Decade of the Sendai Framework for DRR - Envisioning the Road Ahead" in Paris in September 2024. NDMA Pakistan’s delegation led by Chairman NDMA, actively participated in the said conference, where Chairman NDMA was a panellist on a Session on Science, Technology and Innovation and shared Pakistan's experiences in disaster risk reduction and contributed to discussions on enhancing global cooperation and resilience.
 - i. **D-8 Organization for Economic Cooperation. 11th D-8 Summit** was held on December 19, 2024, in Cairo, Egypt, under the theme “Investing in Youth and Supporting Small and Medium Enterprises: Shaping Tomorrow’s Economy”.
3. **Anticipatory Action**. Anticipatory Action (AA) has emerged as an innovative mechanism that aims to trigger pre-agreed actions with pre-approved financing when early warnings reach a pre-defined impact threshold. NDMA's efforts in implementing AAs are a significant step towards building resilience and reducing the impact of disasters in Pakistan. During 2024, NDMA took a leadership role in streamlining AA into national DRM system, while working with all stakeholders in developing coordinated implementation of AA interventions in the country. Key developments on AA from 2024 are as follows:-

- a. **AAs in Disaster Management: A Comprehensive Guide.** DRR Wing's AA Team published a comprehensive guide on AAs in Disaster Management, which characterizes AAs across 15 stakeholders at various levels.
 - b. **National Coordination Forum on Anticipatory Action (NCF-AA).** NDMA established National Coordination Forum on AA with the aim to provide guidance & oversee, coordinate and monitor implementation of AA activities/ interventions by bringing together stakeholders from government, UN, humanitarian and development sectors.
 - c. **International Participation.** 1st South Asia Dialogue Platform on Anticipatory Humanitarian Action was held from 10 - 11 September 2024 in Colombo, Sri Lanka.
 - d. **National-level Training.** NDMA, with the support of partner organizations including WHH, WFP, FAO and GRC, conducted a national level training for humanitarian actors on AAs in Islamabad in August 2024.
 - e. **Provincial Trainings.** Following the success of national training course, a provincial-level training course was held to strengthen capacities across the country. Provincial training was held in Karachi, Sindh and gathered 40 participants from provincial government departments, NGOs, and academic institutions.
4. **Provincial Coordination Cell.** Provincial Coordination Cell (PCC) team is actively engaged in coordination, collaboration, and liaison with all PDMA's to streamline disaster management efforts.
- a. **Projection of Latest Provincial Incidents & Activities.** PCC works on gathering, analysing, and disseminating real-time information on emerging hazards, ongoing disasters, and response efforts across all provinces.
 - b. **Coordination Support for SimEx.** SimExs-2024 was conducted in NDMA on 28th June 2024 aimed at enhancing emergency response capabilities.
 - c. **Hazards and Disasters Data Collection.** PCC team collected, consolidated hazard / disaster data from all provinces on daily basis. This real-time data was continuously displayed on the NEOC, enabling instant situational awareness.
 - d. **Monsoon Briefings.** Outcomes of daily and weekly briefings were shared with both National & Provincial Authorities to enhance preparedness for the monsoon season. These briefings provided insights on real-time weather patterns, potential flood risks, and evolving meteorological conditions ensuring a proactive and coordinated response.

- e. **Supporting Coordination Challenges.** Key administrative and logistical challenges were resolved to enhance disaster management efficiency. Notably, the transfer of land to PDMA Punjab (relief warehouse at Gujjar Khan) removed a longstanding bureaucratic hurdle. Warehouse issues with GBDMA were pursued and coordinated to improve logistical readiness. These efforts strengthened overall disaster preparedness and response.
- f. **Provincial Visits to NDMA.** PCC coordinated high-level visits to enhance inter-agency collaboration in disaster management. CM of Gilgit-Baltistan and senior Member Board of Revenue (SMBR) Punjab officer engaged with NDMA to improve coordination, policy alignment, and disaster resilience, fostering a unified approach.
- g. **Functioning Paper of PCC.** PCC's Functioning Paper has been developed for smooth functioning of the Cell with NDMA Wings and external stakeholders.

5. **Gender and Child Cell (GCC)**

- a. **Gender Equality and Empowerment Symposium.** GCC participated in Symposium titled "Breaking Barriers, Bridging Divides". A Gender Equality and Empowerment Symposium" organized by COPAIR Center of Pakistan and International Relations on 15th January 2024.
- b. **Guest Speaker at Shaping Tomorrow Resilience.** GCC participated in an Interactive session titled "Cooperation on Climate Resilience and Adaptability" organized by COPAIR on 16th January, 2024.
- c. **Membership Inter-Agency Working Group on Sexual & Reproductive Health - IAWG Steering Committee.** GCC has joined Steering Committee of IAWG on 24th January 2024. IAWG is a global coalition of organizations that work together to address and cater to the sexual & reproductive health and rights in Humanitarian Settings.
- d. **National Consultation on Pakistan School Safety Framework.** GCC, organized a National Consultation on Pakistan School Safety Framework on 6th March 2024 at Marriott Hotel, Islamabad with Government Departments, UN Agencies, and other relevant stakeholders. Objectives of consultative meeting were to address new challenges, risks/ threats to school safety that have emerged since the last consultation and to explore the adoption of new technologies, tools, and methodologies for enhancing school safety, such as digital platforms for risk assessment, EW systems, communication channels and addition of a chapter on Climate Change and its impacts on disasters in Pakistan.

- e. **Inclusivity and Economic Empowerment for PWDs.** GCC represented NDMA as panellist in “Inclusivity and Economic Empowerment for people with Disabilities in Pakistan” conducted by Special Talent Exchange Program (STEP) on April 17th, 2024.
 - f. **Meeting with Population Council.** GCC attended a meeting with the Interim Co-President (Mr. James Sailor) of the Population Council, New York, on April 24th, 2024. Discussion revolved around coordinating efforts to integrate gender perspectives and cater to requirements of vulnerable populations throughout the DRR Management cycle.
6. **UNICEF South Asia Regional Learning and Knowledge Exchange Meeting**
- a. UNICEF South Asia Regional Learning and Knowledge Exchange Meeting on Child-Centered DRR & Disaster Management was held from 22nd to 24th of April 2024, in Kathmandu - Nepal.
 - b. DRR presented the Institutional Leadership and Coordination of NDMA Pakistan focusing on the proactive initiatives of NDMA, NEOC and its strategic capabilities at National Dialogue Platform on AAs, DMCF. GCC presented Gender and Child Cell GCC, NDMA as the whole knowledge exchange was focused on CCCDRR.
 - c. UNICEF highlighted the GCC as a remarkable success story in the SAARC region as no other country has a dedicated cell/wing in their respective Disaster Management Authorities to deal with the needs and concerns of Vulnerable Communities (women, children, elderly, disabled and other marginalized communities). All child centered GCC, NDMA Publications were shared with SAARC Countries which were highly appreciated.
7. **Launch of Disability Inclusive Disaster Risk Reduction (DIDRR).** United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP) has developed an innovative E-learning tool with Special Talent Exchange Program (STEP) focused on enhancing understanding and capacity in disability-inclusive DRR practices. This is an online course about incorporating disability perspectives into all phases of disaster risk reduction: prevention; preparedness, response, and recovery. GCC NDMA launched this e-learning tool kit on 03rd May, 2024 at the NEOC.
8. **Pakistan School Safety (PSSF) Refresher.** GCC NDMA organized a 3-days Refresher of Master Trainers (Federal Directorate of Education Teachers) on Pakistan School Safety Framework (PSSF) from 14th to the 16th of May 2024.
9. **Celebration of School Safety Day.** GCC in partnership with Agha Khan Agency for Habitat organized an event at Islamabad Model School for Girls, G-9/3 to commemorate School Safety Day

on 16th May 2024 (designated School Safety Day in ICT). AKAH presented an all-inclusive School Safety Kit consisting of 22 items to safety communities through GCC.

10. **UNICEF and Education Cannot Wait (ECW)**. UN's Global Fund, jointly organized a session titled "Anticipatory Action - Innovating and Acting Early to Safeguard Education from Climate Change" at Humanitarian Hub Pavilion. Session showcased innovative approaches to mitigating climate shocks and protecting vulnerable children's education. Session concluded with a call to prioritize early action and invest in climate-resilient education.

11. **Nature Conservation Day Celebrated at Lincoln Corner, National Library of Pakistan**. Lincoln Corner hosted a celebration of Nature Conservation Day on 15th July 2024 at the National Library of Pakistan. GCC represented NDMA.

12. **UNICEF Program "URAAN" on "DRR Planning for Safeguarding Children"**. UNICEF program series "URAAN" featured an insightful episode on "DRR Planning on Safeguarding Children," aired on 17th of August 2024. GCC, represented NDMA. Discussion focused on strategies to protect children during disasters, highlighting the importance of comprehensive DRR planning. Both experts underscored the need for robust policies and community engagement to ensure the safety and well-being of children in emergency situations.

13. **Training on "AAP - Accountability of Affected People"**. Comprehensive training on "AAP - Accountability of Affected People" was held at Serena Hotel from July 23-24, 2024 by UNICEF.

14. **Training on Minimal Initial Service Package (MISP)**. Three-day training session on "Minimal Initial Service Package (MISP)" was held at the Ramada Hotel from July 29-31 2024. Representatives from SDMA and other Govt depts from AJK as well as international non-governmental organizations (INGOs), and local NGOs actively participated in the event.

15. **Regional Parliamentarians Conduct Study Visit to NEOC**. A high profile delegation of Parliamentarians of Asian region visited NEOC to explore Gender Empowerment in Green Economy:-

- a. A distinguished delegation of regional parliamentarians, including representatives from the USA, Japan, Egypt, Indonesia, Jordan, and other nations such as Cambodia, Iraq, Lao PDR, Maldives, Mongolia, Nepal, Thailand, Turkmenistan, and Vietnam, visited the NEOC on August 13, 2024. Visit was led by Hon. Romina Khurshid Alam, Coordinator to the Prime Minister on Climate Change and Environmental Coordination.
- b. Study visit, organized under the Asian Forum of Parliamentarians on Population and Development (AFPPD) Standing Committee on Gender Equality and Women Empowerment's initiatives, aimed to explore the critical intersections of gender

empowerment and the green economy within the framework of ICPD-30. During the discussions, the participants focused on the gendered dimensions of climate change and the green economy, emphasizing women's unique vulnerabilities and strengths.

16. **Empowering Women & Girls in Disaster Management**

- a. GCC, in partnership with UNWOMEN, UNICEF, UNFPA, Catholic Relief Services (CRS) Welthungerhilfe (WHH), Islamic Relief Pakistan, HANDS, Federation Handicap International (HI) and Special Talent Exchange Program (STEP) successfully hosted a "One-Day National Dialogue on the Role of Women and Girls in Disasters" at the Marriott Hotel on August 6, 2024.
- b. Dialogue brought together government officials, humanitarian organizations, and women leaders from disaster-prone communities. Guest speaker Ms. Romina Khurshid Alam, Chair of the Women Parliamentary Caucus, highlighted those women are essential agents of change in building a stronger, more inclusive Pakistan.

17. **Asia Pacific Ministerial Conference on Disaster Risk Reduction**. Asia-Pacific Ministerial Conference on Disaster Risk Reduction (APMCDRR) took place from October 14-18, 2024, in Manila, Philippines. During the conference, NDMA showcased its advancements in EW systems and gender-responsive DRR strategies at the NDMA Booth in APMCDRR Marketplace. GCC was represented NDMA in the Fail Forward Café Side Event held by UN Women and at the Gender Responsive Desk Set up by UN Women.

18. **Hosts Critical Panel Discussion on Gender-Based Violence and Sexual Health Issues in Women and Adolescent Girls due to the Climate Crisis at COP-29**

- a. At the 29th Conference of the Parties (COP-29) in Baku, Azerbaijan, GCC, NDMA held a significant panel discussion on "Exacerbation of Gender-Based Violence (GBV) and Sexual and Reproductive Health (SRH) Issues in Women & Adolescent Girls Due to the Climate Crisis".
- b. Chairman NDMA, delivered keynote address, highlighting potential policy frameworks and interventions to address these pressing issues. He emphasized the importance of innovative, locally-led solutions to combat GBV and improve SRH outcomes during climate emergencies.

19. **Miscellaneous Initiatives by GCC**

- a. GCC, facilitated the Media Directorate in developing content for the NDMA Media Channel "**Tayyer Pakistan**".

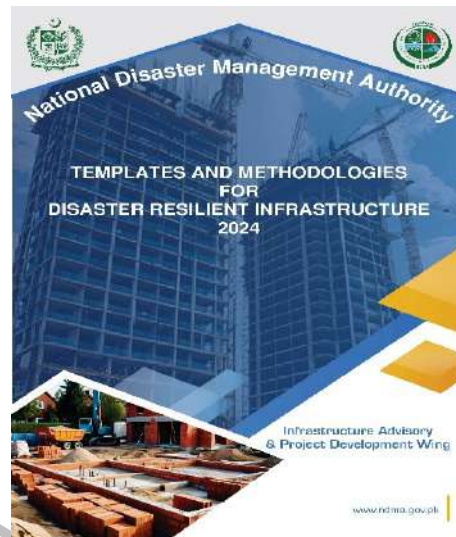
- b. GCC facilitated the visit of Carmen Von Heese, Regional Emergency Advisor, UNICEF ROSA to the NEOC on 30th September 2024.
- c. GCC represented NDMA at the Disability Inclusive Disaster Risk Reduction (DiDRR) in Asia and the Pacific on the 8th of October 2024.
- d. GCC represented NDMA at the COSP-17 Side Event, **“The Power of Women with Disabilities in Global Problem Solving”** on the 10th of June 2024.

NDMA Annual Review 2024

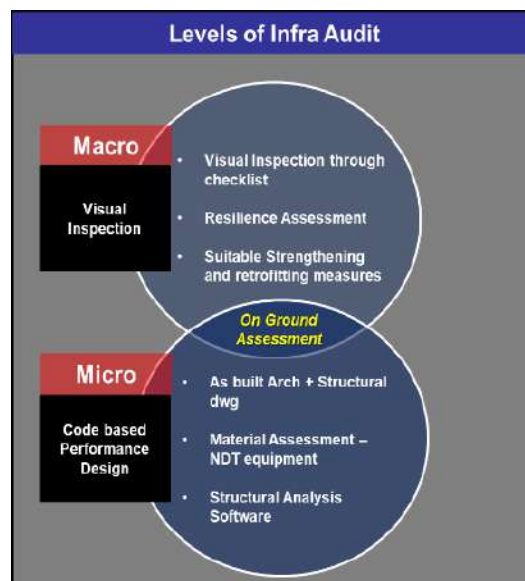
CHAPTER 5 – INFRASTRUCTURE ADVISORY & PROJECT DEVELOPMENT (IA&PD)

1. **Booklet Publication “Templates & Methodologies for Disaster Resilient Infrastructure”**

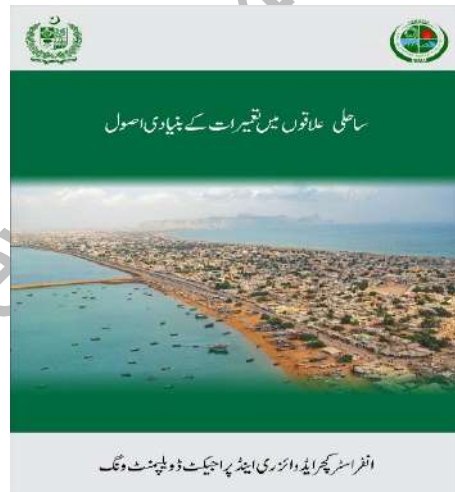
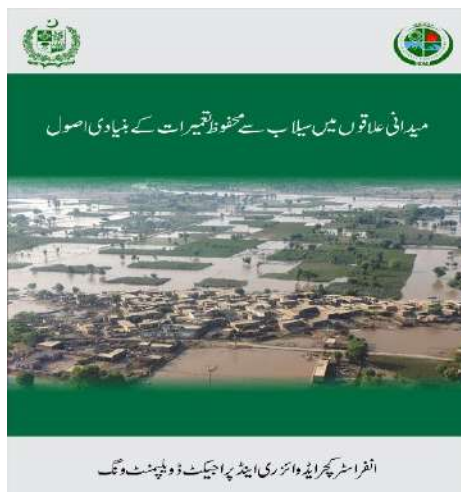
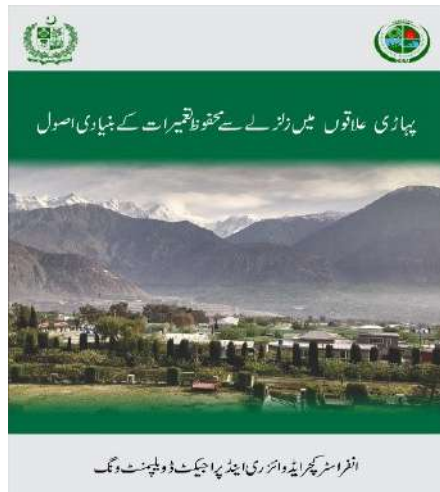
- a. Booklet provides a comprehensive guide for improving construction practices in Pakistan's disaster-prone regions. Addressing various natural hazards, including earthquakes and floods. Book emphasizes the need for region-specific construction strategies. It highlights the flaws in current building practices and offers solutions derived from global best practices, tailored to Pakistan's socio-economic context. By adopting these methodologies, book aims to enhance structural resilience, reduce disaster impacts and contribute to sustainable development, ultimately improving the communities vulnerable to natural disasters.
- b. **Analysis/ Lesson Learnt.** Effective dissemination of this booklet should be done by provincial line departments for implementation and adoption of the proposed construction techniques/ methodologies. Furthermore, innovations and improvements need to be incorporated in the next edition for enhanced benefits.



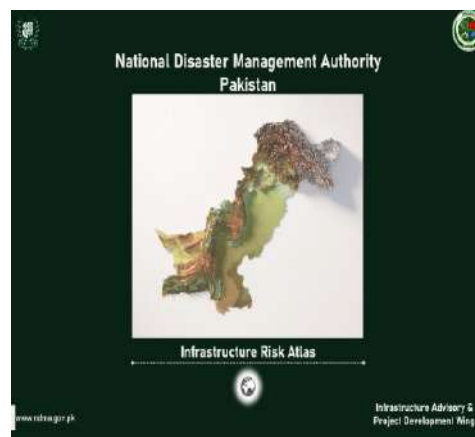
2. **Introduction to the Concept of Infrastructure Audit.** Infrastructure audit is the primary step in the adoption of proactive disaster management approach for Pakistan. It is aimed on proactively identifying the weaknesses in Pakistan's infrastructure through a systematic health monitoring mechanism at the grass root level. Proper adoption of this approach will ultimately lead to substantive decrease in fatalities/ infrastructure damages in future. Advisory was issued to PDMA's in June 2024 to form Provincial Infrastructure Audit Units. No such mechanism existed in country prior to this, certain legislative loopholes were identified. A comprehensive guideline to carryout infrastructure resilience audit is necessary and the jurisdictional matters need to be resolved amicably via legislative actions.



3. **Publication of zone wise construction leaflets.** These leaflets focused on the adoption of zone-specific construction methodologies derived through a careful analysis of successful construction approaches adopted in regions having similar topographic characteristics and hazard profiles. In order to ensure effective information dissemination these leaflets have been published in regional language. Although construction leaflets have been formulated, but on ground enforcement is required, which is only possible when this information trickles down to the lowest tiers of society in local languages resultantly leading to effective implementation and contributing to increased infrastructure resilience.



4. **Publication of Pakistan's 1st Infrastructure Atlas.** Infrastructure Risk Atlas is a ground breaking initiative aimed at addressing the critical lack of data on Pakistan's building infrastructure. This comprehensive resource provides detailed information on the type and vulnerabilities of buildings across the country, highlighting areas at high risk from natural and human-induced hazards. By identifying structurally weak regions, the Atlas enables targeted disaster risk reduction efforts, prioritizing regions for retrofitting and capacity-building programs. It shall serve as a vital tool for policymakers and stakeholders, guiding informed decision-making and resource allocation, ultimately enhancing Pakistan's infrastructure resilience and supporting a safer, more sustainable future. Although this is first of its kind initiative in Pakistan and helps in identifying most at-risk districts from the perspective of infrastructure its accuracy is limited due to lack of on ground data. Additionally, data for GB and AJK was not available due to which the formulated maps are for major four provinces. The accuracy of existing maps can be increased if accurate data of type of structures and its quantum can be obtained.



5. **Collaboration with National University of Sciences and Technology (NUST).**

Collaboration with the leading university of Pakistan in order to develop a bridging mechanism between the academia and disaster management practitioners in Pakistan. This collaboration enabled effective information exchange and introduction of novel concepts in the adoption of resilient and sustainable infrastructure. This collaboration serves as a platform for researchers to showcase smart solutions which can be implemented to bring advancement in existing construction practices. To further increase the effectiveness of this strategy, researchers, relevant government departments, developers, builders and local manufactures are to be brought together in order to explore possible collaboration avenues and formulation of improved construction standards which are to be enforced for solid results.



6. **Issuance of Infrastructure Advisories to Provinces.** In the pre disaster phase, infrastructure advisories were issued to relevant provincial departments in line with the projections provided by NDMA's Tech Team to enhance preparedness for effective disaster risk reduction. These advisories specifically focused on the vulnerable infrastructure in potentially exposed regions. Issuing timely advisories plays a vital role in enhancing the capacity of a community against any potential disaster, but its effectiveness is dependent upon actual on ground implementations and solid steps proactively taken in order to brace the community against future scenarios.

7. **Analysis - Existing Construction Practices and Formulation of Recommendations.**

Through analysis of existing construction methodologies and techniques was undertaken on a national level in order to identify the weak links and discrepancies, afterwards feasible construction methodologies and techniques were proposed in line with successful global practices and engineering standards to effectively enhance infrastructure resilience. Although recommendations have been formulated, but on ground enforcement is required, which is only possible when this information trickles down to the lowest tiers of society resultantly leading to effective implementation and contributing to increased infrastructure resilience.

8. **Collaboration with UN-Habitat.** Collaboration with UN-Habitat undertaken for provision of sustainable and low-cost housing solutions tailored specifically for the disaster-prone areas. Further collaboration is required in this regard.

9. **Monitoring and Assessment of Monsoon Infrastructure Damages.** Active monitoring and evaluation of infrastructure damages due to monsoon 2024 was undertaken on a national level.

Afterwards the data was compiled in the form of a digital portal and was analysed for identification of probable causes/ discrepancies in existing infrastructure. Remedial measures suggested keeping in view the nature and extent of damages. It has been observed that although the damages



induced due to the onset of monsoon rains is widely spread throughout the region, the failure patterns are similar. These damages can be significantly reduced by taking proactive measures such as identifying most critical infrastructure, most at risk structures and areas with highest potential of damages followed by retrofitting these structures against anticipated monsoon rains and its accompanying hazards.

10. **Participation in “China-Pak Strategies Seminar on Smart Disaster Prevention of Major Infra Structure” - Southeast University, Nanjing, China.**

Seminar served as a platform for leaders of partner institutions, technical experts from both sides to exchange knowledge and foster collaboration in the field of disaster prevention. A detailed discussion was carried out for construction of joint laboratory and to develop a road map for future cooperation. NDMA was required to deliver a brief covering introduction of NDMA, disaster risk profile of Pakistan, mitigation strategies and existing challenges faced due to the onset of increased disasters. Due to increase in climate induced disasters in recent years, this initiative can lay the foundation of how the infrastructure in this region will progress. Pakistan faced huge losses due to the inadequate capacity of existing infrastructure to sustain impact of natural disasters. As a result of this conference, major five universities of Pakistan have started collaboration with multiple universities of China on researches aimed at devising smart solutions to tackle prevalent natural calamities.

11. **1st National Seminar on “Disaster Resilient Infrastructure”.**

NDMA organized a national seminar on Disaster Resilient Infrastructure to foster a dialogue towards disaster-resilient Pakistan through proactive disaster management approaches specifically addressing quality of vulnerable infrastructure. Session held at Bahria University Islamabad, focused on need to predict, mitigate and adapt to climate change, emphasizing a shift from reactive responses to proactive strategies for enhancing infrastructure resilience. Key



takeaways include adopting innovative, cost-effective designs, retrofitting existing structures, and integrating disaster resilience into new construction. Importance of cooperation between government, private sector, academia, and industry professionals was highlighted, along with the need for proactive disaster risk management. Lessons learned stress the value of global best practices, improved policies, and national coordination to create sustainable, resilient infrastructure that can mitigate future disaster impacts and support long-term development.

12. **Collaboration with National Energy Efficiency Conservation Authority (NEECA).**

Concept of energy efficient buildings was actively pursued in collaboration with NEECA. Keeping in view the SDGs and in line with energy efficiency and conservation policy 2023, the concept of energy audits and LEED certification was proposed to be adopted in order to effectively tackle the prevalent energy crisis and the shortfall faced during natural calamities. Considering the energy crisis in Pakistan, a major gap exists in infrastructure for incorporation of energy efficient construction practices. Although codes have been developed, strict enforcement is required in order to achieve fruitful results. Initiative has the potential to enhance energy efficiency of infrastructure.



13. **Establishment of Material Hubs.** Material hubs are being established in regions adjacent to vulnerable communities. Purpose of these material hubs is to stockpile readily available construction materials that can be effectively utilized for reconstruction in post disaster phase. Material hub has been established in GB and is under development in Muzaffargarh and Sukkur. Initiative serves as a proactive measure for increasing the capacity of local community in reconstruction phase post disaster. Scope of this initiative needs to be broadened in order to enhance the response and reconstruction capability during the post disaster phase. Construction of model shelters is recommended in order to increase awareness of communities in addition to providing them with training programs to increase their capacity.

14. **Development of Exposed Infrastructure Cost Calculation Portal.** In order to pre-emptively estimate the cost of exposed infrastructure under various disaster scenarios, a portal was created which was integrated with NCOP portal of NDMA. Portal has the capability to identify the various types of exposed infrastructure and estimate its financial value. Portal plays a vital role in estimating the value of exposed infrastructure, which enhances the effectiveness in determining the extent of potential disaster impact on infrastructure highlighting the areas where immediate interventions are required resultantly contributing to increased preparedness. Portal can be further

improved by increasing the accuracy of calculation by incorporation not just point data but constructed area, which will result in accurate cost estimations.

15. **Development of Post Disaster Infrastructure Damage Assessment Portal.** To enable swift financial assessment of damaged infrastructure in the post disaster phase the post disaster assessment portal was developed. Portal will expedite response during post disaster phase and enhance policy formulation and resource prioritization. Accuracy of calculation is limited due to lack of on ground data for partially and fully damaged structures. Accuracy can be increased if more information such as type of structure, covered area and extent of damages are reported from on ground survey to NEOC.

16. **Seminar “National Collaboration for Sustainable Smart Construction Solutions - Disaster Resilient Approach”.** IA&PD wing organized a national seminar on “Sustainable Smart

Construction Solutions - Disaster Resilient Approach” to promote discussions on sustainable and resilient construction solutions. Event brought together industry experts, builders, developers, engineering organizations and academia experts to collaboratively devise solutions for disaster-resilient infrastructure



tailored to Pakistan’s socio-economic and geographical diversity. Session was held at NEOC, NDMA. Seminar, organized under the “Build Back Better” framework emphasized on integrating advanced technologies, adopting sustainable materials and tailoring global best practices to Pakistan’s unique geographical/ socio-eco context. Seminar emphasized urgent need for integrating innovative, disaster-resilient construction practices in Pakistan. Key lessons included the importance of adopting global best practices, utilizing technology like AI and 3D printing, and promoting modular construction to balance cost-efficiency with resilience. Experts highlighted the necessity of retrofitting vulnerable infrastructure, enhancing compliance with disaster-resilient building codes and fostering interdisciplinary collaboration between government, academia, and the private sector.

17. **Recommendations.** A lot of initial targets have been achieved during 2024. However, discrepancies exist in on ground implementation. Strategies and mechanisms need to be developed for effective implementation. In this regard the following steps are recommended:-

- a. Development of a systematic mechanism to implement infra audit on provincial level.
- b. Development of bridging mechanism for effective data provision from SDMA/AJK and GBDMA for enhancement of infra risk maps.

- c. Proactively identifying most at-risk areas exposed to monsoon 2025 as per projections, carrying out on ground assessment of infrastructure and its condition, identifying weak links and implementing retrofitting measures to ensure safety of the community.
- d. Broadening the scope of material hubs initiative, establishing more material hubs in vulnerable communities, development of new housing models that can be constructed using stockpiled material and construction of model houses while involving local communities to enhance capacity of the community to deal with future scenarios.
- e. Strengthening linkages between academia and disaster management authorities to promote research and innovation in infrastructure practices for effective DRR.
- f. Bridging gap between industry and policy making authorities for proper implementation of infrastructure development policies.
- g. Developing a mechanism for systematic enhancement of infrastructure knowledge at the lower tier of the society to aid in the adoption of sustainable construction solutions.
- h. In order to showcase modern sustainable practices and increase the acceptance of resilient construction solution on community level, model community hubs should be established in disaster prone areas of Pakistan in collaboration with national, international and provincial level development organizations.

CHAPTER 6 – OPERATIONS & LOGISTIC WING

1. Operations & Logistic Wing of NDMA entails three Directorates; Response, Logistics and Recovery & Rehabilitation. It has mandate to perform functions in accordance with National policy, plans, strategies and programmes with regard to disaster management either before, during or post disaster. **Response Directorate** has mandate to prepare plans to cater the effects of disasters and promptly act during the disaster to mitigate affects and losses of the disaster. **Logistic Directorate** provide logistic support post disaster management. **Recovery & Rehabilitation Directorate** has mandate to formulate policies to compensate the affectees as well as works for rehabilitation of the affected people and their belonging.

2. **Mandate & Scope**. Like all other wings, Operations Wing articulation spans across all phases of disaster i.e Pre-impact actions, On-impact and Post-impact recovery.

a. **Pre-Disaster Phase**

- (1) Mid-term Response & Contingency Plans.
- (2) Coordination Measures for Preparedness, Simulation Exercises.
- (3) Procurement, Stocking & International Relief.
- (4) Advisories & Alerts.

b. **During Disaster Phase**

- (1) National Response, Rescue & Evacuation.
- (2) Relief Operations - Need, Transportation and Distribution.
- (3) Establish Relief / Medical Camps.
- (4) Emergency Procurements, International Relief / Assistance.

c. **Post Disaster Phase**

- (1) Damage Need Assessment.
- (2) Ex-gratia Assistance / Compensations.
- (3) Coordination for Foreign Assistance.
- (4) Early Recovery Measures.

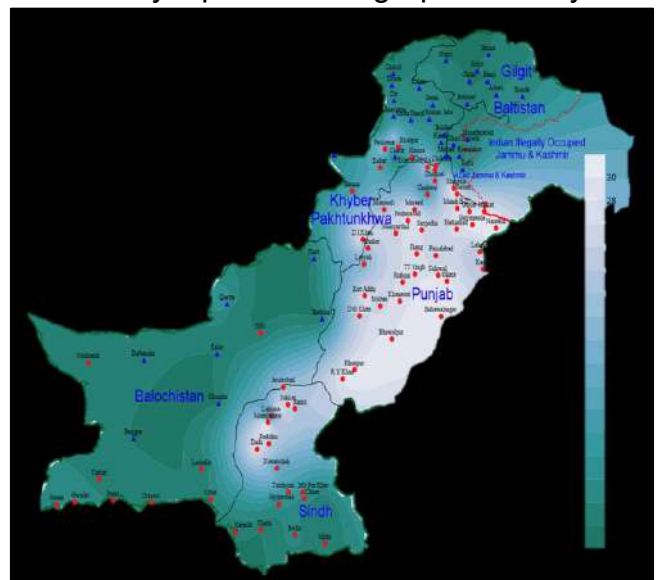
3. **Key Functions**

- a. Formulation, coordination & generation of National response in face of any disaster.
- b. All coordination/ liaison with stakeholders, including federal/ provincial ministries, departments, Armed Forces, rescue departments, PDMAs etc.
- c. Formulation and issuance of response SOPs, guidelines and contingency plans.
- d. Participate in Simulation Exercises (SimEx).
- e. Formulation and issuance of advisories and alerts.

- f. Issuance of SITREPs / situational updates and progress on response operations.
- g. Coordinate & conduct of conferences / meetings / visits etc.
- h. Preparation and conduct of briefs and presentations on response matters.
- i. Coordination for aviation assets and required support.
- j. Employment of SAR assets within and outside country.
- k. Need assessment and coordination for requirement of logistics support.
- l. Provision of Ex-Gratia assistance to affectees of natural and man-made disasters.
- m. Issuance of tax exemption certificate for import / export of relief items by donors / UN agencies, INGOs and NGOs as per SROs issued.
- n. In case of major disaster / international appeal, coordinate with UN and government stakeholders for Recovery Needs Assessment (RNA).
- o. Coordinate with relevant INGOs / NGOs for recovery and rehabilitation activities.
- p. Formulation, updating and implementation of national stocking policy.
- q. Maintenance of national reserves of relief items and initiate timely replenishments.
- r. Monitor, supervise and ensure / oversee all warehouse operations i.e. receipt, delivery, transportation, storage, security, emergency action plans.
- s. Formulation, approval, issuance and coordination of relief receipts and distribution.
- t. Allocation, re-allocation and adjustment of resources as per disaster.

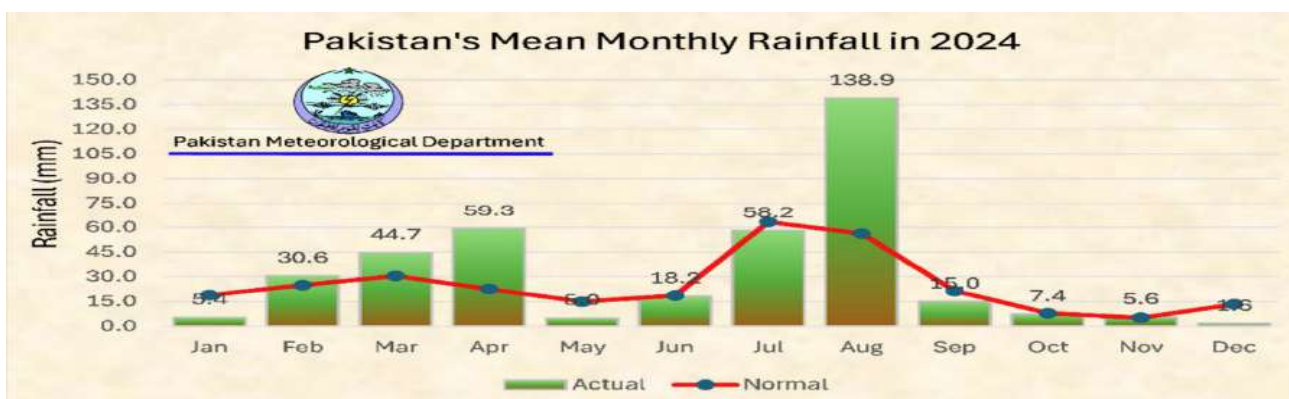
OPERATIONS AND LOGISTIC WING ACTIVITIES

4. **Smog.** Smog during January 2024 was exacerbated by a persistent high-pressure system and dry continental airflow, causing a severe cold wave across the country. Two Western disturbances, one from January 18-21 and another from January 27-31, brought significant rain and snowfall. Dense smog affected Punjab, Southern Khyber Pakhtunkhwa, and upper Sindh, reducing visibility to near zero and disrupting transport. Extreme cold in Punjab led to health concerns, with the province recording its lowest-ever mean maximum temperature of -5.79°C .



Number of Smog days - January 2024
(Source: PMD)

5. **Rainfall.** In 2024, Pakistan experienced a notable increase in overall annual rainfall, with significant regional and temporal variations. While certain periods of the year saw below-average precipitation, others particularly mid-year witnessed intense rainfall, resulting in a nationwide total well above the long-term average. Southern and southwestern regions recorded the most substantial increases, while central areas also experienced higher-than-normal precipitation. In contrast, northern regions generally saw rainfall closer to average levels, with a few areas receiving less than usual. Overall, the year was marked by heightened rainfall activity across much of the country.



Monthly mean rainfall in 2024 verses corresponding averages (Source: PMD)

6. **Spring Rainfall.** During the February–March–April (FMA) period of 2024, Pakistan experienced above-normal rainfall, with Balochistan being particularly hard hit. The province faced multiple spells of torrential rain, resulting in widespread flooding, significant human and material losses, and a state of emergency in several districts. NDMA and PDMA Balochistan, along with the military mobilized for rescue and relief operations in response to the disaster, but the scale of the event initially overwhelmed local capacities.

7. List of losses and damages attached below, provides a detailed account of the extent of the impact, highlighting the widespread consequences of the heavy rainfall. Affected regions faced challenges such as flooding, infrastructure damage, and displacement of communities, exacerbating the vulnerability of those already at risk.

Loss		Pb	KP	Bln	AJ&K	GB	Total
Death		26	65	18	11	-	120
Injury		8	95	14	11	-	128
Livestock		-	412	115	-	-	527
Crops (acres)		20,661	5,330	58	30	-	26,079
Houses	P	7	3,360	1,815	214	-	5,396
	F	-	556	225	51	2	834
Roads		-	-	14	-	-	14

List of losses and damages in Pakistan during spring rains.

8. Immediate relief measures, including the provision of shelter, food, and medical assistance were provided by the NDMA on the directions of the Honourable Prime Minister of Pakistan. The coordinated response by NDMA with PDMAs played a pivotal role in delivering timely aid and minimizing further suffering.

9. In response to the severe impact of natural calamities, NDMA coordinated the distribution of essential relief items, including food supplies, tents, blankets and medical aid, to support the displaced and vulnerable populations. NDMA's timely intervention, in collaboration with provincial authorities, played a crucial role in mitigating the crisis and restoring basic living conditions for affected communities.

Coordinated by NDMA					
District	Tents	Blankets	Plastic Mats	Kitchen Sets	Solar Lights
Balochistan					
Gwadar	1,000	1,000	1,000	1,000	1,000
Chaghi	1,000	1,000	1,000	1,000	1,000
Pishin	1,000	1,000	1,000	1,000	1,000
Total	3,000	3,000	3,000	3,000	3,000
Khyber-Pakhtunkhwa					
Lower Chitral	1,200	1,200	1,200	1,200	1,200
Upper Dir	1,200	1,200	1,200	1,200	1,200
Swat	1,200	1,200	1,200	1,200	1,200
Charsadda	1,200	1,200	1,200	1,200	1,200
DI Khan	1,200	1,200	1,200	1,200	1,200
Total	6,000	6,000	6,000	6,000	6,000
G. Total	9,000	9,000	9,000	9,000	9,000

10. **Forest Fire.** In 2024, Pakistan faced a surge in forest fires due to climate change-driven droughts, extreme heat, and human activities like illegal logging and agricultural burning. These fires devastated biodiversity, worsened air quality, and displaced communities, highlighting the urgent need for effective prevention and mitigation strategies: -

- Barkhan Forest Fire.** On March 16, 2024, a fire in Balochistan's Barkhan region burned 200 acres of forest, threatening the local ecosystem. Firefighters, residents, and officials contained and extinguished it. Cause remains unknown.
- Margalla Hills Forest Fire.** Forest fires in Margalla Hills National Park on May 27-28, and 31, 2024, burned 130 acres. No casualties occurred. NDMA deployed

helicopters from PAF and Askari Leasing to contain the fires and prevent further damage.

- c. **Chakdara Forest Fire.** On May 28, 2024, a forest fire in Chakdara Forest Range, Lower Dir, affected 80 acres across multiple areas. No casualties were reported. NDMA deployed an Askari Leasing helicopter to contain the fire. Cause and mitigation measures are under review.
- d. **Soon Sakessar Valley Forest Fire.** On May 29, 2024, a wildfire near Dhoke Miani, Mianwali, spread across 800 acres of private land and 408 acres of government forest. Due to rough terrain, responders reached the site on foot. Tragically, a forest department worker lost his life. NDMA and PDMA coordinated with the Pakistan Army and PAF, deploying helicopters to contain the fire. Authorities later arrested a suspect on April 1, 2024.

11. **Monsoon.** Monsoon season 2024 in Pakistan began on June 29, slightly ahead of its usual start date of July 1st. Rainfall in July and September was somewhat below average. However, August witnessed an exceptionally high volume of rain, offsetting the earlier deficit. Rainfall in August not only compensated for months of July and September but pushed the total monsoon season rainfall above the seasonal average.

12. To sum it up, Pakistan experienced excessively above-average rainfall during the entire monsoon season with a +51% deviation from the normal and ranked 8th wettest monsoon rainfall during the past 64 years (record is 387.8 mm in 2022). On a regional scale, Balochistan and Sindh had excessively above-average rainfall (+111% & 108% respectively), while Punjab had also above-average rainfall (+48%). Khyber Pakhtunkhwa (KP) and Gilgit Baltistan (GB) (with -5% & +2% respectively) received near-average rainfall, whereas, Azad Jammu and Kashmir (AJ&K) (with -21%) was the only region to receive below-average rainfall. Figure. 1 shows the spatial distribution seasonal rainfall and Figure-2 gives the comparison of cumulative monsoon rains this year and the previous two years.

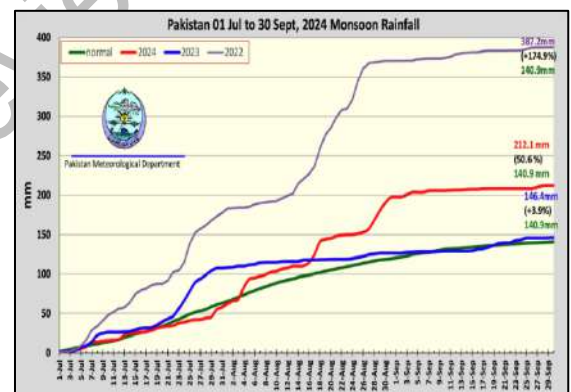


Figure:1
Spatial Distribution of Seasonal Rainfall

MONSOON 2024 RAINFALL (mm)			
	01 Jul to 30 Sept, 2024 Rainfall		
	normal (mm)	actual (mm)	Deviation (%)
Pakistan	140.9	212.1	51
Azad J&K	389.5	306.5	-21
Balochistan	58.3	122.9	111
Gilgit-B	39.7	40.5	2
Khyber-PK	256.3	242.6	-5
Punjab	231.9	344.0	48
Sindh	133.7	278.4	108

Figure:2
Comparison of Cumulative Monsoon Rains
2024 and the previous two years

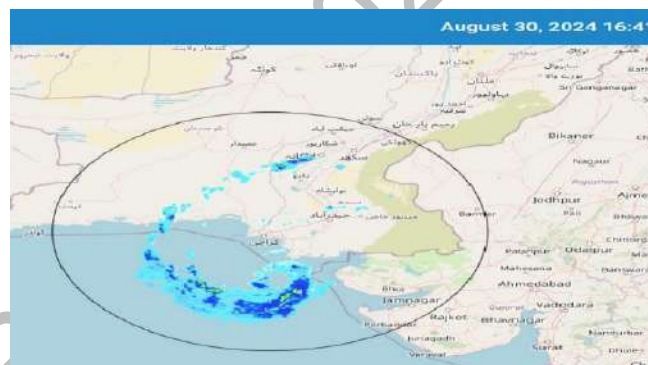
13. **Losses and Damages**. Monsoon-2024 season caused severe humanitarian impacts in Pakistan, with 280 deaths from flash floods, landslides, lightning, and roof collapses. Rural areas faced sudden disasters, while urban flooding led to electrocution hazards. Monsoon also injured 523 people and killed 677 livestock, impacting rural livelihoods.

Province-wise Deaths					Province-wise Injuries				
Death				Total	Injuries				Total
Balochistan	15	3	24	42	Balochistan	3	2	14	19
KP	40	21	51	112	KP	45	34	57	146
Punjab	43	18	62	123	Punjab	122	90	105	317
Sindh	25	13	39	77	Sindh	66	27	66	159
GB	1	0	3	4	GB	0	0	1	1
AJ&K	3	0	7	10	AJ&K	12	7	7	26
Total	127	55	186	368	Total	248	160	260	668

Source: (PDMAs, GBDMA & SDMA)

14. **Cyclone ASNA**

- Cyclonic Storm ASNA's formation in August was rare, as monsoon cyclones are uncommon due to strong wind shear. Only three similar cases were recorded between 1893 and 2023 (1944, 1964, and 1976).
- Cyclonic Storm ASNA (August 31 - September 2) originated from a monsoon low over the Bay of Bengal on August 16. It intensified into a depression by August 25 and a Deep Depression on August 26. Moving Westward, it re-emerged over the Northeast Arabian Sea, strengthening into Cyclonic Storm ASNA on August 30. System tracked South-westward, weakening into a Deep Depression on 1st September and a depression on 2nd September.
- Despite weakening, CS ASNA brought 40-46 knot winds, heavy rain, and thunderstorms to Southern Sindh, uprooting trees, damaging structures, and causing disruptions.



15. In 2024, comprehensive disaster-related guidelines, daily monsoon situation reports and multiple advisories were issued in a timely manner to ensure effective preparedness and response. Additionally, the National Disaster Response Plan along with the Summer and Winter Hazard Contingency Plans were formally published and made accessible on the official website of the NDMA. These documents were designed to enhance coordination, mitigate risks and strengthen resilience against seasonal and unforeseen hazards.

16. **Re-stocking**

- NDMA has successfully replenished its relief stocks in accordance with the revised Stocking Policy 2023. Below is a summary of the items that NDMA is required to

maintain, as outlined in the policy. Table provides details on the planned stock levels, NDMA held stock, and reserves designated for international relief assistance:-

Items	Planned	NDMA Held Stock	Stock for International Assistance	Donation Stock	Total Stock
Family Tents	83,333	83,333	7,333	12,397	103,063
Winterized Tents	20,833	20,833	3,052	6,646	30,531
Shelter tents	1,000	1,000	-	118	1,118
Blankets	250,000	250,000	25,870	110,786	386,656
Life Jackets	5,000	3,730	-	170	3,900
Boats	111	111	-	0	111
De-watering Pumps	500	500	-	3	503
Collapsible Water Tanks	500	500	-	0	500
Water Filtration Plants	417	417	-	0	417
Generators	100	0	-	861	861

- b. NDMA has successfully completed the replenishment of its relief stocks, meeting the requirements set out in the revised Stocking Policy of 2023. This policy outlines the necessary stock levels for various relief items that NDMA must maintain to ensure effective disaster response and preparedness. The replenishment process ensures that NDMA is well-prepared to respond to emergencies and provide timely assistance to affected populations.
- c. Revised policy specifies the types and quantities of essential relief items, such as tents, blankets, generators, and other critical equipment. These items are intended to address the immediate needs of disaster-affected areas, providing support during the initial phases of relief operations.

17. A detailed summary is provided below, showing the specific items NDMA is required to stock under this policy. The table includes:

- a. **Planned Stock**. The target quantities for each relief item as outlined in the Stocking Policy 2023. These targets are based on anticipated needs during emergency.
- b. **Held Stock**. Current quantities of each item that are physically available in NDMA's warehouses. This reflects the readiness of NDMA to deploy these resources quickly during disasters.
- c. **Stock for International Relief Assistance**. A reserve of specific items earmarked for international assistance, should NDMA need to respond to regional crises or provide support to neighbouring countries in need. These reserves ensure that NDMA can extend its support beyond national borders when required.

18. By maintaining these stock levels, NDMA aims to ensure a rapid and coordinated response to emergencies, both within Pakistan and for international assistance efforts. Following the 2022 floods, NDMA revised its stocking policy for receiving foreign assistance. According to this policy, low-cost relief items will be sourced locally, while high-cost items such as aviation support, Bailey bridges, filtration plants, and OBM boats will be requested through foreign embassies in Pakistan and Pakistani missions abroad.

Disasters	Articles	Quantity from Countries or Equivalent Donation (in financial amount)						
		China	USA	EU	Turkiye	KSA	UAE	Total
1. Major Disasters (Affecting 0.5 Mn People and above) a. Floods b. Earthquake	Rescue							
	Aviation Support - Helicopters / Aircrafts (Rescue, logistics, fire fighting etc)	10	5	5	5	5	5	35
	Boats (OBM)	20	20	40	-	50	-	130
	Relief							
	Bailey Bridge (Equipment to Bridge)	20	20	10	-	10	4	64
	Field Hospital	5	5	1	2	2	-	15
	Water Purification Plant	10	-	10	-	5	5	30
	Water Filtration Plants	200	100	100	50	200	200	850
	De-Watering Pumps	200	100	200	50	50	40	640
	Generators	80	60	50	-	80	50	320
2. Medium Disasters (Affecting less than 0.5 Mn People) a. Floods b. Earthquake c. Tsunami	Rescue							
	Aviation Support - Helicopters / Aircrafts (Rescue, logistics, fire fighting etc)	5	3	3	3	3	3	20
	Boats (OBM)	10	10	20	-	25	-	65
	Relief							
	Bailey Bridge (Equipment to Bridge)	10	10	5	-	5	2	32
	Field Hospital	3	3	-	1	1	-	8
	Water Purification Plant	5	-	5	-	3	3	16
	Water Filtration Plants	100	50	50	25	100	100	425
	De-Watering Pumps	100	50	100	25	25	20	320
	Generators	40	30	25	-	40	25	160

19. **e-Calculator/ Relief Item Database.** Logistics Directorate, NDMA has developed an e-Logistics Calculator, a digital tool designed to collate national / provincial relief stock, perform need-gap analysis and define the responsibilities of all stakeholders involved in logistic relief operation during disaster. Portal facilitates a coordinated response by ensuring that no gaps in relief efforts are overlooked. It enables a real-time and data-driven approach to disaster management, ensuring that relief items are dispatched to areas in need as quickly and effectively as possible. Salient features of e-calculator are as follow:-

- Integration with EW System.** e-Logistics Calculator is directly linked with NDMA Tech EW risk calculator, which predicts the potential impact of a disaster and identifies the exposed population. Data of exposed population is picked up by e-Logistics Calculator.
- Defining the Type of Relief.** e-calculator can define disaster-specific requirement where user can input percentage of specific category of relief articles as per disaster.

- c. **Calculation of Relief Requirements.** Based on the type of disaster and the size of exposed population, e-Logistics Calculator determines the total need of essential relief items (camp, medical, food and equipment).
- d. **Stock Comparison with PDMA.** After defining the total need, e-calculator then checks the availability of relief items in the existing stocks of PDMA and evaluates whether the available stock can meet the demand for the affected population.
- e. **Identifying Gaps.** If a need gap exists between the calculated relief and the available stock at PDMA level, the e-Calculator flags it as a shortfall. Need gap is then further transferred to next level of respondents; NDMA, NGOs, UN or humanitarian bodies.

e-Logistics Needs R-15

Exposed Pop: 4,445,864 Affected Pop: 1,074,806
Province Name: Azad Kashmir Population: 1,074,806

District	Population	Affected Pop
Abbottabad	1,419,072	279,135
Batagram	554,133	187

Select Disaster Type: Earthquake
LOW MEDIUM HIGH

Articles	Disaster %
Camp Articles	50
Medical & Food	60
Equipments	30

Held Stocks - Need / Responsibility

Categories	Camp Articles				Medical & Food				Equipment		
	Family Tents	Tarpaulin	Blankets	Mattress	Medicines (EP)	Hygiene Kits	Food Items (EP)	WF Plants	Generators	Water Tanks	
Net Req	89567	89567	368903	368903	107481	107481	107481	369	64	332	
PDMA (15%)	392	749	193	392	0	0	0	0	95	0	
Gap	89567	88818	368710	368511	107481	107481	107481	369	0	332	
NDMA (15%)	114,093	9,838	403,386	356	0	0	0	417	269	861	
AMI Hub (15%)	0	0	28,980	0	0	0	0	0	0	0	
NGOs/UN (15%)	0	0	0	0	0	0	0	0	0	0	
IC (15%)	0	0	0	0	0	0	0	0	0	0	
Int Sec (15%)	0	0	0	0	0	0	0	0	0	0	
Total Gap (EP)	0	12491	0	368541	107481	107481	107481	0	0	0	

20. **e-Logistics Dashboard.** The NDMA e-log dashboard is designed to provide a real-time overview of logistics and stock management for disaster relief operations. It offers key insights into resource distribution, stock levels, and logistical requirements, helping to ensure efficient management of aid and supplies. Here's a general overview of its components:-

- a. **Summary Metrics.** Displays critical data, such as the total caseload, number of affected families, financial impact, and logistics requirements (e.g., transport effort in containers).
- b. **Resource Distribution.** Visualizes how resources like shelter and essential supplies are allocated across various regions. A donut chart indicates the quantities assigned to different areas, helping to track where aid is being sent.
- c. **Stocking Levels.** A bar graph outlines the percentage of stocked items against national targets, including supplies like tents, blankets, water filtration units, and life-

saving equipment. It highlights areas of surplus and potential shortages, allowing for quick adjustments.

- d. **Regional Caseload Management.** Focuses on managing resources for specific regions, using graphs to show how items are distributed and where critical needs may exist. This helps in prioritizing resource allocation for regions with higher demand.
- e. **Supply Gap Analysis.** Uses color-coded visuals to compare planned stock levels, donations, and current holdings for various items. This feature helps identify any gaps in supplies, enabling targeted relief efforts.
- f. **International Aid Tracking.** Tracks contributions from international sources, showing how external support is helping to fill resource gaps. It ensures transparency in how aid is being utilized to support relief operations.
- g. Overall, the dashboard provides a comprehensive, user-friendly interface for monitoring and managing disaster response efforts, enabling quick and informed decision-making for effective resource distribution.

21. **Palestine Relief Ops.** NDMA dispatched relief assistance to Palestine in response to the ongoing humanitarian crisis caused by conflicts and violence in the region. This aid was part of Pakistan's diplomatic efforts to stand in solidarity with Palestine. Pakistan has historically been a vocal advocate for Palestinian rights in international forums, and this relief effort accentuated that commitment. Summary of Relief effort in 2024 is projected in table below:-

Ser	Mode	Date	From	To
1 st	PAF (IL-78)	1 January 2024	Islamabad	Amman (Jordon)
2 nd	PAF (IL-78)	13 January 2024	Islamabad	Amman (Jordon)
3 rd	PAF (C-130)	4 February 2024	Islamabad	Al Arish (Egypt)
4 th	Chartered Flight	6 February 2024	Karachi	Amman (Jordon)
5 th	Ship Container	26 February 2024	Karachi	Port Said (Egypt)
6 th	Ship Container	22 April 2024	Karachi	Port Said (Egypt)
7 th	Ship Container	4 July 2024	Karachi	Aqaba (Jordon)
8 th	Chartered Flight	2 October 2024	Karachi	Amman (Jordon)

Ser	Mode	Date	From	To
9 th	Chartered Flight	26 October 2024	Islamabad	Amman (Jordan)

22. Details of NDMA's assistance to Palestine in 2024:-



23. **Relief Operations for Lebanon and Syria.** NDMA dispatched relief assistance to Lebanon and Syria in response to the ongoing humanitarian crisis fuelled by conflicts and violence in the region. This initiative was part of Pakistan's broader diplomatic efforts to demonstrate solidarity with Lebanon and Syria. As a longstanding advocate for human rights on international platforms, Pakistan underscored its commitment to humanitarian support through significant relief missions.



24. **Summary of Relief Effort.** Details of NDMA's assistance to Lebanon and Syria in 2024:-

Ser	Mode	Date	From	To
1 st	Chartered Flight (3T)	9 October 2024	Karachi	Damascus (Syria)
2 nd	Chartered Flight (100T)	17 October 2024	Karachi	Beirut (Lebanon)
3 rd	Chartered Flight (17T)	27 October 2024	Karachi	Beirut (Lebanon)

Ser	Mode	Date	From	To
4 th	NLC Road / Ship Convoy (140T)	27 October 2024	Islamabad	Beirut (Lebanon)
5 th	NLC Road Convoy (60T)	27 October 2024	Islamabad	Damascus (Syria)
6 th	Chartered Flight (17T)	29 October 24	Islamabad	Beirut (Lebanon)
7 th	Chartered Flight (95T)	29 October 2024	Islamabad	Beirut (Lebanon)
8 th	Chartered Flight (17T)	17 November 2024	Islamabad	Damascus (Syria)
9 th	Chartered Flight (17T)	19 November 2024	Islamabad	Damascus (Syria)
10 th	Chartered Flight (17T)	27 November 2024	Islamabad	Damascus (Syria)

25. Malaysia Relief Operation during Floods

- NDMA dispatched two consignments of 40 tons each to assist Malaysia during devastating floods. Relief included essential items like tents, blankets, quilts, sleeping bags, mats, and life jackets.
- Shipments, sent on December 8 and December 11, were received in Kuala Lumpur by Pakistan Embassy representatives and Malaysia's National Disaster Management Agency (NADMA). This timely aid supported thousands of displaced families, reflecting Pakistan's strong bilateral ties with Malaysia and its commitment to providing humanitarian assistance to friendly nations during crises.



26. Repatriation of Pakistanis from Syria

- In December 2024, NDMA orchestrated a successful evacuation of Pakistani nationals stranded in conflict-affected Syria. NDMA coordinated with the Ministry of Foreign Affairs and Pakistani embassies in Damascus and Beirut to facilitate the safe return of 448 Pakistanis.

- b. Evacuees were transported via a special chartered flight from Rafic Hariri International Airport in Beirut to Islamabad. Upon arrival, they were received by Federal Minister Ahsan Iqbal and NDMA Chairman at Islamabad International Airport. Special desks were established to assist the returnees with onward travel to their home destinations.



27. **Relief to Kurram.** In December 2024, NDMA launched an emergency relief operation in Parachinar, Kurram District. In coordination with the Ministry of Health and CMH, NDMA transported 1,000 kilograms of essential medicines via two helicopter flights from Islamabad. Additionally, critically ill patients, including an Indonesian national and her child, were evacuated for urgent medical treatment. This swift response underscores the NDMA's commitment to public health and citizen well-being during crises.



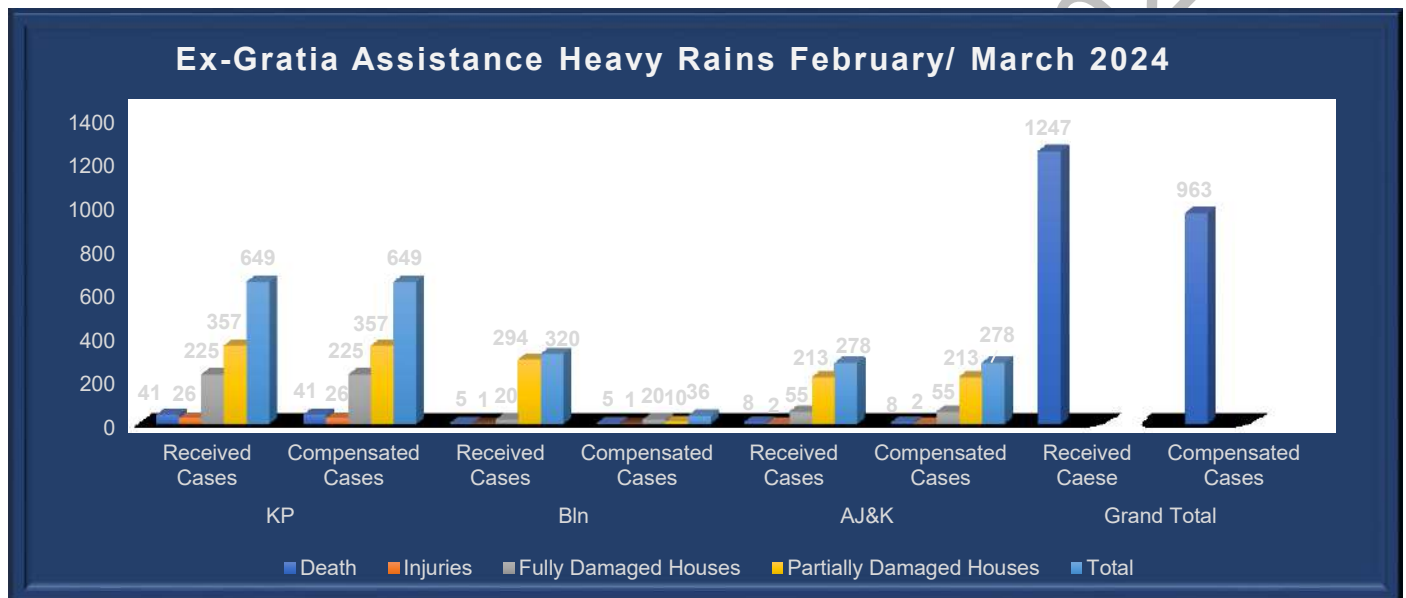
28. **Analysis.** NDMA has successfully completed the replenishment of its relief stocks in accordance with the revised **Stocking Policy of 2023**, which focuses on enhancing the country's disaster preparedness and ensuring an efficient, well-coordinated response. The revised policy outlines clear guidelines for maintaining appropriate stock levels, including items such as tents, medical kits, generators, and other essential disaster response materials.

29. **Lessons Learnt**

- a. **Importance of Pre-Positioning Relief Stocks.** Ensuring readiness for disasters, minimizing response delays and impact.
- b. **Local Sourcing for Efficiency.** Reducing external dependency, supports the local economy, and lowers logistical costs.
- c. **Targeted International Coordination.** Allocation of resources efficiently by sourcing low-cost items locally and high-cost items through diplomatic channels.

- d. **Data-Driven Decision Making.** e-Logistics Calculator improves real-time stock management and targeted disaster response.
- e. **Regional and International Solidarity.** NDMA's ability to mobilize resources not just for national needs but also for international aid (e.g., to Palestine, Malaysia) underscores the importance of global cooperation and humanitarian support

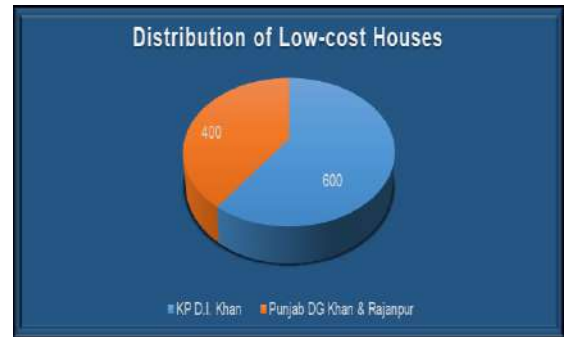
30. **Provision of Ex-Gratia Assistance - Heavy Rains.** During Heavy Rains Spell in February/ March 2024, in pursuance to directive issued by Honourable Prime Minister of Pakistan: **963** compensation cheques issued to the affected persons in Balochistan, Azad Jammu & Kashmir (AJ&K), and Khyber Pakhtunkhwa.



31. **Applications for Redressal of Grievance.** A total of **54** grievance applications were submitted by affected individuals. To ensure the prompt provision of relief and timely redressal of grievance NDMA referred these applications to concerned PDMAs, Federal and Provincial departments for necessary action as per policy/ rules.

32. **Humanitarian Assistance in Collaboration with KSrelief.** In coordination with the National Disaster Management Authority (NDMA), KSrelief undertook construction of 1,000 low-cost housing units, implemented rehabilitation projects, and distributed various relief items across Punjab, Khyber Pakhtunkhwa, Balochistan, Sindh, Azad Jammu & Kashmir, and Gilgit-Baltistan.

- a. **Construction of 1,000 Low-Cost Houses.** In collaboration with NDMA KSrelief undertook the construction of **1,000** low-cost housing units in flood-affected areas of Khyber Pakhtunkhwa and Punjab provinces as part of the recovery and rehabilitation efforts following the floods 2022. NDMA in coordination with PDMAs undertook the collection of beneficiary data for those affected by floods 2022. This comprehensive effort involved capturing GPS coordinates and photographic evidence of damaged houses to ensure data accuracy. Additionally, representatives from KSrelief conducted field surveys to assess the actual damage to houses and independently verified the beneficiary data, thereby ensuring its precision and reliability.
- b. **Rehabilitation Project.** In collaboration with NDMA KSrelief will facilitate the rehabilitation of **10** schools, **5** healthcare facilities, and **5** water supply systems in affected areas of floods-2022.
- c. **Non-Food Item (NFI) Shelter / Winter Kits Project.** NDMA coordinated with KSrelief and arranged **21,000** Shelter NFI & Winter Kits Project in Punjab, KP, Sindh, Balochistan, AJ&K and GB as per following details: -



Phase	Province	No. of NFI Kits
Phase I	Balochistan	5,000
	Khyber Pakhtunkhwa	4,000
Phase II	Balochistan	1,000
	Khyber Pakhtunkhwa	3,000
	Punjab	500
	Sindh	1,500
	Gilgit Baltistan	1,000
Phase III	Balochistan	1,000
	Khyber Pakhtunkhwa	1,000
	Punjab	1,000
	Sindh	1,000
	AJ&K	1,000
Total		21,000

- d. **Food Packages Project.** In continuation of food security project 2023-2024 KSrelief distributed 78,600 food packages across **35** districts of Pakistan in collaboration with NDMA. In second phase, 32,400 food packages were distributed to the districts facing challenges and natural disasters. In the third phase, 27,200 food packages were distributed, crucial for maintaining the momentum of the project and ensuring

consistent assistance to the affected populations. The final phase distributed 19,000 food packages, aimed at providing sustained relief and addressing needs in the most vulnerable districts. Each food package contains 97 kg weight.



- e. **Distribution of 500 Tons Dates.** KSrelief donated **500 tons** of Saudi dates to the NDMA. NDMA approached Pakistan Bait-ul-Mal and ensured distribution of donated **500 tons** Saudi dates among the most vulnerable and deserving individuals.



33. **Lessons Learnt Rehabilitation & Recovery Directorate**

- a. Receipt of incomplete cases with regard to requisite documents for verification.
- b. Slow/ unsatisfactory processing regarding queries on incomplete cases.
- c. Improper scrutiny of cases by DDMA's.
- d. Lack of awareness among public and gross root level to submit assistance claims.
- e. Limited food & non-food packs provided by KSrelief in phase wise manner.
- f. Departed response of stakeholders caused inordinate delay for resolution of grievances.

CHAPTER 7 – PLANS WING

1. **Programs and Activities.** In year 2024, the Plans Wing of NDMA was actively engaged in numerous programs, activities, conferences, SimEx and meetings. Here are some of the key programs and activities:-

a. **Coordination Meeting with Humanitarian Partners.** On 6th April, 2024, the NDMA organized its first joint initiative, bringing together stakeholders and humanitarian partners on a single platform. Main purpose of this meeting was to bridge the gap between government and non-government organizations and stakeholders. One of the key lessons learned from the 2022 flood was the requirement to enhance coordination mechanisms. This Joint initiative aimed at strengthening Pakistan's National Disaster preparedness. Overall, two sessions were held at the NEOC, NDMA, during which we successfully identified stockpiles, assessed preparedness for monsoon rainfall, and pinpointed gaps in the planning between government and humanitarian partners.



b. **Seminar on Disaster Resilient Pakistan.** Considering that Pakistan is significantly impacted by climate change and is ranked as the 5th most vulnerable country by the Global Climate Risk Index, the total damage caused by the floods is estimated at PKR 3.2 trillion (US\$14.9 billion), with the total loss amounting to PKR 3.3 trillion (US\$15.2 billion). Floods and droughts have become annual events in Pakistan, making it essential to recognize the significance of climate-resilient settlement planning and integrate climate change considerations into development projects. Furthermore, to effectively address situation, it is essential to bridge the gap between stakeholders, including humanitarian partners, government and non-government agencies, as well as individual and community-level contributors. This



critical scenario demands immediate action to implement both mitigation and adaptation strategies, ensuring national resilience.

- c. In line with this need, the NDMA organized a seminar titled "Disaster Resilient Pakistan" at NU-Tech University, Islamabad, on June 13, 2024. Seminar aimed to bring together experts, policymakers, and stakeholders from diverse sectors, including government, international and national organizations, UN agencies, development partners, practitioners, and academia, to strategize on enhancing disaster resilience in Pakistan.



- d. Purpose of the seminar was to bring together stakeholders and humanitarian partners on a unified platform to discuss the pressing issue of climate change and identify policy gaps both before and after disasters, facilitating proactive and informed decision-making, and encouraging comprehensive and meaningful discussions on climate resilience, emergency preparedness, community resilience, and anticipatory action.
- e. **Seminar on National Resilience Day.** On October 8th, 2024, the NDMA organized a seminar on National Resilience Day. The purpose of the seminar was not just to remember past hardships, but to recognize our collective efforts in strengthening disaster management systems, enhancing preparedness, and building a resilient future for generations to come. It served as a call to action for all of us to continue working towards a stronger, safer, and more self-sufficient Pakistan. The event brought together academia, humanitarian partners, government agencies, and UN organizations.
- f. **International Search and Rescue Advisory Group (INSARAG) Asia Pacific Meeting/ Conference.** The INSARAG is a leading humanitarian platform dedicated to enhancing global search and rescue operations through standardized guidelines and resources. In 2024, Pakistan had the honour of hosting the INSARAG Asia-Pacific Regional Meeting, which aimed to foster international dialogue, evaluate policy guidelines, and identify potential gaps in



existing frameworks to better align with INSARAG's mission in the region. Held in Islamabad from October 28-29, 2024, the in-person meeting brought together 64 international participants from 18 countries, alongside 133 representatives from national agencies and organizations in Pakistan. The event was organized with the support of the INSARAG Secretariat and hosted by NDMA.

- g. The primary objectives of the meeting were to review and strengthen regional disaster preparedness, governance structures, localization strategies, and partnerships. A key focus was on ensuring a flexible and responsive approach to natural disasters in the Asia-Pacific region. Participants also discussed the INSARAG Strategic Plan 2021-2026, assessing progress made in 2023 and identifying actions to advance the strategic goals in the coming years. Throughout the meeting, experts and INSARAG teams shared insights, proposed policy improvements, and addressed challenges within existing guidelines, providing valuable recommendations to enhance the effectiveness of disaster response efforts across the region.



2. **Projects and Meetings.** In 2024, the NDMA successfully secured projects with its committed partners. The Authority was able to sign Letters of Understanding (LoUs) with AKAH, GIZ, IRC, WFP, and extend the existing UN-Habitat project. Below are some of the key activities: -

- a. **NDMA and International Rescue Committee (IRC).** On April 16, 2024, NDMA formalized a mutual agreement with IRC to enhance disaster preparedness. The IRC provides vital support to people in Pakistan affected by floods, and other natural disasters, poverty and the COVID-19 pandemic, as a committed partner, NDMA aims to collaborate on strengthening community-based disaster risk management, developing best practices toolkits, and implementing capacity building initiatives.
- b. **NDMA and Aqa Khan Agency for Habitat Pakistan (AKAHP).** On 11th July, 2024, NDMA and AKAHP signed a LoU aimed at enhancing knowledge sharing and capacity building in DRR initiatives. It provides a framework for exchanging information and data

for Electronic Multi-Hazard Vulnerability and Risk Assessment (eMHVRA), collaborating on joint disaster risk management projects, advocating for DRR and climate change awareness, developing habitat policies and strategies, and enhancing the capacities of relevant departments through workshops and training. Partnership focuses on improving collaboration, pooling resources, and fostering resilient communities.

c. **Pakistan Monsoon Proactive Preparedness & Humanitarian Response Coordination Forum.**

For Proactive Disaster Preparedness in Pakistan, NDMA organized Pakistan Monsoon Proactive Preparedness & Humanitarian Response Coordination Forum at NDMA. Forum aimed to ensure a unified and effective response to potential monsoon-related disasters. Forum helped in identify the existing potential of humanitarian responders, relief stockpiles, emergency preparedness measures, community engagement initiatives through local trainings, awareness campaigns, and rehabilitation plans.



d. **Global Events.** NDMA successfully conducted numerous bilateral meetings to enhance mutual cooperation, foster stronger partnerships, and align efforts in disaster management. These meetings provided a platform for sharing best practices, discussing emerging challenges, and coordinating joint strategies with international stakeholders to strengthen disaster preparedness and response at a global level.

e. **Asia-Pacific Region of INSARAG at Geneva, Switzerland.** NDMA had the opportunity to chair the INSARAG Asia-Pacific informal meeting in Geneva, Switzerland, on May 6th, 2024, during the 10th Humanitarian Networks and Partnerships Week (HNPW). Outcomes of this event included global partnerships to organize joint sessions, exchange of experiences regarding disaster management, and mutual agreement on use of high-end technology in disaster management.



- f. **COP-29 & NDMA.** At the 29th COP-29 in Baku, Azerbaijan, NDMA participated and held a significant panel discussion on "From Policy to Practice: COP-29 and the Way Forward for Pakistan," emphasizing actionable strategies for mobilizing international climate finance and strengthening regional collaboration.



- g. **SimEx - Winter Freeze.** This year, four simulation exercises were conducted in accordance with the NDMA Disaster Calendar. The final exercise, focused on winter freeze, took place on December 6-7. Numerous participants from line departments, including PDMA Punjab, KP, Sindh, Balochistan, SDMA, GBDMA, as well as humanitarian partners from NGOs, UN agencies, and development partners, actively participated.



3. **Analysis and Lessons Learnt.** During 2024, NDMA made significant efforts in promoting Pakistan's disaster resilience, leading to improvements in disaster preparedness, response coordination, and international partnerships. A key achievement was the coordination meeting with humanitarian partners in April, which successfully brought together government and non-government stakeholders. This meeting underscored the importance of enhanced coordination in disaster response, particularly in light of the lessons learned from the 2022 floods. The "Disaster Resilient Pakistan" seminar in June provided a critical platform for experts, policymakers, and stakeholders to discuss climate change impacts and formulate strategies for strengthening disaster resilience. The proactive preparedness initiatives, notably the monsoon preparedness forum, demonstrated the importance of early action and community engagement in minimizing the impacts of seasonal disasters. NDMA's participation in global events like COP-29 reinforced its commitment to addressing climate change and strengthening disaster risk management frameworks on a global scale. Despite these achievements, challenges remain in ensuring continuous coordination, addressing resource gaps, and improving disaster response strategies at the local level. The year also highlighted the need for continued capacity building and stronger engagement with international partners to advance disaster resilience efforts. A key lesson from 2024 is the requirement for

adequate coordination mechanisms between government agencies, humanitarian organizations, and local actors through our existing channels and strategies:-

- a. There is a need to acknowledge seminars like "Disaster Resilient Pakistan." The more we work, the greater the chances of improving disaster resilience.
- b. Proactive initiatives, such as the Monsoon Preparedness Forum, have demonstrated that taking early action to assess resources, stockpiles, and response capacities is crucial.
- c. Participation in global forums like INSARAG and COP-29 highlighted the importance of international partnerships.

4. **Recommendations.** Adequate emphasis should be placed on improving coordination among stakeholders and humanitarian organizations. Regular SimEx, preparedness forums, and joint planning should become routine to ensure all stakeholders are well-prepared and equipped:-

- a. Building on the success of current capacity-building programs, it is essential to broaden these efforts to reach more local communities. Collaboration with NGOs, and other local partners will help ensure that disaster resilience practices are effectively implemented and sustained at the grassroots level.
- b. There should be more exposure visits and capacity-building workshops for HR to enhance skills and knowledge.
- c. The integration of advanced technologies in disaster management such as early warning systems, predictive tools, and digital mapping should be explored further and expanded. These technologies can improve situational awareness, accelerate response times, and optimize resource management during disasters.
- d. Disaster management plans should be developed by dedicated team members with clear timelines. This approach will ensure that the plans are grounded in sound scientific research and evidence.

CHAPTER 8 – REGIONAL AND MILITARY COLLABORATION & MEDIA (RM&M)

1. Comprehensive International Simulation Exercise (CISE)

- a. After the concept finalization and as per Chairman NDMA vision to conduct International Simulation exercises with Lead Disaster Management authorities both at global and regional level with friendly countries; a comprehensive concept note was prepared and shared with all friendly countries through Pakistan Defence Attaches (DAs) abroad as well as foreign Defence Attaches stationed in Pakistan.
- b. After extensive coordination and meetings both in person as well as virtual, the CISEs were started in 2024 by RM&M.
- c. First multi-lateral CISE was conducted on 5th June 2024 with participation of DAs from Japan, Oman, Nepal, Bangladesh and Jordan. It was conducted in person format on Hydro met hazards at NEOC NDMA.
- d. The first bi lateral CISE in Pakistan was conducted between NDMA Pakistan and AFAD Turkiye on 10th July 2024. Exercise comprised of 2 x scenarios i.e. Earthquake and Flooding. Stakeholders from different departments including Disaster Management Organizations / Authorities, related Government Ministries, Military Responders, Search & Rescue Organizations, Academia/ Think Tank, EW Technical Group, Disaster Management Media and Industry / Private sector participated in exercise.
- e. Next multilateral CISE was conducted on 10th September 2024 with NDRRMA Nepal and ICIMOD countries participants. Exercise spanned two days and conducted in person at NEOC NDMA. Participants from NDRRMA Nepal and ICIMOD countries gave their response and inputs on the given scenarios on GLOF hazard covering Hindu Kush Himalaya (HKH) region.
- f. Next multi-lateral CISE was conducted on 3 - 4 December 2024 between NDMA, Ministry of Emergency Situations Uzbekistan and Kazakhstan. Exercise was conducted on virtual mode and comprised of 2 x scenarios i.e. heavy snowfall and earthquake.
- g. **Analysis**
 - (1) CISE underscored the critical role of multi-stakeholder engagement in disaster mitigation and management. Scenario-based simulations offered an invaluable platform to test national response strategies, readiness levels, and inter-agency coordination. Both Pakistan and participating countries exchanged best practices, enhancing adaptability and refining contingency plans tailored to

cultural contexts. A key takeaway was the effectiveness of centralized planning with decentralized execution, enabling flexible, localized responses.

- (2) Exercises highlighted the strategic use of national assets during defined disaster phases, emphasizing the importance of measured and timely interventions. Additionally, CISE provided a practical template for public institution collaboration with disaster responders, ensuring a cohesive response framework.
- (3) CISE established regional level coordination on disaster management, refined proactive climate-related strategies, as prescribed by the early warnings for all initiative by UN-DRR and fulfilled obligations of the National Climate Policy (2021) and National Adaptation Plan (2023) that stress upon the implementation of Climate change adaptation measures.

2. **NDMA NEOC Capability Exposition through Bilateral Visits**

- a. **High level Delegations' Visits.** Another significant task of RM&M wing has been, conduct of various hi-level delegations from across the globe. During these visits avenues of mutual collaboration and coordination for effective disaster management and pro-active streamlined disaster risk reduction were discussed:-

Ser	Delegation / Visitor	Details
(1)	US Army, Commander CentCom	Maj Gen Charles Kemper, Commanding General-Task Force Spartan with 15 members
(2)	National Defence University	Led by Air Vice Marshal Amir Munir along with faculty & officers
(3)	German Capstone Course (DCC)	German delegation visit
(4)	Armed Forces Division Bangladesh	Lt. Gen. S M Kamrul Hassan with 12 members
(5)	Army Command and Staff College Nepal	Major General-led delegation with 25 members
(6)	17 th Round of Pak-Germany Staff Talks	Headed by Commander Markus Joachim Pedro Harder
(7)	Multiple Defence Attaches & Military Officials	Delegations from UAE, Iraq, Canada, Iran, US, Egypt, Türkiye, Germany, Italy, Sri Lanka, Malaysia, Indonesia, Turkmenistan, Switzerland, Philippines

Ser	Delegation / Visitor	Details
(8)	MoFA Visit	Altamash Wazeer from Ministry of Foreign Affairs (MoFA)
(9)	Defence Attaches from Jordan, UAE, Uzbekistan, Kazakhstan	Observing NEOC capabilities
(10)	Military Attache Oman & Qatar	Capt. (Navy) Mattar Salim Hamed Al-Yaqoobi, Staff Brig. Pilot Salem Hamad Almarri
(11)	DA Oman	Specific visit to NEOC
(12)	DA Australia	Capt. Andrew's visit
(13)	ACI Countries Delegation	Representatives from Indonesia, Malaysia, Brunei, Vietnam, Philippines, Myanmar, Thailand
(14)	Uzbek & Indonesian Delegation	Official visit for disaster management collaboration
(15)	Thai Defence Attache	Engagement with NDMA
(16)	Defence Attaches from KSA, France, Italy	Visit focused on disaster risk reduction
(17)	NDU, IPDS, Defence Attaches & Ambassadors	85 participants from different institutions
(18)	Designated Defence Attaches (Pakistan)	From France, Italy, and KSA
(19)	French Delegation	Defence Attache from Pakistan and France
(20)	German Armed Forces Delegation	Military representatives from Germany
(21)	Kazakhstan Military Delegation	Col. Khusaainov Olzhas Sagyndykovich with one member
(22)	National Security Workshop	26th batch including Senators, MPs, bureaucrats, diplomats, and military officials
(23)	KSA Delegation	Focused on disaster management cooperation
(24)	UK Naval Advisor	Commodore Jawad Haider Khawaja, designate Defence & Naval Advisor (Pakistan)

b. **Virtual & In-Person Meetings with Stakeholders**

Ser	Meeting With	Details
(1)	Turkish Embassy & AFAD Türkiye	Virtual meeting with Sefik Kolat, Counsellor of Interior
(2)	NEMA New Zealand	Virtual meeting on disaster management collaboration
(3)	Saudi Civil Defence	Col. Abdullah AlSaab chaired the meeting on emergency response
(4)	Additional Secretary (SCO)	In-person meeting with Mr. Marghoob Butt
(5)	Uzbek Ministry of Emergency Situations	Virtual discussion on mutual disaster preparedness
(6)	Kazakhstan Ministry of Emergency Situations	Virtual meeting regarding CISE
(7)	UNESCO Iran - RCECWA	Virtual meeting with Mr. Mambod Amini Hosseini on earthquake risk management

c. **Impact of Bilateral Cooperation on Disaster Management Mechanisms**

- (1) In 2024, bilateral visits and engagements for cooperation in disaster management played a vital role in refining Pakistan's disaster management mechanisms. NDMA Pakistan hosted delegations from friendly countries as of France, US, Uzbekistan, Bangladesh, Germany, US, UK, Nepal, Kazakhstan, Türkiye, Jordan, Oman.
- (2) Strengthened coordination mechanisms with disaster management counterparts of friendly Countries as that with AFAD Türkiye, NDRRMA Nepal, Ministry of Emergency Situations Uzbekistan and Kazakhstan were pivotal.

3. **Media Directorate Activities Report.** During 2024 Media Directorate remained actively engaged in disseminating timely information, promoting awareness, and ensuring effective risk communication through various platforms. Key accomplishments are as follows:-

- a. **Widespread Media Coverage.** A total of **188** media releases were issued throughout the year, covering NEOC projections, advisories, NDMA's operations, disaster response activities, international humanitarian assistance for Gaza, Syria & Lebanon as well as Malaysian floods, and major national events including INSARAG and visit of NEOC by notable dignitaries at NDMA HQs. Media directorate also conducted media coverage of COP29 at Baku.

- b. **Social Media Projection.** All press releases and major NDMA events were proactively shared across NDMA's official social media platforms, i.e. Facebook, LinkedIn and Instagram. Due to expeditious social media campaigns, the footprint of NDMA has increased up to **105 percent** enhancing risk communication during DM cycle.
- c. **Media Directorate Ensured**
- (1) Timely updates and real-time coverage of key events, visits, and field activities.
 - (2) Use of engaging content formats including infographics, videos, and reels to increase outreach and engagement.
 - (3) Substantial growth in follower base and audience interaction across platforms, strengthening NDMA's digital presence and visibility.
4. **Tender Notices & Advertisements.** **44** Tender Notices and advertisements were published in leading national newspapers to ensure transparency and wide outreach.
5. **Public Awareness Campaigns.** A comprehensive awareness campaign was launched in collaboration with PEMRA to promote the NDMA Disaster Alert App. The campaign resulted in **over 350 appearances** across different electronic media channels, significantly enhancing public awareness on disaster preparedness and early warning dissemination.
6. **Monthly Newsletters (NDMA Insights).** Last year, Media Directorate designed and publish 12 monthly newsletters to showcase our strategic engagements and key initiatives for information of our stakeholders.
7. **International Media Collaborations.** NDMA media wing is an integral and vital component of NDMA Pakistan's disaster management strategy, enabling the country to effectively communicate its challenges, efforts, and successes on a global stage. Through strategic collaborations, media engagement, and technological integration, the wing enhances the National Disaster Management Authority's (NDMA) ability to address disasters efficiently. Its role spans all phases of disaster management, including preparedness, response, and recovery, ensuring that Pakistan not only addresses immediate challenges but also builds long-term resilience against future crises.
8. **Monitoring Global Media.** The Global Media Watch of NDMA Media serves as monitoring mechanism to track global disaster trends, regional hazards, and climate narratives. Which tracks real-time global disasters, and analysis of international reporting on climate-related emergencies, enabling timely rebuttals, clarifications, and engagement which is being shared on NDMA website for global audience, NDMA leadership and relevant stakeholders.

9. **Strategic Collaborations.** Engaged all the global media present in Pakistan for awareness and EW. Served as a liaison and helped to co-produce a documentary and special reports on Pakistan's Green Climate Fund (GCF), and Disaster preparedness, that helped NDMA to amplify Pakistan's efforts at climate adaptation globally. International media BBC, VOA, DW, AP, Reuters and AFP highlighted NDMA news stories during monsoon. The documentary and special program prepared by Discover Pakistan became global face of NEOC. The wing also engaged International Media for their support for awareness through radio, TV, and social media channels to expand early warnings, awareness for communities at risk. The coverage of international risk reduction platforms and digital networks were also done that helped in contributing to the global policy discussions.
10. **Coverage Reports of Major International Disaster.** In 2024, the wing played a proactive role in monitoring major international disasters, including severe floods in Bangladesh and UAE, earthquakes in Japan, Afghanistan and China, and wildfires in Canada and other parts of Europe and North America. Through its International Media Wing, NDMA closely tracked global disaster events to assess potential regional impacts, support diplomatic coordination, and draw lessons for Pakistan's preparedness strategies. By analyzing international responses and integrating global insights into national planning, we strengthened its situational awareness and readiness posture, ensuring that Pakistan remains aligned with global best practices in disaster risk management.
11. **Global Media Engagement at COP & International Forums.** NDMA's role and climate stance were promulgated in global discussions through multiple forums and conferences. Facilitated news coverage and background briefings and side-line interviews with international outlets such as BBC, Reuters, VOA and Deutsche, highlighting Pakistan's needs and innovations in climate resilience.
12. **Countering Misinformation.** By partnering with international media forums like Al Jazeera Media Initiatives, the wing ensured that accurate, fact-checked information is delivered.

CHAPTER 9 – INTERNATIONAL COLLABORATION (IC) WING

1. Diplomatic Visits and Meetings

- a. **Mauritian High Commissioner (11 January)**. Strengthened ties in disaster response and collaboration.
- b. **Director of KSrelief, Pakistan Chapter (23 January)**. Discussed NDMA's solarization project.
- c. **Kuwaiti Ambassador (24 January)**. Enhanced cooperation in disaster management.
- d. **Ambassadors from Azerbaijan, Japan, South Korea, Germany, Nepal, Switzerland (February)**. Focused on disaster risk reduction and knowledge sharing.
- e. **Turkish Ambassador (28 March)**: Shared Turkey's earthquake preparedness expertise.
- f. **Australian High Commissioner (May)**. Emphasized joint training programs in disaster resilience.
- g. **USIP Country Director Imran Khan (29 May)**. Discussed NDMA projects.
- h. **Bosnian Ambassador and Nigerian Delegation (27 June)**. Explored operational capabilities and cooperation in disaster response.
- i. **Delegations from Qatar and Oman (July)**. Discussed regional disaster management strategies.
- j. **ASEAN Heads of Missions (9 August)**. Strengthened Southeast Asia's collective disaster response strategies.
- k. **Commonwealth Heads of Missions (6 December)**. Enhanced regional disaster management cooperation.

2. Federal Ministries Engagements

- a. **Federal Secretaries Visit to NEOC (2 January)**. Reviewed disaster response capabilities.
- b. **Meetings with Federal Ministries (January - August)**. Collaborated with EAD, Planning & Development, Law & Justice, Foreign Affairs, and Climate Change ministries on various projects, including solarization proposals and legislative support for disaster management initiatives.
- c. **Senate Chairman and Standing Committee Visit (20 November)**. Emphasized legislative backing for NDMA initiatives.

- d. **IT Minister's Visit (11 December)**. Discussed AI-based solutions for disaster management.

3. **Virtual Meetings**

- a. **Pak Diaspora Engagement with Prof. Zulfiqar Bhutta (January)**. Leveraged diaspora expertise for disaster management improvements.
- b. **Follow-ups on Equipment Requirements (February - March)**. Shared NEOC concept papers with Pakistani missions globally to address equipment needs.
- c. **Qatar Civil Defense Meeting (30 April)**. Focused on resource sharing and technical delegation visits to NDMA.
- d. **Ambassadors' Virtual Meetings (June – July)**. Discussed weather projections, disaster preparedness, and high-end equipment requirements with ambassadors in various zones.
- e. **Humanitarian Relief Coordination for Gaza and Lebanon (October)**. Planned relief efforts for war-affected populations in collaboration with Pakistani Ambassadors in Syria, Jordan, Lebanon, and Egypt.
- f. Key Outcomes.
- g. Strengthened international partnerships in disaster risk reduction.
- h. Advanced collaboration with federal ministries on strategic projects.
- i. Enhanced regional coordination for humanitarian relief efforts.
- j. Promoted technology-driven solutions for effective disaster management.

CHAPTER 10 – ADMINISTRATION & FINANCE (A&F) WING

Functions of Administration & Finance Wing (A&F). In order to carry out the assigned tasks / functions, A&F Wing is performing following tasks:-

- a. Management of all Administrative matters of NDMA.
- b. Provide complete administrative support to NDMA Response Wings.
- c. Order, Procure, Transport and keep record of relief goods.
- d. Management of all Finance and Audit matters.
- e. Court / Legislative and Parliament related matters.
- f. Conduct of National Disaster Management Commission meetings.

CHAPTER 11 – ESTABLISHMENT WING

1. **Functions of Establishment Wing.** In order to carry out the assigned tasks / functions, Establishment Wing is to ensure:-

- a. Provision of Human Resources for all the Wings of NDMA with impartiality depending upon merit.
- b. Comprehensive security and maintenance of the NDMA Complex.
- c. Provision of Motor Transport for all events as and when required through regular maintenance and servicing.

2. Following major events / tasks conducted by the Wing for the reporting year:-

- a. Provision of security for all high profiles visits and routine security of NDMA complex.
- b. Finalization of disbandment of Earthquake Reconstruction & Rehabilitation Authority (ERRA) and adjustment of Human Resources of ERRA.
- c. Project officers reassigned per expertise within sections of NDMA.
- d. Finalized New HR Policy for NDMA.
- e. New approved vacancies filled through adopting modern human resource hiring techniques.

CONCLUSION

1. In 2024, NDMA of Pakistan played a pivotal role in delivering timely and impactful humanitarian assistance across a range of crises, both domestically and internationally. The organization's efforts underscored Pakistan's unwavering commitment to addressing human suffering and promoting solidarity during challenging times.
2. NDMA's support for Palestinian refugees and humanitarian relief in Lebanon and Syria highlighted its role as a global advocate for justice and compassion in conflict zones. The relief dispatches during Malaysia's devastating floods and the swift evacuation of Pakistani nationals stranded in Syria demonstrated NDMA's capacity for international coordination and crisis response. Domestically, its rapid intervention in Parachinar, where tribal clashes caused significant casualties, reaffirmed its dedication to safeguarding citizens in distress.
3. Recovery and rehabilitation efforts of 2024 showcase NDMA's effective and proactive approach in managing disaster through prompt Ex-gratia assistance and relief distribution in coordination with stakeholders. Significant achievements in housing construction, infrastructure rehabilitation, and aid provision reflect the commitment and coordinated efforts of NDMA. Lessons learned and forward-looking recommendations will further strengthen future recovery efforts, ensuring greater efficiency, resilience, and support for disaster-affected communities.
4. The multiple engagements with Global & Regional DM authorities as well as with Military components of friendly countries in 2024 have significantly promulgated the stance of Pakistan in General and NDMA in particular in the comity of nations in the field of proactive Disaster Management. The Pakistan's disaster management framework has been highly appreciated by Global bodies and has intrinsically helped in fostering transboundary collaboration and joint response mechanism formulation.
5. These diverse operations not only alleviated suffering but also reflected NDMA's organizational efficiency, strategic collaboration with national and international stakeholders, and alignment with Pakistan's diplomatic values. By addressing crises with professionalism and empathy, NDMA cemented its position as a cornerstone of Pakistan's humanitarian and disaster management framework, showcasing Pakistan's readiness to assist the global and local community in times of need.