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

2026 NATIONAL DISASTER RESPONSE PLAN

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ACRONYM

Acronym	Full Form
A&F	Administration and Finance
AAR	After Action Review
AAs	Anticipatory Actions
ADB	Asian Development Bank
ADP	Annual Development Program
AJ&K	Azad Jammu and Kashmir
AWS	Alert and Warning System
BBB	Build Back Better
BCP	Building Code of Pakistan
C2DM	Climate Change and Disaster Management
CAP	Common Alerting Protocol
CBDMC	Community-Based Disaster Management Committees
CBDRM	Community-Based Disaster Risk Management
CBEW	Cell Broadcast Early Warning
CBPF	Country-Based Pooled Funds
CDA	Capital Development Authority
CERT	Community Emergency Response Team
CISE	Comprehensive International Simulation Exercise
CoE	Centre of Excellence
CPR	Cardiopulmonary Resuscitation
CRI	Climate Risk Index
CSEB	Compressed Stabilized Earth Blocks
DATs	Disaster Action Teams
DCP	Disaster Contingency Plan
DCP	Donor Coordination Platform
DDMAs	District Disaster Management Authorities
DDMP	District Disaster Management Plans
DEAP	Disaster and Emergency Assistance Policy
DEOC	District Emergency Operations Centre
DM	Disaster Management
DMCF	Disaster Management Coordination Forum
DNA	Damage and Needs Assessment
DRF	Disaster Risk Financing
DRM	Disaster Risk Management
DRR	Disaster Risk Reduction
EAD	Economic Affairs Division
EAP	Early Action Protocol
EDO	Executive District Officer
EOC	Emergency Operations Centre
ERF	Emergency Response Framework
ERRA	Earthquake Reconstruction and Rehabilitation Authority
ESG	Environmental, Social and Governance
EWS	Early Warning System
FFC	Federal Flood Commission
FPA	Framework Partnership Agreements
FSX	Full-Scale Exercise

Acronym	Full Form
GB	Gilgit Baltistan
GBV	Gender-Based Violence
GCC	Gender and Community Cell
GCF	Green Climate Fund
GCOP	Global Common Operating Picture
GIS	Geographic logical Information Systems
GLOFs	Glacial Lake Outburst Floods
GoP	Government of Pakistan
GSP	Geological Survey of Pakistan
HAZMAT	Hazardous Materials
IA&PD	Infrastructure Advisory and Project Development
IASC	Inter-Agency Standing Committee
IC	International Collaboration
ICIMOD	International Centre for Integrated Mountain Development
ICS	Incident Command System
ICT	Islamabad Capital Territory
IDSR	Integrated Disease Surveillance and Response
IFIs	International Financial Institutions
INGO	International Non-Governmental Organization
INSARAG	International Search and Rescue Advisory Group
IPCC	Intergovernmental Panel on Climate Change
KP	Khyber Pakhtunkhwa
LEAs	Law Enforcement Agencies
LHWs	Lady Health Workers
LoA	Letter of Agreement
MEL	Monitoring, Evaluation and Learning
MHEWS	Multi-Hazard Early Warning Systems
MoF	Ministry of Finance
MoFA	Ministry of Foreign Affairs
MoUs	Memorandum of Understandings
NAVTTC	National Vocational and Technical Training Commission
NCF-AA	National Coordination Forum on Anticipatory Action
NCOP	National Common Operating Picture
NDF	National Development Framework
NDM Act 2010	National Disaster Management Act 2010
NDMA	National Disaster Management Authority
NDMF	National Disaster Management Fund
NDMP	National Disaster Management Plan
NDRP	National Disaster Response Plan
NDRRS	National Disaster Risk Reduction Strategy
NEOC	National Emergency Operations Centre
NFI	Non-Food Items
NGOs	Non-Governmental Organizations
NIDM	National Institute of Disaster Management
NIH	National Institutes of Health
NR	National Resource

Acronym	Full Form
NSPU	National Situation and Progress Update
Ops	Operations
PCF	Provincial Contingency Funds
PCIW	Pakistan Commissioner for Indus Waters
PCRWR	Pakistan Council of Research in Water Resources
PDMA	Provincial Disaster Management Authority
PDNA	Post-Disaster Needs Assessment
PEOC	Provincial Emergency Operations Centre
PMD	Pakistan Meteorological Department
PMO	Prime Minister Office
PPE	Personal Protective Equipment
PSDP	Public Sector Development program
PSS	Psychosocial Support
PWDs	Persons with Disabilities
RF	Risk Finance
RMC	Regional and Military Collaboration
RNA	Rapid Needs Assessment
RRO	Rapid Response Option
SAR	Search and Rescue
SCBA	Self-Contained Breathing Apparatus
SDGs	Sustainable Development Goals
SEZ	Special Economic Zone
SIMEX	Simulation Exercise
SLA	Service Level Agreement
SME	Small and Medium Size Enterprises
SOP	Standard Operating Procedure
Tech-EW	Technical Early Warning
TEVTA	Technical Education and Vocational Training Authority
TTX	Tabletop Exercise
UEAI	United Emergency Alert Interface
UN	United Nations
UNDP	United Nations Development programme
UNDRR	United Nations Office for Disaster Risk Reduction
UNICEF	United Nations Children's Fund
UNOCHA	United Nations Office for the Coordination of Humanitarian Affairs
UNRC	United Nations Resident Coordinator
USAR	Urban Search and Rescue
VDMC	Village Disaster Management Committee
VRC	Village Reconstruction Committees
WASH	Water, Sanitation and Hygiene
WHO	World Health Organization
WMO	World Meteorological Organization

INTRODUCTION

1. **Purpose**. National Disaster Response Plan (NDRP) 2026 is framed to provide a comprehensive, coordinated and scalable framework for disaster response across Pakistan. It serves as a blueprint for national and regional authorities, humanitarian partners, private sector and civil society to work in concert in mitigating losses, protecting lives and livelihoods and driving resilient recovery in the face of natural and human-induced hazards.

2. **Vision, Mission and Objectives**

   a. **Vision**. Developing shared templates of proactive disaster management deliverances, driven from archived experiences and optimal utility of Early Warning Technology Infrastructures, seeking maximized reduction in disaster impacts, for all hazard contingencies encompassing national geographical zones, seeking greater national spectrums resilience.

   b. **Mission**. To design unified national disaster response embedded with validated early warning capacities, robust national preparedness, well-rehearsed mobilization of resources, effective inter-agency coordination and community-focused actions.

   c. **Objectives**

      (1) Strengthen institutional capacity and governance for disaster response.

      (2) Enhance Early Warning Systems (EWS) and community preparedness.

      (3) Facilitate timely, efficient and accountable response operations.

      (4) Mainstream risk-informed recovery and reconstruction.

      (5) Mobilize sustainable financing and resources for Disaster Risk Reduction (DRR) and response.

      (6) Establish a robust system for monitoring, evaluation and learning.

      (7) Early recovery and Build Back Better (BBB).

3. **Scope and Applicability**. NDRP 2026 applies to:-

   a. All tiers of Government (National, Provincial, District, Local).

   b. All hazards (Natural, climate-induced, technological, biological, chemical and human induced).

   c. Response phases (Activation to recovery).

   d. Stakeholders (Government agencies, Non-Governmental Organizations (NGOs), International Non-Governmental Organizations (INGOs), civil society, national resource, communities).

   e. Entire Pakistan geographic coverage (specific hazard for regional risk profile).

EXECUTIVE SUMMARY

NDRP 2026 articulates Pakistan's operational framework to prepare for, respond to and recover from disasters in an increasingly complex and climate-vulnerable future. Recognizing escalating hazard profiles; from intensifying floods, earthquakes and Glacial Lake Outburst Floods (GLOFs) to heatwaves, cyclones and drought. This plan sets forth a coordinated, multi-level, proactive approach that employs Disaster Risk Reduction (DRR) techniques. Plan strengthens institutional capacity, integrates risk financing and leverages community resilience.

NDRP 2026 outlines robust governance mechanisms anchored in the National Disaster Management Authority (NDMA), Provincial Disaster Management Authorities (PDMAs), District Disaster Management Authorities (DDMAs) and local responders. It emphasizes a scalable Incident Command System, advanced early warning and an integrated resource mobilization strategy including the National Disaster Management Fund (NDMF).

Importantly, NDRP 2026 places "BBB" at the heart of recovery, ensuring that reconstruction drives resilience not just restoration. Monitoring, evaluation and continuous learning frameworks will institutionalize after-action reviews, lessons learned and improvements. Through strategic financing, public-private partnerships and alignment with national development and climate change goals, this plan aims to significantly reduce disaster losses, safeguard communities and build a safer, more resilient Pakistan.

CHAPTER – 1

NATIONAL DISASTER RISK CONTEXT

1. **Hazard Profile**. Pakistan's geography, climate stressors and socio-economic change make it particularly susceptible to a wide spectrum of hazards. These include hydro-meteorological, geological, climate or human induced, industrial, anthropogenic and emerging risks. The following comprehensive profile integrates all major hazards affecting Pakistan:-

a. Hydro-meteorological hazards stem from weather and hydro-related events and remain the most frequent and devastating in Pakistan:-

(1) **Floods**

(a) **Riverine Floods**. Triggered by heavy monsoon rains in Pakistan and upstream regions across the border, river overflow, dam releases and climate driven rainfall anomalies. Notable recent historical floods of 2010, 2022 and 2025, caused significant loss of lives, massive displacement, infrastructure damage and agricultural losses.

(b) **Flash Floods/ Hill Torrents**. Common in hilly areas of Khyber Pakhtunkhwa (KP), Gilgit Baltistan (GB) and Azad Jammu and Kashmir (AJ&K) where intense, localized rainfall generates hill torrents, often affecting small communities with minimal warning. They also augment floods by contributing to the river flows.

(c) **Urban Flooding**. Rapid urbanization, encroachments on natural drains and inadequate drainage in major cities cause waterlogging and localized flooding during monsoon storms.

(d) **Mudflows**. Occur in mountainous and semi-mountainous regions following intense rainfall or snowmelt, causing loss of lives, damaging infrastructure and blocking roads.

(e) **Cloudbursts**. Sudden extreme rainfall events, increasingly observed in Northern regions, trigger flash flooding, landslides and localized devastation.

(2) **Monsoon Variability**. Pakistan experiences erratic monsoon patterns, influenced by global climate anomalies. Alternating periods of drought and excessive rainfall, intensified by climate change has increased flood and drought risks.

(3) **Droughts**. Prolonged dry spells in Southern Punjab, Sindh and Balochistan impact water availability, crop production and livestock.

Drought risks are exacerbated by over-extraction of groundwater and unsustainable irrigation practices.

(4) **GLOFs**. Northern mountainous regions (GB, KP) host thousands of glacial lakes. Rising temperatures accelerate glacier melt, increasing the risk of sudden lake breaches that can devastate downstream communities.

(5) **Heatwaves**. Extreme summer heat in Sindh, Balochistan, Southern Punjab and major urban centres is increasing in duration and intensity, causing heatstroke, energy shortages and significant public health challenges.

(6) **Water Stress**. Rapid population growth, declining groundwater tables, reduced river flows and inefficient water governance contribute to widespread water scarcity across Pakistan.

b. Pakistan's tectonic setting along the convergent boundary of the Indian and Eurasian plates exposes it to frequent geological hazards:-

(1) **Earthquakes**. Northern and Western Pakistan, including Kashmir, KP and Balochistan, are seismically active zones. Earthquakes like the 2005 Kashmir and 2013 Balochistan caused significant casualties, infrastructure damage and secondary hazards like landslides.

(2) **Landslides**. Mountainous regions, particularly along the Karakoram, Hindu Kush and Himalayan foothills are prone to landslides triggered by earthquakes, heavy rains or anthropogenic activities like road construction. Landslides frequently blocked rivers and roads, isolating communities.

(3) **Avalanches**. Northern high-altitude areas (GB, AJ&K, KP) experience avalanches, particularly during extreme seasons or sudden snowstorms, threatening remote communities, mountaineers and transport routes.

(4) **Tsunamis**. Coastal areas along Makran Subduction Zone (Balochistan, Sindh) are vulnerable to tsunamis generated by undersea earthquakes.

(5) **Seismic Activity and Land Shifts**. Continuous tectonic movement contributes to land deformations, subsidence, slope instability and land shifts in vulnerable mountainous terrain.

(6) **Snow Contingencies**. Extreme cold, Heavy snowfall in GB, KP, and AJ&K frequently blocks passes, disrupts transport, affects livelihoods and increases risk of snow related accidents.

c. Climate and Emerging Hazards are linked to climate change and environmental shifts, increasingly affecting Pakistan:-

(1) **Accelerated Glacier Melt**. Pakistan has over 7,000 glaciers mainly in GB and Northern KP. Rapid melting affects river flows, water availability and hydroelectric generation while increasing GLOF risks.

(2) **Sea-Level Rise and Cyclones**. Coastal Sindh and Balochistan are vulnerable to sea-level rise, storm surges and cyclones originating in the Arabian Sea. Cyclone like Yemyin (2007) caused flooding, coastal erosion and human casualties.

(3) **Smog**. Urban centres experience severe winter smog due to vehicle emissions, industrial pollution, crop burning and weather inversions, impacting public health and transportation.

(4) **Pollution (Air, Water, Soil)**. Industrial effluents, urban waste, agricultural chemicals and maritime pollution degrade ecosystems, contaminate water sources and threaten human and environmental health.

(5) **Unpredictably Erratic Global Climate Patterns**. Global climate oscillations increasingly influence Pakistan's temperature, rainfall and seasonal cycles, heightening uncertainty in agriculture, water management and disaster preparedness.

d. Industrialization and urban growth contribute to anthropogenic hazards:-

(1) **Industrial Accidents and Chemical Spills**. Industrial hubs such as Karachi, Faisalabad and Hub etc. are prone to chemical leaks, explosions and hazardous material incidents. Limited enforcement of safety regulations magnifies these risks.

(2) **Transport and Infrastructure Risks**. Industrial corridors, oil pipelines and urban transport systems are susceptible to human error, negligence, or sabotage potentially causing large-scale emergencies. Crashes including air crashes, train accidents, road pileups and maritime accidents pose major risks to human life.

(3) **Maritime Disasters**. Coastal areas and port operations face risks of shipwrecks, vessel collisions, port accidents, offshore structural failures and hazardous cargo incidents.

(4) **Oil Spills**. Ports, shipping lanes and coastal industries are vulnerable to oil spills, affecting marine life, coastal communities and fisheries.

(5) **Fires**. Industrial, commercial and urban areas face risks from electrical faults, industrial mishandling, gas leakages, forest fires and settlement fires which are often exacerbated by poor safety compliance.

(6) **Encroachments**. Encroachments on riverbeds, drainage channels, natural waterways, forests and coastal belts increase exposure to floods, urban heat, biodiversity loss and environmental degradation.

(7) **Food Security**. Rising population, climatic shocks, water scarcity, soil degradation, supply-chain disruption, locust plague and global market volatility threaten long-term national food security.

(8) **Population Bulge**. Rapid demographic growth strains housing, health, education, employment, water supply and waste systems which intensify vulnerability to multiple hazards.

(9) **Biological Hazards, Health Emergencies and Epidemics/ Pandemic**. Public health emergencies, sudden unexpected increase in number of a disease cases with in country. Outbreaks of communicable diseases (e.g. Dengue, COVID-19) can escalate into public health emergencies particularly in urban centres with high population density/ poor sanitation.

2. **Exposure and Vulnerability Assessment**

a. **Population Pressure and Diverse Terrains**. Pakistan population exceeding 241 million presents unique challenges for Disaster Risk Management (DRM). Population is unevenly distributed across highly diverse terrains from the densely populated plains of Punjab and Sindh to the rugged mountains of GB, AJ&K and Northern KP. This diversity increases exposure to hazards such as floods, landslides, snow avalanches and urban disasters. High-density urban centres like Karachi and Lahore face compounded risks due to congestion, informal settlements, air quality and inadequate drainage infrastructure.

b. **Vulnerable Settlements and Infrastructure Deficits**. Many communities reside in flood-prone plains, encroachments along water ways, poorly planned urban areas or remote mountainous regions where resilient infrastructure is limited. In urban slums and informal settlements housing is often substandard with inadequate drainage and limited access to essential services making these populations particularly susceptible to flash floods and waterborne diseases. In mountainous and rural areas, landslide and glacier-related hazards are exacerbated by limited connectivity and insufficient structural mitigation.

c. **Institutional Vulnerabilities**. Disaster management institutions in Pakistan face challenges in extending early warning coverage to remote areas. Although the

National Emergency Operations Centre (NEOC), Pakistan Meteorological Department (PMD) and other agencies maintain monitoring networks, gaps persist in real-time dissemination of alerts to communities in mountainous or far-flung regions. Coordination between federal, provincial and district disaster management authorities require improvement, delaying emergency response and resource mobilization. The lack of standardized multi-hazard early warning protocols and inconsistent activation of response triggers further increases institutional vulnerability.

d. **Socio-Economic Factors Amplifying Risk**. Poverty, income inequality, limited access to education, healthcare and emergency resources compound vulnerability. Poor households often reside in hazard-prone areas because land there is cheaper and they may lack savings to recover from disasters. Marginalized communities are disproportionately affected by floods, smog, cold waves and other hazards and often have limited access to information, mobility and healthcare services. This socio-economic stratification amplifies the human and economic impact of disasters.

3. **Emerging Risks and Climate Change Trends**

a. **Pakistan's Vulnerability - Global Climate Risk Index (CRI) 2025**. CRI 2025 identifies Pakistan as one of the countries most exposed to climate-related hazards. Frequent extreme weather events ranging from floods and heatwaves to droughts have intensified economic and social vulnerabilities. Pakistan's geographical diversity from the low-lying Indus delta to the high-altitude Himalayas exposes communities to multi-hazard risks. Historical data indicate that climate-related disasters have caused significant loss of life, disrupted livelihoods and imposed substantial financial burdens on both national and local economies. CRI underscores the urgent need for adaptive strategies, climate-resilient infrastructure and risk-informed development planning.

b. **Increasing GLOF Risks**. Pakistan's Northern regions, particularly GB and parts of KP are witnessing an alarming increase in glacial lake formation due to accelerated glacier melt. Rising temperatures have destabilized moraine-dammed lakes, increasing the likelihood of sudden breaches. GLOFs pose immediate threats to downstream settlements, hydroelectric infrastructure and vital road networks such as the Karakoram Highway. Monitoring glacial lakes through remote sensing and in-situ hydrological stations is crucial along with early-warning systems to protect vulnerable communities. Lessons from past

events like 2025 Taalidass, Ghizer Lake and 2010 Attabad Lake Disaster highlight the need for proactive mitigation measures.

c. **Erratic Monsoons and Shifting Precipitation Patterns**. Pakistan's monsoon system has become increasingly unpredictable. Early onset, uneven distribution of rainfall, cloudbursts, hailstorms and intense downpours are now common resulting in localized flash floods, cloud burst, mud flow, riverine flooding and soil erosion. At the same time prolonged dry spells and longer heatwaves in Southern and Central Pakistan are exacerbating water scarcity reducing agricultural productivity and increasing energy demands. Climate projections suggest that monsoon variability will continue to intensify necessitating adaptive water resource management, dynamic reservoir operations and resilient agricultural practices.

d. **Sea Intrusion and Coastal Salinization**. Rising sea levels along Pakistan's 1,050 km coastal belt are compounding flood risk in low-lying areas, particularly in Southern Sindh and Balochistan. Saltwater intrusion into freshwater aquifers is degrading arable land and threatening livelihoods dependent on agriculture and aquaculture. Cities such as Karachi, Gwadar and Thatta face increased vulnerability to tidal surges and cyclonic activity amplified by poor drainage infrastructure and rapid urbanization. Integrated coastal zone management, mangrove restoration and improved storm-surge early-warning mechanisms are critical for mitigating these threats.

4. **Risk Scenarios**

a. **Baseline Scenario**

(1) **Description**. Continuation of current trends with moderate seasonal flooding, periodic heatwaves and manageable disaster impacts.

(2) **Key Features**

(a) **Hydro-Meteorological Trends**. Seasonal floods continue along Pakistan's rivers, but generally within controlled thresholds. NEOC, PMD and WAPDA data indicate peak flows rarely exceed the design capacity of headworks and dams.

(b) **Glacial Behaviour**. Minimal GLOF activity with only isolated small-scale events in Northern Pakistan.

(c) **Heatwaves**. Occasional heatwaves in Sindh and Southern Punjab causing localized health stress but manageable by provincial health departments.

(d) **Operational Response**. NEOC and Provincial Emergency Operations Centres (PEOCs) and Incident Command System (ICS) systems can respond effectively using current infrastructure. Community alert systems, SMS warnings and siren networks are sufficed for dissemination.

(e) **Impact on Population**. Localized displacement in flood-prone districts, minor road/ infrastructure disruptions and limited health emergencies.

(f) **Preparedness Focus**. Maintain baseline monitoring, early warning dissemination and routine disaster management exercises. Strengthen minor flood defences in urban and peri-urban areas.

b. **Medium Scenario**

(1) **Description**. Increased monsoon variability, more frequent flash floods and moderate GLOFs leading to heightened disaster risks.

(2) **Key Features**

(a) **Monsoon Variability**. Rainfall intensity becomes more erratic; sudden heavy downpours in Punjab, KP, AJ&K and GB trigger flash floods and localized urban flooding.

(b) **Glacial Hazards**. Moderate GLOFs from lakes in GB, KP threaten downstream communities due to which EWS become critical.

(c) **Compound Events**. Simultaneous minor floods in different provinces strain local response units, requiring inter-provincial coordination.

(d) **Operational Response**

i. NEOC/ PEOCs activation becomes more frequent.

ii. Provincial and district disaster management authorities require surge capacity for temporary shelters, food and health services.

iii. Evacuation plans and flood-resistant community structures need reinforcement.

(e) **Impact on Population**. Thousands displaced temporarily; crop and livestock losses increase; health services under moderate stress due to waterborne diseases and heat stress.

(f) **Preparedness Focus**. Expand meteorological and hydrological monitoring; strengthen community alert dissemination, pre-position relief stocks; define response triggers for ICS activation.

c. **Worst-Case Scenario**

(1) **Description**. Major glacial outbursts, catastrophic monsoon floods and simultaneous multi-hazard events across provinces, overwhelming existing response capacity.

(2) **Key Features**

(a) **Glacial and Hydro Risks**. Massive GLOFs in Northern KP, GB and AJ&K, breaching downstream dams and levees. Major rivers exceed flood design thresholds causing large-scale inundation.

(b) **Monsoon Catastrophe**. Prolonged heavy rains lead to simultaneous floods in Sindh, Punjab, KP and Balochistan. Urban flooding in major cities, compounds disaster impact.

(c) **Compound Multi-Hazards**. Landslides in Northern mountainous regions, infrastructure collapse and simultaneous heatwaves or cold waves intensify vulnerability.

(d) **Operational Stress**

i. NEOC and PEOCs overwhelmed; federal assistance required for inter-provincial coordination.

ii. International humanitarian support may be needed.

iii. Emergency health services face severe strain; hospitals and field health camps may be inundated.

(e) **Impact on Population**. Widespread displacement, increased casualties, destruction of houses, crops and critical infrastructure; long-term socio-economic disruption.

(f) **Preparedness Focus**

i. National multi-hazard early warning protocols activated.

ii. Risk financing leveraged for rapid relief and recovery.

iii. Emergency mobilization of all disaster response assets. PDMAs/ Rescue 1122, Civil Armed Forces deployed. Federal resources including Armed forces mobilized in aid of civil administration. Stress on national recourses. All NGOs/ INGOs activated to rescue and relief response. International community assistance coordinated.

iv. Post-disaster recovery plans incorporate “BBB” principles to enhance resilience.

CHAPTER – 2

INSTITUTIONAL FRAMEWORK & GOVERNANCE

1. **National Disaster Management Architecture**. According to National Disaster Management Act 2010 (NDM Act 2010), Pakistan has three-tiered disaster management system i.e., federal, provincial and district. National Disaster Management Commission (NDMC) foresees the overall disaster management of the country. NDMC is headed by Honourable Prime Minister of Pakistan who acts as Chairman of the commission. At the federal level, NDMA and at provincial level, PDMAs are the leading agencies for disaster management. Similar to national level, Provincial Disaster Management Commissions (PDMC) are headed by the Honourable Chief Minister (or Prime Minister in case of State of AJ&K) of the respective province who acts as Chairman of the Commission. At district level, District Disaster Management Authorities (DDMAs) are established. However, they are operated through ad-hoc arrangements under respective Deputy Commissioner offices. An overview of the three tiers of Pakistan's disaster management system is outlined as follows:-

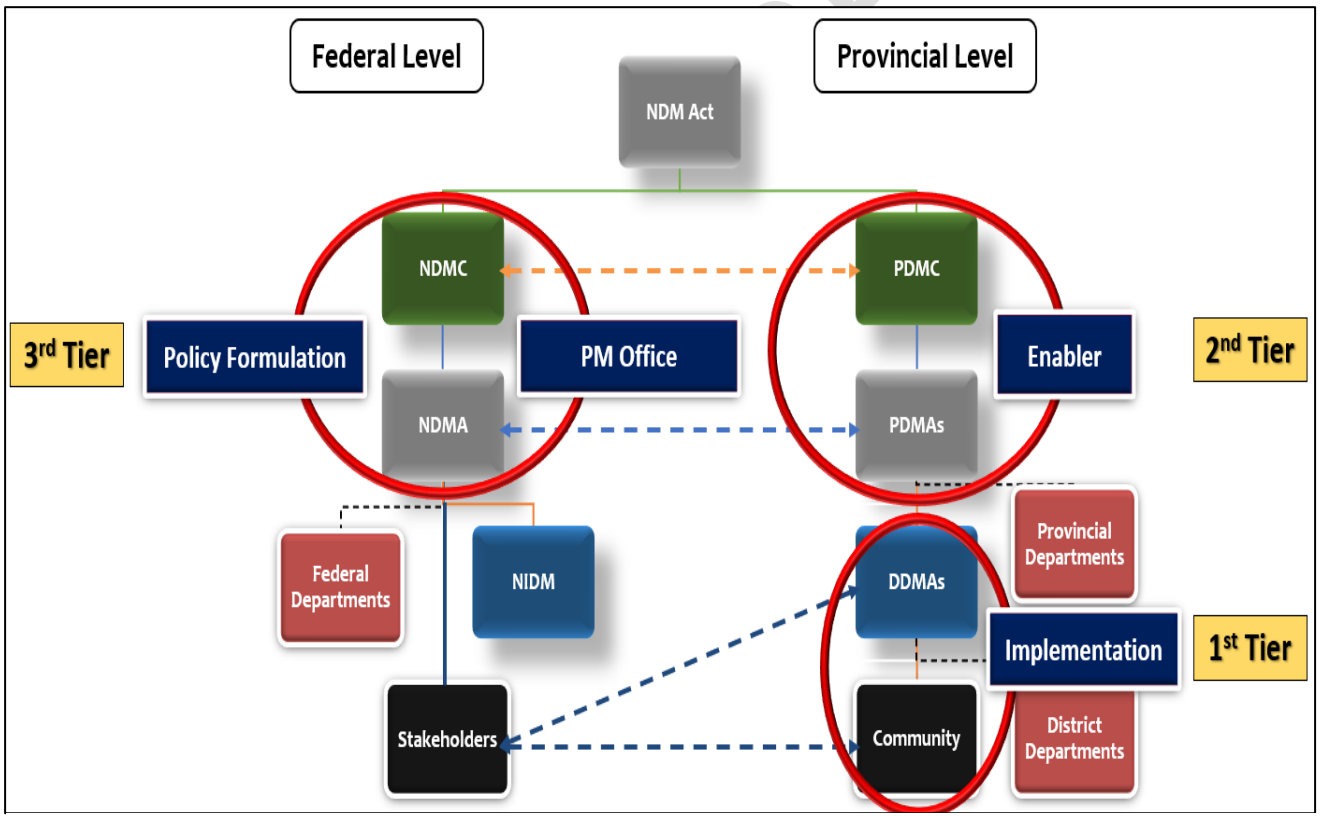

Figure 1: Overview of three Tiers Pakistan's Disaster. Management System.

a. **NDMA**. Lead agency for national coordination, federal resource allocation, inter-agency liaison and international humanitarian engagement.

b. **PDMAs**. Operational units at provincial level, responsible for planning, early warning dissemination and coordination of response.

c. **DDMAs**. Frontline entities for local response, rescue, relief mobilization, community engagement.

d. **Local Government and Community Groups**. Local government/ Municipal-level disaster management committees, community volunteers, civil society and the private sector.

2. **Roles and Responsibilities**. As per NDM Act 2010, NDMA, PDMAs and DDMAs have following major powers and functions:-

a. **NDMA**. Strategic oversight, national-level coordination, resource mobilization, capacity building, standards, Standard Operating Procedures (SOPs):-

(1) Implementing, co-ordinating/ monitoring body for disaster management.

(2) Prepare National Plan to be approved by the National Commission.

(3) Implement, coordinate and monitor implementation of the national policy.

(4) Lay down guidelines for preparing disaster management plans by different Ministries or departments and the Provincial Authorities.

(5) Provide necessary technical assistance to Provincial Governments and Authorities for preparing their disaster management plans in accordance with the guidelines laid down by the National Commission.

(6) Coordinate response in any threatening disaster situation or disaster.

(7) Lay down guidelines for or give directions to the concerned Ministries or Provincial Governments and Authorities regarding measures to be taken by them in response to any threatening disaster situation or disaster.

(8) For any specific purpose or for general assistance requisition the services of any person and such person shall be a co-opted member and exercise such power as conferred upon him by the Authority in writing.

(9) Promote general education/ awareness to disaster management.

(10) Perform other functions as National Commission may require to perform.

b. **PDMAs**. Provincial contingency planning, coordination with district authorities, managing provincial level stockpiles, early warning and training:-

(1) Formulate provincial disaster management policy obtaining the approval of the Provincial Commission.

(2) Coordinate and monitor implementation of National Policy, National Plan and Provincial Plan.

(3) Examine the vulnerability of different parts of the province to different disasters and specify prevention or mitigation measures.

(4) Lay down guidelines to be followed for preparation of disaster management plans by the Provincial departments and District Authorities.

(5) Evaluate preparedness at all governmental or non-governmental levels to respond to disaster and to enhance preparedness.

(6) Coordinate response in the event of disaster.

(7) Give directions to any Provincial department or authority regarding actions to be taken in response to disaster.

(8) Promote disaster general education, awareness and community training.

(9) Provide necessary technical assistance or give advice to District Authorities and local authorities for carrying out their functions effectively.

(10) Advise Provincial Government regarding all financial matters in relation to disaster management.

(11) Examine the construction in the area and if it is of the opinion that the standards laid down have not been followed, it may direct for following the same to secure compliance of such standards.

(12) Ensure that communication systems are in order and disaster management drills are being carried out regularly.

(13) Perform such other functions as may be assigned to it by the National or Provincial Authority.

c. **District Disaster Management Authorities (DDMAs)**. Local risk assessments, implement response plans, community based preparedness as first responders:-

(1) Preparation of disaster management plan including district response plan.

(2) Coordinate and monitor implementation of national and provincial policy, national, provincial and district plans.

(3) Ensure district disasters vulnerable areas identified and prevention and mitigation measures are undertaken by govt departments.

(4) Ensure guidelines for prevention, mitigation, preparedness and response measures as laid down by National and Provincial Authorities are followed by all departments of the Government at the district level and the local authorities in the district.

(5) Give directions to different authorities at the district level and local authorities to take such other measures for the prevention or mitigation of disaster as may be necessary.

(6) Lay down guidelines for preparation of disaster management plans by the Government departments at district level and local authorities.

(7) Monitor the implementation of disaster management plans prepared by the Departments of the government at the district level.

(8) Lay down guidelines to be followed by the Department of the Government at the district level.

(9) Organize and coordinate specialized training programs for different levels

of officers, employees and voluntary rescue workers in the district.

(10) Community prevention of disaster/ mitigation training/ awareness programs with support of local authorities, governmental and NGOs.

(11) Set up, maintain, review and upgrade the mechanism for early warnings and dissemination of proper information to the public.

(12) Prepare, review and update district level response plan and guidelines.

(13) Coordinate with and give guidelines to local authorities in the district to ensure that pre-disaster and post-disaster management activities in the district are carried out promptly and effectively.

(14) Review development plans prepared by Government Departments at district level, statutory or local authorities with a view to make necessary provisions therein for prevention of disaster or mitigation.

(15) Identify buildings and places which could, in the event of a disaster situation be used as relief centres or camps and make arrangements for water supply and sanitation in such buildings or places.

(16) Establish stocks of relief and rescue materials or ensure preparedness to make such materials available at a short notice.

(17) Provide information to Provincial Authority relating to different aspects of disaster management.

(18) Encourage involvement of NGOs and voluntary social-welfare institutions working at the grassroots level in the district for disaster management drills are carried out periodically.

(19) Ensure communication systems are in order and disaster management drills are carried out periodically.

(20) Perform such other functions as the provincial Government or provincial authority may assign to it or as it deems necessary for disaster management in the district.

d. **Tehsil/ Local Government**. Tehsil and Local Governments in Pakistan play a frontline role in national disaster response by maintaining essential municipal services, enforcing land-use and building regulations, and preparing local contingency plans as required under the law, which designates them as “local authorities” responsible for disaster prevention, preparedness, and initial response under the direction of the DDMA. They act as immediate responders by facilitating evacuation, providing emergency relief such as water, sanitation, and temporary shelters, restoring local infrastructure, and reporting damage and needs to the DDMA and PDMA for coordinated action. Local governments are

also mandated to train staff, support rehabilitation, enforce safer reconstruction, and engage communities in awareness and early warning activities, forming the grassroots foundation of Pakistan's disaster management system.

e. **Other Stakeholders**. Military/ paramilitary (search and rescue, logistics), NGOs (relief, health), private sector (supplies, infrastructure), media (risk communication), Academia, DRR societies.

3. **Functioning of NDMA**. NDMA of Pakistan operates through specialized wings to manage disasters effectively at both local and global levels. NDMA's wings are responsible for formulating national disaster policies and plans, coordinating with federal institutions, PDMAs and DDMAs, issuing early warnings, mobilizing resources, overseeing emergency response, and supporting rehabilitation and reconstruction efforts across Pakistan. These wings ensure capacity building, training, risk assessment, and integration of DRR into development planning. Globally, NDMA represents Pakistan in international disaster-management forums, coordinates humanitarian assistance with United Nations, international NGOs, and donor agencies, manages foreign relief and aid during major disasters, and aligns national disaster practices with international frameworks such as the Sendai Framework for DRR, thereby strengthening Pakistan's disaster preparedness and response through global cooperation and knowledge sharing:-

a. **Tech Early Warning Wing (Tech-EW)**. Tech-EW Wing is NDMA's analytical core responsible for hazard monitoring, detection and predictive modelling. It tracks global climatic, hydrological, seismic and geophysical indicators using national and international platforms (Global Watch, NCOP, GCOP). It generates accurate early warnings, forecasts and risk maps and disseminates them to response agencies and the public. It supports operational decision-making through real-time updates, by early projections and post-event assessments. It ensures that scientific forecasts are translated into actionable intelligence for response agencies. Conducts Multi-Hazard Vulnerability and Risk Assessments (MHVRA) to inform evidence-based planning/ prioritization of DRR interventions.

b. **National Institute of Disaster Management (NIDM)**. It serves as Pakistan's national think tank for disaster management, focusing on training, research, best practices, policy support and knowledge management. It provides evidence-based insights, conducts DRR research, manages national/ international universities partnerships and develops national DRR curricula. It has transformed into a proactive research driven institution, leading hazard studies, early warning improvements and nationwide capacity building.

c. **Tech Equipment and Maintenance Wing (Tech E&M)**. Tech E&M Wing is

NDMA's digital backbone, driving IT modernization, automation and technology integration. It develops mission-critical Information Communication Technology (ICT) infrastructure, NDMA's website, NDMA's mobile application, alerting platforms and digital public engagement tools. It leads digital transformation, secure communication systems and internal applications to improve operational efficiency and preparedness.

d. **DRR Wing**. DRR Wing institutionalizes anticipatory action (AAs) across national and provincial systems. It sets hazard-specific triggers and SOPs, leads coordination forums like National Coordination Forum on Anticipatory Actions (NCF-AA) and Disaster Management Coordination Forum (DMCF), supports district-level planning and integrates AAs into NEOC dashboards and national contingency plans. It focuses on pre-positioning, evacuations, trigger-based actions and community preparedness. Operational drills, research guidance and district templates enhance proactive preparedness nationwide. Within the DRR Wing of NDMA, Gender and Community Cell (GCC) ensures that disaster policies and plans are inclusive and gender-responsive by integrating the needs of women, children, elderly, persons with disabilities, transgender persons, other economically marginalized, migrants, refugees and internally displaced persons (IDPs) and religious and ethnic minority groups and other vulnerable groups into DRR strategies, while promoting community participation, awareness and resilience at grassroots level. Moreover, Provincial Coordination Cell (PCC) is designated for inter provincial disaster coordination across Pakistan.

e. **Infrastructure Advisory and Project Development Wing (IA&PD)**. IA&PD ensures resilient infrastructure through pre-disaster audits and post-disaster reconstruction planning. Develops guidelines, conducts structural assessments, establishes Provincial Infrastructure Audit Units and maintains a national audit index. Plans Material Hubs across Pakistan for rapid recovery. Post disaster supports technical assessments, debris clearance and resilient rebuilding.

f. **Operations Wing (Ops)**. Ops Wing uses early warnings to activate formal response protocols, coordinate with federal departments, PDMAs/ DDMAs, mobilize rescue teams, pre-position assets and manage field operations and logistics supply. Operational wing also provides Ex-gratia assistance to disaster victims. It works closely with Tech-EW Wing, PMD and GSP for real-time updates and supports national rescue and relief operations based on hazard alerts.

g. **Plans Wing**. Plans Wing develops national plans, integrates anticipatory components, sets seasonal preparedness frameworks, and ensures alignment

with national DRR strategies. It coordinates multi-agency planning and ensures coherence between national, provincial, and district preparedness plans. Wing also engages NGOs, International Non-Government Organizations (INGOs), UN agencies, and international coordination mechanisms such as INSARAG to support search-and-rescue preparedness and joint planning.

h. **National Resource Wing (NR)**. NR Wing serves as NDMA's dedicated institutional mechanism for systematic engagement, coordination and governance of private sector, industry and philanthropic contributions during disaster preparedness, response and early recovery phases. It ensures non-governmental resources are strategically aligned with national response priorities, operational needs identified as per requirements, while maintaining avoidance of duplication, transparency and accountability.

i. **International Collaboration Wing (IC)**. IC Wing coordinates Pakistan's global disaster partnerships. It leads diplomatic engagements, diaspora collaboration, bilateral/ multilateral DRR cooperation and foreign high end needs pre-coordination. It enables quicker mobilization of international aid during disasters and strengthens Pakistan's role in global and regional DRR forums such as OIC, ECHO, SAARC, AHA Centre, ECO, SCO and AFAD.

ii. **Regional Military and Media Wing (RM&M)**. RM&M Wing drives Pakistan's regional and global disaster collaboration through military/ counterpart agencies exchanges, delegations, Comprehensive International Simulations Exercises (CISE) and defence attaché networks. It aligns national DRR priorities with regional frameworks, enhances interoperability and strengthens coordinated cross-border emergency response. Its Media Directorate is mandated to design and implement national risk communication strategy, ensuring a coherent and coordinated approach to public awareness on disasters early warnings/ climatic hazards. It engages with public, media and government institutions/ Ministries. Meida Directorate is responsible for managing misinformation, deploying multi-channel communication systems and dissemination of public service messages on multi-hazard scenarios. It ensures two-way information flows between institutions and communities, supporting last-mile early warnings through SMS, radio, community communication system/ social media. It also maintains a unified crisis communication to avoid conflicting narratives. Furthermore, manages strategic partnerships with media houses and digital platforms, thereby institutionalizing disaster communication as a governance priority. This structured risk communication framework reinforces public awareness,

preparedness and resilience during emergencies at national level.

iii. **Risk Finance Wing (RF)**. RF Wing strengthens Pakistan's financial resilience through pre-arranged finance (contingency funds, risk pools). It conducts fiscal risk assessments, develop triggers for fund activation, ensures transparent financial tracking and mobilizes climate finance via Economic Affairs Division (EAD), Ministry of Finance (MoF), International Financial Institutions (IFIs) and global financing mechanisms. It embeds risk financing in planning, budgeting and Post-Disaster Need Assessments (PDNAs). It designs and operationalizes parametric instruments, contingency funds and scalable financing systems to ensure timely disaster funding. It supports national and provincial operational financing.

iv. **Climate Change & Disaster Management Centre of Excellence (C2DM CoE)**. C2DM CoE is NDMA's national platform for advanced training, expert exchange and multi-agency coordination. It strengthens early warning skills, climate analytics, responder training and sector-specific preparedness. It provides a continuous pipeline of skilled human resources through regular preseason training modules.

v. **Administration and Finance Wing (A&F)**. A&F Wing manages all financial and administrative support for NDMA, including legal, procurement, financial and management of regular and grant based funds. It ensures legal compliance with applicable financial rules, Public Procurement Regulatory Authority (PPRA) regulations, audit requirements, and government procedures, maintains financial discipline, oversees contracts and procurement processes, and supports operational activities through timely provision of resources and services.

vi. **Establishment Wing**. Establishment Wing ensures workforce readiness through staff management, deployment rosters, emergency duty assignments, and maintenance of records. It manages HR planning, postings, promotions, allowances, and disciplinary matters, coordinates staff training with C2DM CoE, ensures availability and management of transport for operational mobility during routine and emergency operations, and oversees compliance with government HR policies and service rules.

vii. Response Application Sequence of NDMA is given below:-

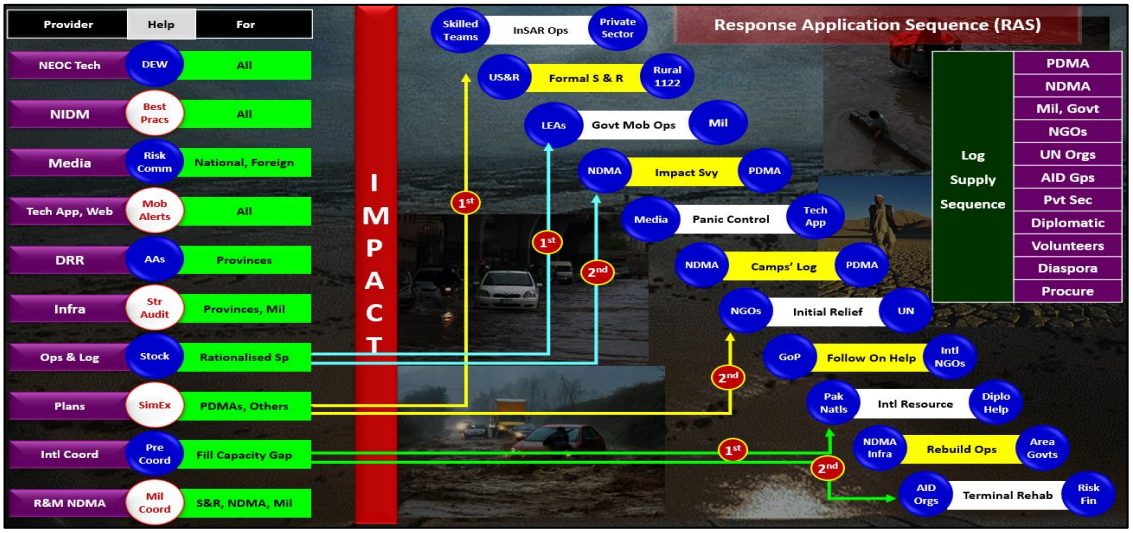

Figure 2: Response Application Sequence of NDMA.

4. **Coordination Mechanisms**

a. **Incident Command System (ICS)**. Standardized ICS across tiers to ensure interoperability and scalable response.

b. **Inter-Agency Forums**. Regular coordination meetings (quarterly/ yearly) among NDMA, PDMAs, Military, NGOs, INGOs, UN, private sector, donors.

c. **Community Liaison Platforms**. Community disaster management committees, public feedback mechanisms, local exercises.

d. **Emergencies Operation Centres (EOCs)**. EOCs serve as the digital/ linked hub for issuing early warnings, alerts, advisories and information to the public, media, ministries, departments and humanitarian response agencies. EOCs also lead/ ensure coordination and management of relief operations in affected areas. All the agencies such as Rescue Services, Armed Forces, Civil Defence, Law Enforcement Agencies (LEAs) and other humanitarian agencies efforts are coordinated by the EOCs at each respective tier; national, provincial and district. EOCs function throughout the year in disaster and non-disaster times. In disaster times, the EOCs coordination rescue, relief and recovery and non-disaster time they work towards ensuring disaster preparedness planning.

e. **NEOC**. NEOC is an indigenous, dynamic, integrated and ICT enabled (including AI and ML) capability of proactive disaster management comprising all relevant disaster management stakeholders and partners to affect synergy, smooth and efficient coordination and response enabling proactive and informed decision making by national authority in face of any natural or man-made disaster. It serves as a unified national hub to plan, execute and coordinate all responses to disasters facing the country. Mobile NEOCs has been developed by NDMA

which can be deployed near disaster site for performing NEOCs functions at site. Main functions/ features of NEOC are:-

(1) To develop collage of all available technical inputs to predict future disasters as a high end national early warning capability. National databases, available satellites input and IT spectrum to generate daily National/ Global Common Operating Picture (NCOP/GCOP) for informed decision making by national authority for dissemination.

(2) **Main Functions/ Features**

(a) Modern digitized hub to carry out disaster mitigation, preparedness, response and management at national level.

(b) Guide national institutions to brace for impact and swiftly recover, from unavoidable disasters.

(c) Collect, analyse and share information; vulnerable areas' needs and gaps in relief provisions.

(d) Coordinate plans and determine current and future needs.

(e) Impact extents of potential disasters (time, area, populace).

(f) Support data (pre-coordinated and pre-planned) with global organizations, UN and diplomatic channels.

(g) Minimize financial stress and achieve damage control.

(h) Enable risk communication for communities' alert system through all available media mediums.

(i) House representatives from relevant ministries, line departments, Armed Forces, donors, UN agencies, selected NGOs/ INGOs.

(j) To determine:-

i. Impact extents of potential disasters (time, area, populace).

ii. Vulnerable areas' needs and gaps in relief provisions.

iii. Support data (pre-coordinated and pre-planned) with global organizations, UN and diplomatic channels.

(k) **Operational Potential**

i. Monitor/ predict occurrence of disasters, much in advance.

ii. Provide early warnings to all stakeholders gaining adequate buffer time to prepare, plan and adjust (as required).

iii. Guide national institutions to substantiate for impact and swiftly recover from unavoidable disasters.

iv. Minimize financial stress and achieve damage control.

v. Enable risk communication for communities' alerts system through all media mediums.

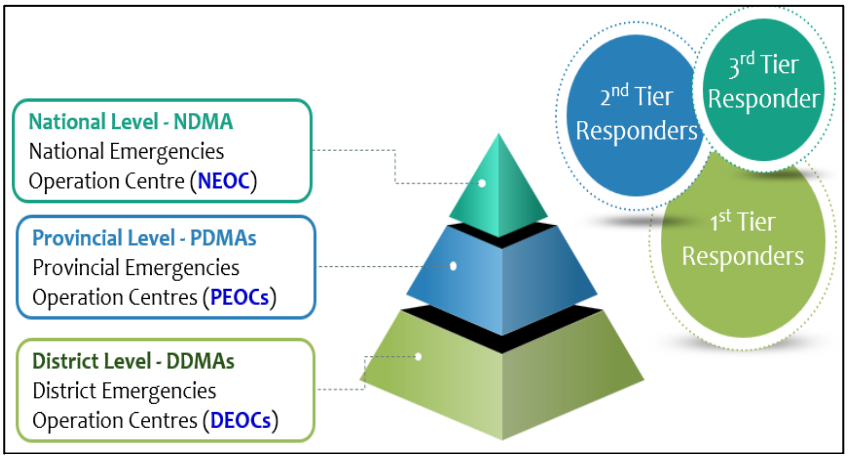

Figure 3: Emergency Operation Centre Tiers.

(3) **NEOC's Strategic Utility in Public Advisory Domains**

(a) **Risk Control Policies**

i. Reliable and credible projections of disasters.

ii. Automated updating/ fusion of social national databases.

iii. Early identification high-risk zones.

(b) **Climate Studies**

i. Readiness for GLOF, rains, avalanches etc.

ii. Timely relocation of likely vulnerable people and livestock.

iii. Coordinate clearance plans for encroached waterways and hydraulic structures.

iv. Infrastructure control and land use plans.

(4) NEOC's coordination mechanism is given below:-

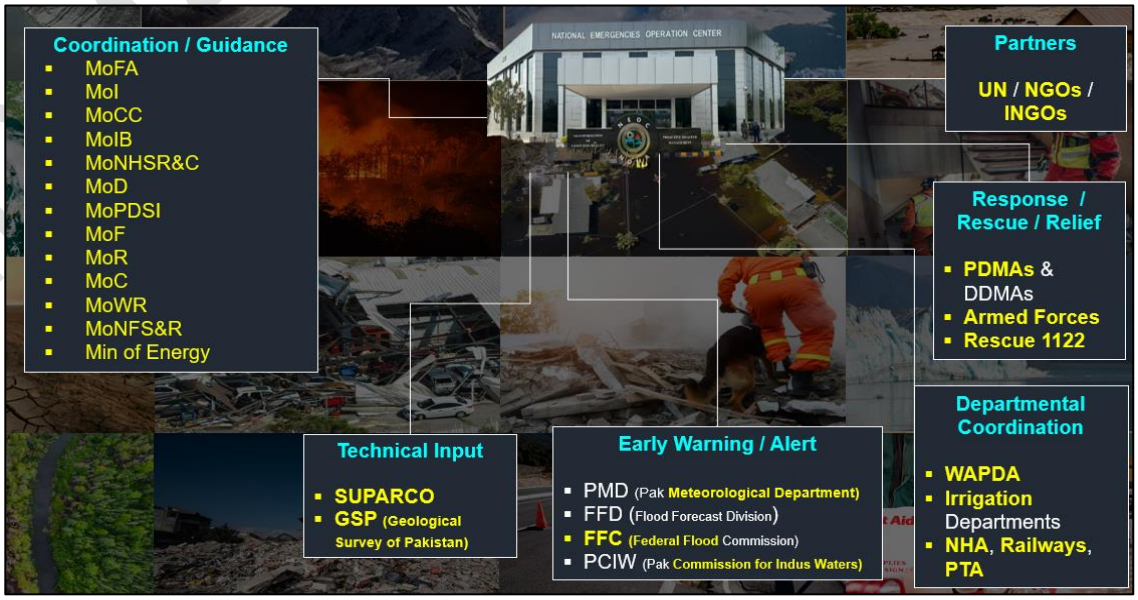

Figure 4: Pakistan's NEOC Coordination Mechanism.

f. **PEOC**. PEOC is an indigenous, dynamic, integrated and ICT enabled (including AI) capability of proactive disaster management comprising all relevant disaster management stakeholders and partners to affect synergy, smooth and efficient coordination and response enabling proactive and informed decision making by provincial authority in face of any natural or man-made disaster. It serves as a unified provincial hub to plan, execute and coordinate all responses to disasters facing the country. PEOCs should replicate NEOCs structure and implement in respective provinces.

5. **Legal and Policy Enablers**

a. Enshrine plan in NDM Act and link with Provinces. Ensure implementation and continuity, the NDRP legally anchored within the NDM Act. Embedding the plan in the Act make compliance mandatory for all federal ministries, departments and provincial authorities. Additionally, provisions are harmonized with Provincial Disaster Management so that NDMA, PDMAs, DDMAs and relevant line departments operate under aligned responsibilities, SOPs and reporting mechanisms. This legal linkage reduces duplication, clarifies authority during emergencies and ensures consistent preparedness and response standards across all provinces, GB and AJ&K.

b. Incorporate “BBB” and resilience principles into national development policy. Pakistan’s NDRP mandate that post-disaster recovery and reconstruction follow “BBB” principles ensuring that infrastructure is reconstructed to more resilient standards instead of restoring pre-disaster vulnerability. This includes risk-informed development planning, climate-resilient construction codes, ecosystem restoration and community-based resilience strategies. Integrating these principles into national and sectoral development policies (e.g., housing, infrastructure, irrigation, energy, transport etc) ensures that all public sector investments reduce disaster risk rather than unknowingly creating new.

c. Using risk financing mechanisms to strengthen financial preparedness for disasters. This approach helps Pakistan shift from a reactive, relief-oriented model to a pre-financed, proactive disaster management system allowing faster response, reduced fiscal pressure and better vulnerable communities protection.

d. Establish a legal mandate for after-action reviews (AARs) and transparent reporting. NDRP institutionalize a legal requirement for all disaster response operations at federal, provincial and district, to conduct AARs / post event report within a specified timeline after any major incident. It also requires transparent public reporting of lessons learned, gaps identified, financial expenditures and corrective actions taken. A centralized national repository of AARs managed by NDMA can improve institutional memory, enable evidence-based improvement, support accountability and ensure that repeated mistakes such as communication failures, resource shortages or coordination gaps are systematically addressed.

CHAPTER – 3

PREPAREDNESS STRATEGY

1. **Capacity Building and Training**. Pakistan's national training framework for disaster management must prioritize standardized, multi-tiered capacity-building programs aligned with international best practices and the mandates described in NIDM, CoE-C2DM and NDMA's operational wings:-

a. **ICS**. NDMA, through NIDM and the Centre of Excellence (CoE-C2DM), should run structured ICS training based on international standards to strengthen unified command, interoperability, incident action planning and multi-agency coordination. Training must target responders, district administration, police, LEAs, rescue agencies and key line departments to ensure uniform command language and clarity of roles during emergencies.

b. **Search and Rescue (SAR)**. Specialized SAR programs including urban, rural, desert, coastal, maritime and mountain should be institutionalized with technical support from Rescue-1122, Armed Forces, NIDM regional centres and international partners (INSARAG). Courses should include victim extraction, rope rescue, swift-water rescue, rubble stabilization, use of thermal imaging drones and heavy SAR coordination with NEOC/ PEOCs.

c. **First Aid and Pre-Hospital Care**. Nationwide first-aid certification should be standardized. Training must equip responders, teachers, local committees and volunteers with CPR, bleeding control, triage, splinting, shock management and patient transport techniques. Mobile medical units should be used for field demonstrations.

d. **WASH Training**. Aligned with Sphere Standards, responders and community volunteers must receive training on safe water storage, chlorination, hygiene promotion, vector control, sanitation facility setup and rapid WASH assessments. This directly supports anticipatory actions and camp management obligations under NDRP.

e. **Protection [Women, Children, Elderly, Persons with Disabilities (PWDs) and Transgender Persons]**. Protection training should be systematically embedded across all Disaster Risk Management (DRM) related courses. Drawing on technical content and field protocols, these trainings must comprehensively address gender-based violence (GBV) risk mitigation, child protection, safe and dignified spaces, inclusive and accessible services for PWDs and transgender persons, sexual and reproductive health (SRH) including

Minimum Initial Service Package (MISP) protocols, safeguarding standards, psychosocial first aid and clear referral/ coordination pathways. Institutionalising these components across DRM curricula ensures that preparedness, response and recovery operations are consistently aligned with humanitarian protection principles, international minimum standards and inclusive DRM framework, translating policy commitments into operational practices at all levels of disaster management.

f. **Simulation Exercises (SimEx)**. NDMA's shift toward proactive DRR requires a robust, institutionalized exercise cycle that tests planning, early warning and response systems across all administrative levels:-

(1) **SimEx**. These are conducted multiple times in a calendar year at national and provincial levels to validate seasonal contingency plans, evaluate early-warning triggers, analyse inter-agency communication and test decision making against realistic hazard scenarios (floods, heatwaves, cyclones, earthquakes, GLOF, smog, epidemics etc) as per the season. SimExs involve NEOC, all federal stakeholders, PDMAs, DDMAs, line departments, humanitarian partners, clusters and military liaison cells. Comprehensive International Simulation Exercise (CISE) also organize with international partners and UN to pre-coordinate disasters response. Every month, NDMA's CISE involving partner countries, UN agencies, academia and militaries test cross-border coordination and early-warning interoperability. This strengthens Pakistan's responders in regional climate resilience and enhances national capabilities.

(2) **Field Simulation Exercises (FSX)**. Periodic field drills modelled on SIMEX and CISE should test evacuation, SAR deployment, camp establishment, rapid needs assessment, medical triage, logistics movement, communication systems and activation of anticipatory actions. Local responders, communities, traders and NGOs participate to ensure real-world applicability.

(3) **District-Level Exercises**. DDMAs must conduct district-specific drills before each Disaster Early Warning (DEW) for monsoon, winter and summer/ drought seasons. These should include evacuation tests, local hazard mapping, WASH setup and community alerting procedures using Mosque loudspeakers, mobile alerts and volunteers. Aligned with NIDM's expanding academic network and its transformation into a national think

tank, Pakistan's higher education sector embed DRM into mainstream education.

(4) **University-Level Integration**. Formal DRM modules should be included in social sciences, environmental sciences, civil engineering, public health, Geographic Information Systems (GIS)/ remote sensing, climate change programs and policy studies. NIDM's partnerships with universities provide a strong foundation for adopting standardized syllabi aligned with Sendai Framework, Intergovernmental Panel on Climate Change (IPCC) and National Disaster Management Plan (NDMP)/ NDRP.

g. **Technical and Vocational Colleges**. Technical and Vocational Education and Training (TVET) institutions must integrate practical disaster modules covering firefighting, first aid, SAR basics, WASH setup, resilient construction and equipment handling. This aligns with IA&PD Wing's objectives for resilient infrastructure and training local governments and masons in safer construction techniques.

h. **NIDM's Role**. NIDM develops standardized DRR curricula, training manuals, e-learning modules and certification pathways and integrate them into civil services academies, police colleges and local government training institutes. This institutionalization will create a continuous pipeline of trained responders, policymakers and community leaders.

i. **Student Led DRR Societies**. Existing DRR Societies are scaled across campuses to promote volunteerism, resilience education, mock drills and early-warning dissemination. Community engagement is essential for last-mile preparedness strongly emphasized in GCC guidelines, anticipatory action templates and NIDM's Community Based Disaster Risk Management (CBDRM) programs.

j. **CBDRM Committees**. Village and ward-level committees are trained on hazard mapping, household level preparedness, evacuation route identification, first aid, fire safety and alert dissemination methods (radios, Mosque loudspeakers, mobile apps, door-to-door messaging). Committees must maintain updated rosters of vulnerable persons elderly, PWDs, women-headed households, transgender persons and migrants to support inclusive evacuation.

k. **Community Volunteers**

(1) Volunteers should receive short modules on:-

(a) SAR basics.

(b) First aid and psychological first aid.

(c) Safe shelter management.

(d) WASH and hygiene promotion.

(e) Distribution management.

(f) Crowd control and protection.

(g) Data collection and rapid assessment.

(2) NDMA, PDMAs, DDMAs, local NGOs and universities jointly maintain community volunteer pools:-

(a) **Local Leadership Integration**. Jirgas, religious leaders, teachers and lady health workers (LHWs) must be key partners for community level warning dissemination/ trust-building reflecting NDMA's two-way communication and people-centric approach.

(b) **Women and Youth Engagement**. Women volunteers, DRR youth clubs and school safety committees must be institutionalized to support early warning, evacuation support and post-disaster relief.

2. **Early Warning System (EWS)**. Strengthen and expand meteorological monitoring (NEOC/ PMD), hydrological stations, glacier monitoring:-

a. **Disaster Early Warnings (DEWs)**. NEOC issues four DEWs in a year covering each quarter (**Winter**; January to March, **Summer**; April to June, **Monsoon**; July to September and **Winter**; October to December) each year.

b. **High-level Monitoring**

(1) **Rapidly Scale Observing Networks**. Automatic Weather Stations (AWS), radar upgrades, Doppler radars in key basins and strengthen the NEOC and PMD observational network. Pair surface stations with satellite data ingestion and model assimilation to improve forecast skill.

(2) **Hydrological Telemetry**. Real-time river gauges (water level, discharge), automatic water level and velocity recorders at strategic locations (upstream/ downstream of major headworks, tributary confluences, urban drains), plus telemetry (GSM/ satellite) to feed NEOC dashboards.

(3) **Glacier and GLOF Monitoring**. Automated glacier monitoring Equipment {Automated Weather Systems (AWS)} near glaciers, lake level and overflow sensors, time-lapse cameras, acoustic flow sensors) in High Mountain hot-spots combined with satellite-based remote sensing and periodic field surveys to maintain a prioritized GLOF risk inventory. Tech automated systems reduce detection time for GLOF EW.

(4) **Data Quality, Sharing and Modelling**. Common data standards and real-time data sharing between PMD, WAPDA/ Indus River System Authority {(IRSA) (hydrology)}, NDMA Tech-EW and provincial PDMAs are implemented via the NCOP/ GCOP architecture. It is ensured that raw and processed feeds are machine readable for automated trigger logic.

c. **Operational Steps and Governance**

(1) **Priority Network Plan (12–24 Months)**. Map gaps (river basins, glacier lakes, urban flood hotspots), deployment cost (AWS, radars, gauges) and maintenance budgets.

(2) **Sustainment**. Train disaster management crew via C2DM CoE/ NIDM. Better observations and telemetry materially improve lead time and precision of forecasts essential for anticipatory action and targeted evacuations. Build community level alert dissemination systems (sirens, SMS, apps).

(3) **Design Principles**

(a) **Multi-channel and Redundant**. Combine national broadcasts (cell broadcast/ SMS), Pak NDMA Alert app, official channels, social media, print and electronic media, community sirens/ loudhailers, Mosque loudspeakers, FM/ radio and volunteer networks so messages reach everyone even if one channel fails. “All-Channel” approach uses that as backbone.

(b) **Localization and Accessibility**. Messages are kept short, multilingual, use simple actions (evacuate North bank → go to school X) and include formats for PWDs (SMS and voice, sign language captions on TV). Gender/ age/ disability needs should also be accepted.

(c) **Trusted Delivery Partners**. Memorandums of Understanding (MoU) with telecommunication companies for geo-targeted cell broadcast/ SMS and with local governments for siren installation and maintenance (district level ownership). Test Service Level Agreements (SLAs) for message delivery under load.

(4) **Practical Components**

(a) **Community Siren Network**. Solar powered sirens are installed at union council/ village cluster level with clearly defined tones (watch → alert → evacuation). Link sirens to local gauge thresholds for upstream warning.

(b) **SMS/ Cell Broadcast and Apps**. CAP compatibility to telecommunication companies is ensured. (Maintain subscription and opt-out options; run periodic drills.

(c) **Community Focal Points**. Equip Mosque imams, LHWs, school heads and community wardens with message scripts and responsibilities for door-to-door alerts for vulnerable households.

(5) **Testing and Trust Building**. Monthly siren tests, quarterly cell broadcast drills and annual community drills integrated into PDMA plans and NIDM/ C2DM CoE training. Measure reach and comprehension, feed results back to NEOC dashboards.

(6) **Core Elements (Must be National SOP/ Single Source of Truth)**

(a) **Governance and Roles**. Lead agencies for each hazard (NEOC/ PMD for meteorology, Flood Forecasting Division (FFC), WAPDA and IRSA for riverine flows, NDMA Tech-EW for national forecast fusion and public advisories, PDMA/ DDMA for local activation and evacuation). Embed into NDRP and formalize through directions of cabinet.

(b) **Data and Products Taxonomy**. Standard products (watch/ alert/ warning), formats {(Computer-Aided Publishing (CAP)}, Geographical JavaScript Object Notation (geoJSON), expected contents (hazard, uncertainty, expected impacts, recommended actions)} and lead times are defined. Include template messages and thresholds.

(c) **Decision Ladder and SOPs**. Decision matrices that map forecast probability impact to pre-approved actions (pre-positioning, school closure, evacuation), with assigned decision authorities and time windows are included. Use NDRP anticipatory actions and Early Action Protocol (EAP) to create hazard-specific SOPs.

(d) **Integration with Emergency Architecture**. The protocol must spell how NEOC/ ICS activation works (who activates, when, what information required), escalation paths (district → provincial → national) and the interplay between Tech-EW outputs and Ops/ Response activation. Reference the ICS concept used in regional examples and in NDMA documents.

(7) **Implementation Steps**

(a) Pilot for hazards (e.g., riverine flood, GLOF, heatwave, forest fire etc.) with EAPs and triggers.

(b) **Importance**. A single, CAP based protocol avoids inconsistent messages, speeds decisions and ensures every warning is linked to an agreed operational response. WMO and United Nations Office for Disaster Risk Reduction (UNDRR) emphasize protocolized Multi-Hazard Early Warning Systems (MHEWS) for saving lives. Link early warnings with response triggers, define "trigger thresholds" for activation of NEOC/ ICS.

(8) **Principles for Response Trigger Design**

(a) **Forecast Based and Impact Oriented**. Triggers are based on forecast probability, observed thresholds (river discharge, lake level, rainfall intensity) and impact metrics (populations at risk, critical infrastructure exposure). Triggers may be meteorological (forecast rainfall > X mm/24h), hydrological (river stage > Y m at gauge Z), or compound (rainfall + soil moisture).

(b) **Tiered Activation**. Define at least 3 activation levels to align with NEOC/ ICS escalation:-

i. **Level 1 (Watch/ Alert)**. Monitoring posture – NEOC/ PEOCs issues advisory, Ops preps stocks.

ii. **Level 2 (Warning/ Partial Activation)**. NEOC/ PEOCs activated, limited ICS modules mobilized, resources pre-positioned.

iii. **Level 3 (Full Activation/ Evacuation)**. Full NEOC/ PEOCs and ICS on surge, large scale evacuations and life-saving operations.

(c) **Example Trigger Table (Template - Replace Numbers with Local Calibrations)**

Ser	Activation Level	Trigger (example)	Immediate Actions (NEOC/ PEOCs/ ICS)
i.	Watch (Level 1)	3-day rainfall forecast > 50 mm in catchment OR model exceedance prob > 40%	Issue public advisory; Operations pre-check stocks; inform PDMAs

Ser	Activation Level	Trigger (example)	Immediate Actions (NEOC/ PEOCs/ ICS)
ii.	Alert (Level 2)	48-hour forecast of river stage > 75% of flood threshold OR lake level rising trend > 5%/24h	Partial NEOC activation; pre-position boats/ ambulances; siren tests
iii.	Evacuate (Level 3)	Forecasted river discharge > historical highest-level capacity/ lake breach imminent OR observed GLOF precursors and lake level above trigger	Full NEOC and ICS activation; implement evacuation, shelters, medical teams

d. **Automation and SOPs**

(1) **Automate Trigger Checks in NEOC Dashboards**. Ingest forecasts + gauge data → compute trigger conditions → auto-notify NEOC duty officer + PDMA with recommended action and confidence level. This reduces delay and human error. Promote NEOC automation (UEAI/ CAP) - extend it to trigger automation.

(2) Every trigger must link to a clear checklist (who calls the evacuation, routing, vulnerable groups list, shelter IDs, logistics) - embed in EAPs and train via CoE/ NIDM.

e. **Financial and Legal Linkage**. Link triggers to pre-arranged finance instruments and Forecast based Financing/ EAP funds so early actions are funded automatically when triggers are met (parametric pay-outs). This removes procurement delays during the lead time.

3. **Resource Planning**

a. Maintain national level pre-positioned stocks (emergency shelters, WASH etc).

b. Maintain provincial level pre-positioned stocks, establish Provincial and District Supply Warehouses.

c. Pre-arranged logistics agreements (with public/ private sector) to scale quickly.

d. Human resource rosters for trained personnel, volunteer pools, standby teams.

4. **Community Preparedness and Public Awareness**

a. Public awareness campaigns (media, schools, social media) on disaster risks and preparedness.

b. Community DRR committees in high-risk areas: local risk mapping, contingency planning, drills.

c. Incentives for local-level resilience investments (e.g., microgrants for flood-proofing homes). Dissemination of information, Education and Communication Materials for Vulnerable Groups in accessible formats as per the inclusive Early Warnings issued by NDMA Media Directorate on the Annual DEWs through Gender and Community Cell.

d. Use of traditional knowledge and local coping strategies in plan design.

CHAPTER – 4

RISK COMMUNICATION AND PUBLIC INFORMATION

1. **Communication Strategy**. A robust EWS must reach communities through multiple communication channels to ensure maximum coverage and effectiveness. In Pakistan, a multi-channel approach should include:-

   a. **Television and Radio**. These remain the most reliable mass communication mediums, especially in rural areas with limited internet access. Regular broadcast alerts, including visual and audio cues, can inform the public about imminent hazards such as floods, cyclones, smog or snowstorms etc. Coordination with national broadcasters (PTV, Radio Pakistan) and local FM stations is crucial for rapid dissemination.

   b. **SMS and Mobile Alerts**. Leveraging the widespread penetration of mobile phones, SMS based alerts can provide targeted warnings at the community or household level. Short, clear messages detailing hazard type, severity and required actions can reach millions instantly. Integration with the EW Tech, PMD and NDMA systems ensures timely notifications.

   c. **Social Media**. Platforms like NDMA Mobile Alert App, NDMA Web page, Twitter, Instagram, Facebook and WhatsApp are increasingly used for real-time information sharing. Social media allows authorities to push alerts, updates and interactive guidance, particularly for younger demographics. Verified accounts of NDMA, PDMA and local authorities are used to prevent misinformation.

   d. **Community Meetings and Local Networks**. Grassroots level communication remains vital for areas with low digital access. Local religious leaders, community volunteers and union councils can conduct meetings, door-to-door campaigns and public announcements to educate and warn residents. Village sirens or Mosque loudspeakers can supplement these efforts.

   e. **Key Benefit**. Combination of national media, digital channels and community-based networks ensures redundancy, improving the likelihood that warnings reach all vulnerable populations, including marginalized groups.

   f. Prepare, pre-scripted messages tailored to various hazards and disaster phases enhance clarity and reduce confusion during emergencies. Key practices:-

      (1) **Hazard-Specific Messaging**. For floods, messages can focus on evacuation routes and safe shelters; for smog, health precautions; for snowstorms, clothing, heating and travel advisories, for heatwaves; focus on environment adaptable shelters and related medical services.

(2) **Phase Specific messaging**

(a) **Pre-Disaster**. Early warnings, preparedness steps/ instructions to secure lives and property.

(b) **During Disaster**. Real-time updates on risk zones, evacuation orders and emergency services contact information.

(c) **Post-Disaster**. Relief distribution points, health precautions and recovery guidance.

(3) **Consistency and Authority**. Pre-approved scripts ensure uniform messaging across all channels, reduce misinformation and reinforce trust in the authorities.

(4) **Reference**. This approach aligns with NDMA's National MHEWS guidelines and international best practices by UNDRR.

g. **Effective public communication** must resonate with the local population to ensure compliance and understanding:-

(1) **Local Languages**. Messages are delivered in regional languages (Punjabi, Sindhi, Pashto, Balochi, Urdu, Shina and Balti) to reach all segments of the population. Multilingual voice alerts and written notices help bridge literacy gaps.

(2) **Culturally-Sensitive Content**. Incorporating local customs, religious norms and social practices increases acceptance e.g., during flood warnings, guidance can reference community gathering points and traditional shelters familiar to locals.

(3) **Visual Aids and Symbols**. Use of universally understood symbols (flood, fire, snow) in posters, social media and TV graphics ensures comprehension, especially for populations with low literacy.

(4) **Key Benefit**. Language and cultural adaptation improve public trust, encourages timely action and reduces panic during emergencies.

2. **Media Engagement**. Media Directorate of NDMA ensures timely, accurate and coordinated dissemination of disaster related information to the public and stakeholders. NDMA has established United Disaster Media Support Group (UDMSG) to strengthen disaster and climate awareness, as well as preparedness among the public, through stage-level risk communication. UDMSG is structured around six specialized sub-groups that focus on early warning, best practices, risk communication, community resilience, resource provision, recovery and rebuilding, and international coordination. Groups bring together a wide range of risk communication experts and stakeholders, including NDMA subject matter specialists, MoIB, MoFA, MoIT, PMD, PDMAs, PTA, humanitarian partners, academia, armed forces, as

well as certified disaster commentators, reporters, analysts and representatives from civil society. This collaborative framework is designed to ensure a unified and effective approach to Pakistan's narrative on climate resilience, disaster early warnings, preparedness and response communication across all levels of society. Directorate acts as a bridge between NDMA, PDMAs and media ecosystem. Its key functions include:-

a. **Proactive Communication**. Issuing regular press releases, situation updates, public services messages and advisories during disasters to prevent misinformation and panic.

b. **Media Monitoring**. Tracking news coverage, social media trends and public sentiment to quickly address rumours or inaccuracies.

c. **Media Management**. It is ensured that messages from NDMA, PDMAs and other agencies are consistent, factual and aligned with official emergency response protocols.

d. **Public Awareness Campaigns**. Running pre-disaster awareness campaigns using TV, radio and social media to educate communities on preparedness, evacuation and early warning response.

e. By institutionalizing **media liaison**, NDMA strengthens transparency and trust with citizens and ensures that critical warnings and instructions are effectively communicated during emergencies.

f. NDMA organizes **specialized training programs** for journalists to improve the quality and impact of disaster reporting. Trainings create a network of informed journalists capable of acting as multipliers for disaster awareness and public safety. Focus areas include:-

(1) **Risk Sensitive Language**. Teaching journalists to avoid alarmist or misleading language and instead use accurate, actionable information. For example, describing flood risks in terms of probabilities, safe zones and evacuation procedures rather than sensational figures.

(2) **Disaster Preparedness Knowledge**. Media personnel are familiarized with key concepts like EWS, hazard maps and SOPs to ensure report reliability.

(3) **Ethical Reporting**. Guidance on protecting vulnerable populations' privacy and preventing dissemination of misinformation.

(4) **Crisis Communication Simulation**. Hands-on drills where journalists practice reporting during simulated disasters to reinforce proper messaging and coordination with authorities.

(5) **Outcome**. These trainings create a network of informed journalists capable of acting as multipliers for disaster awareness and public safety.

g. To ensure seamless coordination between federal, provincial and local levels, NDMA conducts **joint media exercises** with PDMAs and municipal authorities. Exercises strengthen inter-agency coordination, reduce confusion in actual events and improve public trust in official communication during disasters. Key elements include:-

(1) **Simulated Disaster Scenarios**. Conduct tabletop exercises or field simulations where media interact with response authorities in real time.

(2) **Testing Communication Channels**. Ensuring that press releases, emergency alerts and social media posts can be disseminated quickly and uniformly across jurisdictions.

(3) **Role Clarification**. Defining responsibilities of NDMA, PDMAs, local authorities and media in crisis communication to avoid overlap or gaps.

(4) **After-Action Reviews**. Evaluating performance after exercises to identify strengths, weaknesses and lessons learned for continuous improvement.

3. **Community Feedback Mechanisms**

a. Effective disaster response relies on real-time communication with the affected population. Establishing dedicated hotlines allows citizens to report incidents, request assistance and access information on evacuation, relief distribution and health services. In addition, SMS based alert and feedback systems are essential for areas with limited internet access, enabling mass dissemination of warnings and receiving quick public responses. To complement these technological measures, community committees should be formed at the union council or village level. These committees act as localized coordination points, bridging gaps between government authorities and citizens. Such mechanisms are especially critical in Pakistan's flood-prone and earthquake-sensitive regions, where timely local reporting can accelerate response actions and prevent secondary disasters. They can:-

(1) Collect and relay real-time information on local hazards or needs.

(2) Mobilize volunteers for search, rescue and relief distribution.

(3) Monitor compliance with evacuation advisories or safety measures.

b. **Community Surveys**. After a disaster, it is crucial to evaluate how well the population received warnings and whether response activities met their needs. Community surveys serve as a structured tool to capture public experiences, satisfaction and gaps in response. Surveys can be conducted via in-person

interviews, phone calls, or digital platforms. In Pakistan, integrating surveys into existing union council networks and local NGOs ensures higher participation and reliable data collection. Key aspects include:-

(1) **Reach and Clarity of Alerts**. Did citizens receive timely warnings via SMS, sirens, or community announcements?

(2) **Effectiveness of Response Activities**. Was evacuation, medical and relief services accessible and sufficient?

(3) **Information Needs**. What additional information or services were needed?

c. **Data Analysis**. Collecting data alone is insufficient; it must be systematically analysed and fed back into disaster preparedness and response planning. Post-flood surveys reveal delayed warning reception in certain districts, authorities can revise SMS alert schedules, expand siren coverage, or train additional local committee members. Over time, these loops enhance adaptive management, making Pakistan's MHEWS more efficient and inclusive. Feedback loops allow authorities to:-

(1) Adjust early warning protocols to address gaps identified by community.

(2) Improve resource allocation, evacuation and public communication.

(3) Strengthen community trust in government response mechanisms, fostering resilience.

CHAPTER – 5

RESPONSE MECHANISMS

1. **Response Mechanism Focus**. Main focus of response mechanism is saving human life and reduce economic losses. Pakistan's disaster response mechanisms are structured to provide timely and coordinated action during emergencies, involving multiple tiers of government and specialized agencies. NDMA leads at the federal level, coordinating with federal resources, PDMAs to ensure rapid mobilization of resources, personnel, and relief supplies. Response mechanisms include early warning dissemination, search and rescue operations, emergency medical assistance, and distribution of food, water, and shelter to affected populations. Additionally, Pakistan integrates military support, civil defence, and NGOs to strengthen on-ground operations. Emphasis is placed on real-time information sharing, situation monitoring, and community-level preparedness to minimize casualties and infrastructural losses during natural and man-made disasters. NDMA has prepared a detailed guideline from vulnerable groups during disaster response.

2. **Contingency Planning**. Contingency plans are derived from NDRP are issued by NDMA before each disaster season (DEW) in consultation with all federal and provincial departments/ stakeholders. Accordingly, each PDMA, SDMA and GBDMA prepares its contingency plans to be followed by DDMAs for the disaster season. **Contingency plans** are prepared based on the disaster forecast as follows:-

DEW	Months	Issued by NDMA	Hazards
Winter	January to March	December	Winter hazards
Summer	April to June	March	Summer hazards
Summer	July to September	June	Monsoon hazards
Winter	October to December	September	Winter hazards

3. **Activation Protocols**. Disaster response should follow a tiered activation system to ensure efficiency, clarity and timely deployment of resources. Tiers are typically defined as:-

a. **Tier 1 – Local Response**

(1) **Scope**. Managed by district/ tehsil authorities with local disaster management teams (DDMA/ EDO offices).

(2) **Activation Criteria**. Small-scale incidents, localized hazards, or early-stage events where local resources are sufficient.

(3) **Responsibilities**. Immediate search and rescue, first aid, local alert dissemination, evacuation of affected communities if required, coordination with nearby districts.

b. **Tier 2 – Provincial Response**

(1) **Scope**. Managed by PDMAs in coordination with district authorities.

(2) **Activation Criteria**. Medium-scale disasters that exceed local capacities, cross-district impact, or sustained events (e.g., extended heavy rainfall, localized floods).

(3) **Responsibilities**. Mobilize provincial assets (rescue teams, medical support, temporary shelters), activate provincial emergency operation centres, coordinate with national agencies for additional support if needed.

c. **Tier 3 – National Response**

(1) **Scope**. Managed by NDMA and NEOC.

(2) **Activation Criteria**. Large-scale or multi-provincial disasters, extreme events threatening national security or critical infrastructure, or exhaustion of provincial resources.

(3) **Responsibilities**. National resource mobilization, cross-provincial coordination, international assistance requests, high-level policy decisions and continuous situation monitoring

d. Activation of response levels should be tied to measurable thresholds and objective indicators:-

(1) **Early Warning Thresholds**. Based on meteorological, hydrological, or hazard-specific indicators (e.g., river levels, rainfall intensity, glacier melt rates, wind speed for cyclones, earthquake magnitude etc).

(2) **Risk Scenarios**. Predefined scenarios (flood, earthquake, smog, hazardous leakage etc) with associated impact severity.

(3) **Resource Exhaustion**. Escalation when local/ provincial resources (personnel, equipment, shelters, medical supplies) reach critical limits.

(4) **Community Impact Indicators**. Fatalities, injuries, population displacement, disruption of critical services.

e. Trigger tables should be pre-scripted and widely disseminated to ensure consistent decision-making.

f. NEOC functions as the operational hub for national-level disaster coordination:-

(1) **Issuance of Activation Orders**. Once triggers are met, NEOC formally issues activation directives to provincial and local authorities.

(2) **Timely Mobilization of Resources**. National assets-including specialized rescue teams, search and rescue teams with limited Hazardous Materials (HAZMAT) capabilities, medical brigades and temporary shelters-are dispatched according to predefined timelines.

(3) **Coordination**. Ensures inter-agency synchronization, including armed forces, health, civil defence, meteorology and humanitarian partners.

(4) **Situation Monitoring**. Continuous tracking of evolving disaster parameters and updating response levels dynamically. Record and disseminate situation reporting.

g. **Response Orders/ SOPs for Various Disasters**. Having standardized, pre-approved SOPs reduces confusion and speeds up disaster response:-

(1) **Disaster-Specific SOPs**. Each disaster type (flood, earthquake, smog, chemical spill etc) has tailored response protocols outlining roles, responsibilities, resource deployment and communication flow.

(2) **Resource Mobilization Orders**. Predefined templates indicate what assets to mobilize, where and when, minimizing delays.

(3) **Community Engagement SOPs**. Include evacuation routes, local alert dissemination (sirens, SMS, apps) and coordination with NGOs for relief.

(4) **After-Action Integration**. SOPs include guidance for post-event reporting, lessons learned and coordination for recovery operations.

4. **Incident Command System (ICS)**. ICS is a standardized, scalable and flexible command framework designed to manage emergency operations effectively. ICS structure for a national-level disaster response under the NEOC framework includes:-

a. **Incident Commander (IC)**. IC is the ultimate decision-maker responsible for overall strategy, prioritization of resources and coordination across all wings. For large-scale hydro-meteorological or multi-hazard events, the IC often operates with senior officials from NDMA, provincial disaster authorities and all key stakeholders.

b. **Operations Section**. Section is devised to manage operations in case of emergencies. Responsible for executing the response plan on the ground. This includes search and rescue, mass evacuation, immediate shelter, health and medical services, fire and chemical incident response and deployment of provincial and district-level field teams. Operational priorities are determined using hazard-specific trigger thresholds.

c. **Planning Section**. Section is devised to plan for the timely and efficient management of emergency situations. Collects, analyses and disseminates real-time situational data. Generates action plans, forecasts hazard evolution (e.g., flood peaks, snow accumulation, smog dispersion) and advises the IC on resource needs and operational gaps. GIS analysts are often embedded here.

d. **Logistics Section**. Ensures timely provisioning of personnel, equipment, medical supplies, food, water and shelter. This involves pre stocking,

coordination with civil supplies, military logistics and private sector partners, especially for mass evacuation or flood relief operations.

e. **Finance/ Admin Section**. Manages disaster-related expenditures, procurement, contracts and financial accountability. Ensures compliance with NDRF guidelines and maintains records for audits and post-event reviews.

f. **Role of NEOC**. NEOC to act as the nerve centre for coordination, real-time information sharing, decision making. NEOC functions as the central hub for national disaster management. Its key roles include:-

(1) **Coordination**. Facilitates inter-agency coordination across federal ministries, PDMAs, armed forces and international partners.

(2) **Real-Time Information Sharing**. Utilizes integrated communication networks to receive updates from meteorological stations, hydrological monitoring, field teams and community-based alert systems.

(3) **Decision Support**. Provides the IC with synthesized intelligence to trigger operational actions based on pre-defined thresholds (e.g., river inflows exceeding 800,000 cusecs at Chenab Headworks).

(4) **Resource Allocation**. Acts as the command centre for deploying national resources through and early coordination with stakeholders.

g. **Role of GIS Tools and Dashboards**. Modern disaster management relies on GIS tools and dashboards to maintain a dynamic COP:-

(1) **Mapping Hazards**. Real-time visualization of floods, snow coverage, smog layers, or chemical hazards allows for risk prioritization.

(2) **Monitoring Infrastructure**. Tracks critical facilities such as hospitals, bridges, dams and evacuation shelters.

(3) **Dashboards for Decision-Makers**. Summarize data on affected populations, road blockages, shelter occupancy and supply status.

(4) **Scenario Modelling**. Simulates potential hazard evolution (glacier melt-induced floods, urban smog dispersion) to inform proactive response.

h. **Liaison Officers**. Liaison officers play a critical role in ensuring effective coordination and avoiding duplication:-

(1) **Federal Stakeholders**. Representatives from key federal stakeholders ensure national and international coordination and resource allocation.

(2) **Provincial Representatives**. Ensure smooth coordination between NEOC and PDMAs.

(3) **Military Liaison Officers**. Facilitate deployment of armed forces assets, including rescue teams, logistics support and engineering units.

(4) **UN/ NGO Liaison Officers**. Provide specialized technical support, humanitarian assistance coordination and ensure alignment with Sphere standards and international best practices.

(5) **Local Government Officers**. Liaison officers continuously feed situation reports back to NEOC, improving response accuracy and timeliness.

5. **Search and Rescue**

a. **Federal Integrated Search and Rescue Recourses**. All federal level responders (Armed forces, Civil Armed forces) to maintains a highly specialized national SAR task force/ urban search and rescue (USAR) capable of rapid deployment in response to major disasters such as earthquakes, floods and landslides etc. Teams are equipped with all essential rescue equipment in addition to cane and hazmat resources.

b. SAR task force/ USAR force is:-

(1) Fully trained in USAR, swift-water rescue and high-angle/ mountain rescue operations.

(2) Equipped with modern tools including hydraulic rescue tools, thermal imaging cameras, drones for aerial reconnaissance, inflatable boats, ropes and heavy machinery for debris removal.

(3) Aerial resources for medical emergencies, firefighting.

(4) UAVs, drones and robotics for immediate response and logistics.

(5) Operationally integrated with the NEOC/ PEOCs ensuring immediate mobilization upon hazard alerts.

(6) Regularly exercised through SAR drills and joint exercises with other PDMAs, the military and humanitarian partners to maintain readiness.

c. **Pre-designated SAR teams**. To ensure rapid and localized response, each province and district should maintain pre-designated SAR teams like Rescue 1122. All PDMAs, GBDMA, SDMA and ICT must develop its rescue services down to district and Tehsil level capable of responding to area specific disasters. Rescue services should be equipped with all essential rescue equipment for various disasters scenarios and emergencies. Essential ground and aerial mobile medical services, firefighting capabilities with drones must be developed not only to respond to daily emergencies situation but to respond in case of area specific disasters.

d. **PDMAs Integrated Search and Rescue**. All PDMAs, GBDMA, SDMA and ICT to maintains a highly specialized provincial SAR task force/ Urban Search and Rescue Force (USAR) capable of rapid deployment in response to major

disasters such as earthquakes, floods and landslides etc. Team is equipped with all essential rescue equipment in addition to aerial, drones, cane and hazmat resources.

(1) Teams are regularly trained in multi-hazard rescue techniques, first aid and disaster triage.

(2) Personnel from civil defence, fire services, police and local volunteers are included in teams.

(3) Equipment caches (life jackets, ropes, stretchers, inflatable boats, cutting tools, drones and robotics) should be pre-positioned in high-risk areas prone to floods, landslides and seismic activity.

(4) Standard Operating Procedures (SOPs) are clearly defined for coordination with national SAR forces, NEOC/ PEOC and local hospitals.

e. **Collaboration with the Military**. Given Pakistan's diverse and often remote terrain, collaboration with the military is crucial:-

(1) NDMA and Pakistan Army/ Air Force/ Pakistan Navy define rapid mobilization of helicopters, fixed-wing aircraft and transport vehicles for search, rescue and medical evacuation (medevac).

(2) Military assets provide specialized capabilities including night operations, mountain rescues, flood evacuations and transport of heavy rescue equipment.

(3) Joint Exercises with military aviation units are conducted periodically to enhance interoperability/ readiness for disasters.

f. **Community Level Engagement** is key to reducing response times in disasters:-

(1) **Volunteers** trained in water rescue, collapsed-structure rescue and first aid serve as first responders before professional teams arrive.

(2) **Training programs** can be coordinated through NDMA, PDMAs and civil society organizations.

(3) **Local Warning Systems**. Community SAR units should be linked to local warning systems (sirens, SMS alerts, mobile apps) to respond immediately during floods, building collapses, or landslides.

(4) **Awareness Campaigns and Drills**. Regular awareness campaigns and drills in schools, Mosques, Religious places and community centres ensure resilience at the grassroots level.

g. **Integration and Coordination**

(1) **Multi-tiered Operations**. SAR operations should be multi-tiered**;** community volunteers form the first layer, provincial/ district teams

provide the second layer and national task forces offer specialized support.

(2) **Communication Protocols and ICS**. Standardized across all levels for seamless coordination.

(3) **Post-event Assessments**. Lessons learnt are incorporated into training modules and equipment upgrades.

h. **Concept of Integrated Search and Rescue Recourses (INSaR)**. The concept is envisioned as a unified, nationally coordinated framework to strengthen Pakistan's search and rescue capacity through the integration of existing response mechanisms, humanitarian partners and trained volunteers. INSaR aims to institutionalize standardized, rapid and specialized search and rescue operations, ensuring an effective and timely response to disasters across Pakistan's diverse geographical and hazard contexts. Five specialised teams as per geography (mountains, plains, deserts, maritime & ICT) have been formulated. Each PDMA has been made responsible to coordinate/ train and equip all available public and private SAR resources in its area of responsibility. INSaR distribution with responsibility across Pakistan is as shown in figure 5.

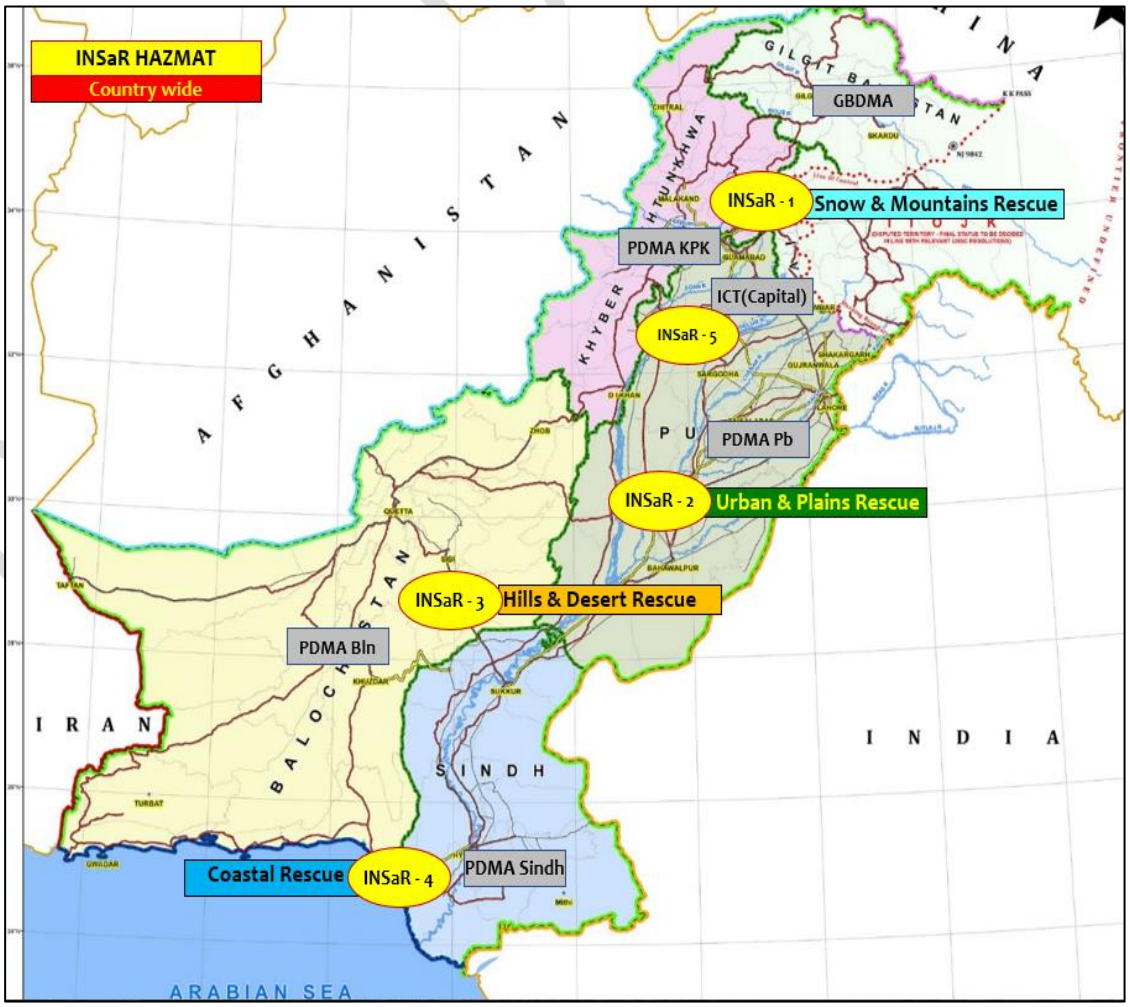

Figure 5: NDMA's INSaR distribution across Pakistan.

6. **Response Mechanism for Vulnerable Groups**. A detailed guideline for vulnerable community-based response, providing hazard-wise triggers, coordination mechanisms and activation checklists for all levels of government is given below:-

a. **Economically Marginalized and Homeless Populations**. People experiencing homelessness, residents of katchi abadis and informal shelters, daily-wage labourers, street vendors, and unemployed or under-employed face heightened exposure risks, displacement and exclusion from relief and compensation. Following measures ensure their inclusion across all DRM phases:-

(1) **Identification & Targeting**. Map informal settlements and high-risk urban pockets as priority zones, maintain UC/DDMA rolls with Civil Society Organization/ Community based organization (CSOs/CBOs). Enable alternative verification where CNICs are missing and deploy mobile NADRA for re-issuance. Apply needs-based targeting even without tenancy documents.

(2) **Early Warning Access**. Disseminate alerts at addas, chowks, markets and transport hubs via loudhailers and SMS/WhatsApp lists, using pictorial and multilingual audio. Pair warnings with clear guidance on shelters, day centres and cash/voucher assistance.

(3) **Evacuation, Shelters & Day Centres**. Remove proof-of-residence barriers; establish seasonal cooling/heating centres near livelihoods; provide secure storage for tools and carts to reduce evacuation resistance.

(4) **WASH & Basic Services**. Ensure 24/7 gender-sensitive toilets and bathing, menstrual hygiene supplies, child-friendly facilities, emergency water points and vector control.

(5) **Health and Mental Health & Psychosocial Support (MHPSS)**. Deploy mobile clinics for primary care, heat/ARI/diarrhoea treatment, missed RI and NCD refills; provide PFA and confidential GBV and substance-use referrals.

(6) **Cash & Livelihoods**. Prioritise unconditional multipurpose cash with simplified KYC offer dignified cash-for-work with child-labour safeguards; protect and replace productive assets.

(7) **Social Protection Linkages**. Fast-track temporary enrolment in poverty alleviation programmes and provincial schemes via on-site helpdesks provide one-stop recovery desks and grievance redress.

(8) **Tenure & Legal Aid**. Prevent forced evictions; ensure consultative, compensated relocation near livelihoods establish legal aid and eviction moratoria during response and early recovery.

(9) **Protection & Accountability**. Train frontline staff on rights-based engagement, zero tolerance for harassment, maintain accessible complaint channels with rapid action.

(10) **Data & Partnerships**. Track sex, age and disability disaggregated data formalise partnerships with vendor unions, worker groups and faith-based charities.

(11) **Urban DRR & Preparedness**. Implement micro-mitigation in informal areas, expand safe vending zones, pre-position essential stocks ahead of hazard seasons.

(12) **Recovery & Reintegration**. Link shelters to stable housing options, provide accelerated skills, micro-grants and mentoring, institutionalise representation of informal groups in local DRM committees.

b. **Family Clusters**

(1) **Household Profiling and Preparedness**. Household profiling should be embedded within multi-hazard vulnerability and risk assessments (MHVRA), CBDRM at UC level, LHW/CHW outreach, social registries and local government datasets with data-protection/ ethical safeguards.

(2) **Family Emergency & Evacuation Plans**. Support each family cluster to develop a simple, visual micro-plan that defines:-

(a) **Clear roles** during alerts/ evacuation (care for young children, older persons/ PWDs, documents, medicines and community coordination focal point).

(b) **Pre-identified, accessible safe locations** (schools, Mosques, community centres, raised platforms or shelters).

(c) **Household early-warning protocols** (who receives, verifies and relays alerts).

(d) **Neighbourhood buddy systems** so households with transport, mobility or connectivity support those without.

(e) **Family-Centred Relief and Services**. During response, use family profiles for registration and prioritisation with attention to households including multiple dependents, women-headed households, gender-diverse persons, homeless families and those with high-care needs. Assistance should be composition-

responsive, including appropriate food and nutrition, dignity kits, assistive devices, medication refills and accessible WASH. Deliver integrated, family-linked services (health, nutrition, GBV mitigation, child protection, PSS and disability-inclusive referrals), ideally through one assigned social worker or volunteer per set of family clusters.

(f) **Family-Based Recovery and Resilience**. In recovery, link shelter, livelihoods and education continuity at the household level to prevent repeat displacement. Ensure re-enrolment of children, especially girls and children with disabilities. Recognise care economy by supporting caregivers, mitigating unpaid care burdens and exploring community-based care or stipends. Systematically connect families to social protection schemes using DRR-sensitive family-cluster data.

c. **Women and Girls**

(1) **Participation & Leadership**. Mandate ≥ 30% women in all DRM bodies; roster/ train women volunteers (first aid, EWS, camp management).

(2) **Early Warning**. Push alerts via LHWs, female teachers/ councillors and verified women's groups/ WhatsApp include evacuation checklists (CNIC/ Nakahama, child items).

(3) **Evacuation/ Shelter**. Female staff at assembly points, privacy partitions, lit pathways, women-only WASH with inside locks routine dignity/ menstrual kits.

(4) **Sexual Reproductive Health (Minimum Initial Service Package)**. Activate within 72 hours, deploy Skilled Birth Attendants/ midwives, Antenatal Care/ Postnatal Care/ Emergency Obstetric and Newborn Care referral, clean delivery kits, contraceptives, psychosocial support.

(5) **Gender-Based Violence**. Confidential referral pathways, women and girls' friendly spaces, female police/ protection cells, community messaging engaging men/ boys.

(6) **Livelihoods and Education**. Cash to women/ Women-Headed Households, women appropriate Cash-for-Women and agriculture/ kitchen-garden inputs, micro-grants/ loans. Temporary Learning Spaces and life-skills/ DRR; track dropouts, enforce child-marriage laws, MHM in schools/ shelters.

d. **Children and Youth**

(1) **Protection**. Activate Child Protection Committees, register/ trace unaccompanied/ separated, supervised interim care.

(2) **Safe Spaces and Psychosocial Support**. Establish Child-Friendly Spaces, youth hubs for information, volunteering, skills.

(3) **Education**. Temporary Learning Spaces within 2-4 weeks, learning kits, flexible shifts, DRR and Psychosocial Support integrated, BBB school WASH/ resilience.

(4) **Health & Nutrition**. Catch-up immunization, paediatrics mobile clinics, Mid-Upper Arm Circumference screening, Blanket/ Targeted Feeding Programs as needed, infant-feeding support.

(5) **Safeguards**. Enforce no child labour in Cash for Work, law enforcement checks on trafficking.

(6) **Youth Recovery**. Vocational/ apprenticeships (masonry, carpentry, solar, tailoring), paid roles in community Information Management/ social mobilization roles.

e. **Older Persons (Elderly)**

(1) **Warning and Evacuation**. Pre-identify, buddy systems, door-to-door alerts, assisted transport, mobility aids on hand.

(2) **Continuity of Care**. Priority queues, mobile geriatric outreach, Non-Communicable Disease medicine refills (including insulin cold chain), replace lost assistive devices.

(3) **Shelter and Relief**. Near entrance sleeping, raised cots, age-sensitive rations, volunteer help for water/ cleaning.

(4) **Psychosocial Support and Roles**. Seniors' corners, group support, engagement as storytellers/ advisors.

(5) **Recovery**. Age friendly housing (ground floor room/ WC, ramps) does not exclude from livelihood assistance.

f. **Persons with Disabilities (PWDs)**

(1) **Registry and Outreach**. Consent-based local registry, annual updates, link to response roll-calls.

(2) **Accessible EWS**. Multi-format alerts (captioning/ sign language interpretation, flashing lights, sirens, door-to-door, plain-language).

(3) **Evacuation/ Rescue**. Train responders, do not separate from assistive devices, evacuation chairs, ground-floor sheltering.

(4) **Accessible Services**. Ramps, wide aisles, accessible latrines, disability help desk, priority/ door delivery, notices in large print, verbal rounds.

(5) **Assistive/ Medical**. Rapid provision/ replacement (wheelchairs, crutches, canes, hearing aids/ batteries), continuity of epilepsy/ psychotropic meds; early rehab/ prosthetics outreach.

(6) **Inclusion and Rights**. Anti-abuse monitoring, equitable cash/ housing, peer groups, after-action reviews, align with Convention on the Rights of Persons with Disabilities/ Inter-Agency Standing Committee (IASC).

g. **Transgender and Gender Diverse Persons**

(1) **Registration & Safety**. Staff sensitization, honour third gender options, engage guru-chela networks, offer voluntary clustering for safety.

(2) **Facilities and Services**. All-gender single use WASH, choice-based accommodation, respectful healthcare (including hormone-therapy continuity where feasible), equal access to Cash-for-Work/ livelihoods.

(3) **Protection**. Zero-tolerance on harassment, focal grievance channels, police coordination. documentation; fast-track CNIC re-issue via mobile NADRA.

(4) **Recovery**. Partner with Community Based Organisations for skills/ micro-enterprise, inclusive Mental Health and Psychosocial Support.

h. **Ethnic and Religious Minorities**

(1) **Culturally Competent Relief**. Respect dietary rules, enable worship/ prayer spaces, dignified burial rites.

(2) **Language Access**. Interpreters/ bilingual volunteers, translated Information, Education and Communication, pictorial signage, minority language radio.

(3) **Representation and Fairness**. Include minority leaders in committees/ targeting, third-party monitoring, active grievance redress.

(4) **Security**. Law-enforcement presence where tensions exist, integrated camp teams, counter hate speech with factual messaging.

(5) **Women and Children**. Female outreach from within communities, equal priority for minority schools, bridging classes where needed.

i. **Migrants, Refugees, and Internally Displaced Persons (IDPs)**

(1) **Planning and Inclusion**. Map migrant/ IDP/ refugee sites, integrate into EWS/ evacuation, coordinate with UNHCR.

(2) **Aid Access**. Provide alternatives to CNIC (attestations/ UNHCR IDs); support host families.

(3) **Protection**. Voluntary, dignified relocations, sphere aligned camps, monitor family separation/ exploitation, uphold guiding principles on internal displacement.

(4) **Legal Aid and Documents**. Mobile NADRA, legal desks for tenancy/ wage disputes and lost documents.

(5) **Livelihoods and Cohesion**. Include in skills/ Cash-for-Work, where lawful, joint host IDP committees/ projects, transparent communication on entitlements.

7. **Relief Distribution**. To ensure timely response during disasters, NDMA and PDMAs maintain pre-positioned stocks of essential relief items near disaster prone areas. Food rations, medical supplies and other supplies are procured through emergency procurements procedures during disasters. Warehouses are strategically located across provinces especially near flood prone river basins, mountainous areas and major urban centres to reduce lead time for relief deployment. Selection of these sites considers accessibility during extreme weather, road networks, proximity to vulnerable populations and security conditions. Regular audits and inventory management systems ensure stock rotation and replenishment of perishable items. To avoid duplication, ensure transparency and reach those most in need, SOPs are developed at national and provincial levels. These procedures define:-

a. **Beneficiary Selection Criteria**. Every affected person is provided relief, but children, elderly, persons with disabilities, women-headed households and those in remote or high-risk zones should be prioritized.

b. **Distribution Protocols**. Systematic registration at distribution points, use of QR code or biometric verification where feasible and maintaining a tracking system to prevent diversion of goods.

c. **Monitoring and Reporting**. Daily logs, photographs and situation reports shared with NEOC/ PEOCs to enable real-time adjustments.

d. **International Humanitarian Standards**. SOPs are aligned with international humanitarian standards (Sphere Standards: a foundational set of humanitarian principles and minimum standards for quality aid in crises) while being adapted to Pakistan's socio-cultural context.

e. **Logistical Challenges**. Relief delivery in Pakistan faces diverse logistical challenges, flooded plains in Sindh and Punjab, mountainous valleys in KP, GB and AJ&K, vast diverse terrain in Balochistan and urban congestion in Punjab. Regular drills and pre-mapped routes enhance efficiency during actual operations. To address this, mobile units are deployed based on terrain:-

(1) **Trucks and 4x4 Vehicles**. For road-accessible areas during floods or urban emergencies.

(2) **Boats and Amphibious Vehicles**. In riverine and inundated regions, especially Sindh and Punjab during monsoon flooding.

(3) **Air Transport (Helicopters, Cargo Planes, Drones)**. For remote or inaccessible areas such as upper KP, GB and AJ&K where road infrastructure is limited.

f. **Collaboration**. Effective humanitarian response relies on collaboration between federal agencies, provincial authorities, local government and humanitarian partners. NDMA coordinates with PDMAs, DDMAs, UN agencies, NGOs, INGOs, national resource and community-based organizations to:-

(1) Identify beneficiaries and verify needs.

(2) Allocate relief stocks to PDMAs/ DDMAs for distribution.

(3) Utilize local volunteers, community leaders and civil society networks through PDMAs/ DDMAs for culturally sensitive delivery.

(4) Conduct post-distribution monitoring to ensure equitable reach and address gaps.

g. **Benefits**. This integrated approach minimizes duplication, improves accountability and ensures rapid and targeted support to populations affected by disasters.

8. **Health, WASH and Protection**. Rapid Needs Assessments (RNA) are critical to identify immediate requirements and prioritize interventions after a disaster. Within the first 72 hours, specialized multi-sectoral assessment teams should be deployed to affected areas:-

a. **Health**. Evaluate the number of injured, availability of local health facilities, stock of essential medicines and health personnel capacity. Focus on trauma care, maternal and child health and continuity of care for chronic diseases.

b. **WASH (Water, Sanitation and Hygiene)**. Assess access to safe drinking water, functionality of sanitation facilities, hygiene risks and potential contamination sources. Identify immediate interventions such as water trucking, latrine construction and distribution of hygiene kits.

c. **Protection**. Identify vulnerable populations, including children, elderly and persons with disabilities, transgender persons, ethnic and religious minorities. Rapidly assess risks of gender-based violence (GBV), child labour, or trafficking. Establish temporary safe spaces and community monitoring mechanisms.

d. **Standardized Protocols**. Protocols should follow tools like the ISAC (the UN's top humanitarian coordination body) guidelines and be coordinated with the

NDMA, PDMA and local humanitarian actors to ensure data sharing and rapid decision-making.

e. **Service Delivery**. Immediate service delivery requires pre-positioned emergency resources:-

(1) **Emergency Health Kits**. These include primary healthcare kits, trauma kits, maternal and neonatal kits and essential medicines. Kits are kept ready for rapid transport via road or air, depending on accessibility.

(2) **Mobile Clinics**. Mobile units enable access to remote or heavily damaged areas. Equipped with basic diagnostic tools, medicines and staff, these clinics can provide outpatient consultations, vaccinations, maternal care and minor surgical interventions.

(3) **Water Purification Units**. Deployment of portable water treatment systems ensures access to safe drinking water, reducing outbreaks of waterborne diseases such as cholera or diarrhoea. Coordination with local authorities ensures rapid distribution and monitoring of water quality.

f. **Responsible Agencies**. Agencies like NDMA, PDMAs, DDMAs and LEAs often coordinate these deployments, with pre-identified staging areas near vulnerable districts for faster mobilization.

g. **Protection Measures**. Protection measures are integral to emergency response in Health, WASH and Protection sector:-

(1) **Child Safeguarding**. Set up child-friendly spaces, temporary learning centres and family tracing mechanisms. Ensure children are shielded from exploitation, trafficking and abuse.

(2) **Gender-Based Violence (GBV) Prevention**. Provide safe shelters, confidential reporting mechanisms and mobile outreach services. Awareness campaigns and engagement with community leaders can prevent secondary risks.

(3) **Psychosocial Support (PSS)**. Deploy trained counsellors and social workers to offer trauma care, mental health support and community-based psychosocial interventions. Integrating PSS into primary healthcare and schools ensures wider coverage and early identification of vulnerable individuals.

h. **Guidelines**. Guidelines such as the IASC minimum standards for protection in Humanitarian Action and Pakistan's National Child Protection Policy can be adapted in emergency settings.

i. **Disease Outbreaks**. Natural disasters often increase the risk of disease outbreaks due to overcrowding, contaminated water and disrupted healthcare systems. Critical actions include:-

(1) **EWS**. Activate syndromic surveillance in shelters and affected communities to monitor for outbreaks of cholera, dengue, malaria and respiratory infections.

(2) **Vaccination and Vector Control**. Conduct rapid vaccination campaigns where applicable and implement vector control measures in flood or stagnant water areas.

(3) **Coordination with Health Authorities**. Link local health facilities, mobile clinics and laboratories to central reporting through international standardised mechanisms. Coordination with National Ministry of Health, National Institute of Health (NIH), WHO Pakistan and provincial health departments ensures timely detection, reporting and control of disease outbreaks.

(4) **Public Awareness**. Disseminate hygiene promotion, food safety and outbreak prevention messages through multiple channels (SMS, radio, community leaders).

9. **Logistics and Supply Chain**. Logistics and supply chain management is **a critical enabler** of a successful disaster response mechanism:-

a. **Private Logistics Companies**

(1) To ensure rapid mobilization of relief supplies, NDMA and PDMAs maintain pre-arranged contractual agreements with private logistics companies, trucking services and air cargo operators. These contracts allow immediate deployment of transport resources during emergencies, avoiding delays caused by procurement procedures.

(2) Agreements typically include pre-negotiated pricing, transport capacity, delivery timelines and clearly defined service level agreements (SLAs), ensuring predictable and reliable performance during disasters such as floods, earthquakes and snow emergencies etc. By having pre-negotiated contracts, authorities can scale operations quickly, whether moving tents and food to remote Northern areas during winter or transporting emergency medical supplies after floods.

b. **Military Support**. Military assets provide essential logistical support in large-scale disasters, especially in areas inaccessible to civilian transport. Pakistan Army, Air Force and Navy possess rapid deployment capabilities, including helicopters, transport aircraft, heavy vehicles and engineering units that can clear roads and set up temporary bridges. Military logistics support complements civilian efforts, particularly in remote regions like GB, AJ&K, Balochistan or flood affected districts of Sindh and Punjab. Established integration protocols between NDMA and the Armed Forces ensure that military support is coordinated efficiently, avoiding duplication and enabling rapid delivery of essential relief items such as food, medical supplies and emergency shelters.

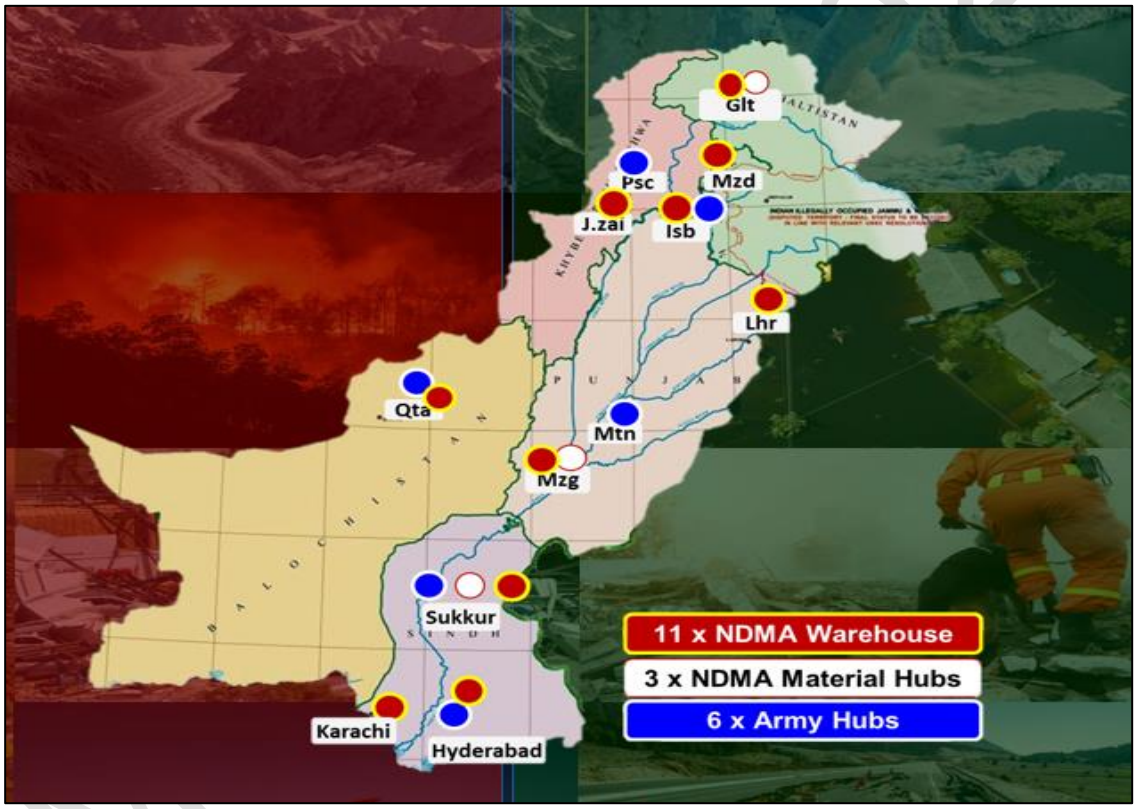

Figure 6: NDMA's and Pakistan Army logistic warehouses across Pakistan.

c. **Inventory Management**. A digital inventory management system is critical for tracking available relief stocks at national, provincial and district levels. NDMA utilizes centralized digital platforms to monitor stock levels of tents, blankets and other essentials items. System allows real-time updates, automated replenishment alerts and efficient allocation of resources to affected areas. Incorporating GIS based mapping helps visualize stock availability in relation to disaster impacted locations, facilitating timely and targeted distribution. Digital systems also enable integration of donor contributions, private sector support and international humanitarian assistance, ensuring that stock movement is traceable and accountable.

d. **Supply Chain Mechanism**. NDMA has stockpile of relief Items as per National Stocking Guidelines of 2023. NDMA has warehouse all over Pakistan for rapid and effective response to disaster management as mentioned earlier. NDMA dispatches relief assistance to PDMA's and DDMA's on instructions of National Authority and PMO. PDMAs and DDMA are responsible for the distribution of relief items to disaster victims. NDMA employs reporting mechanisms that track the dispatch, transit and receipt of relief goods. SOP require detailed documentation of all movements, including vehicle logs, delivery receipts and beneficiary lists. Integration with mobile applications and GIS dashboards allows stakeholders, including PDMAs, DDMAs and donors, to monitor operations in real-time. This ensures equitable distribution, minimum wastage and provides a framework for after-action reviews and lessons learned, which are critical for refining disaster response plans.

10. **Coordination with Military, NGOs, Private Sector**. Pre-coordination significantly reduces operational bottlenecks, clarifies roles and strengthens accountability, leading to faster and more effective multi-sectoral response. To ensure a rapid, coordinated and legally supported response, NDMA and PDMAs should coordinate with key stakeholders:-

a. **Military**. Pre-coordination with Pakistan Armed Forces enables immediate deployment of personnel, heavy machinery and air support for rescue, evacuation and relief operations. This ensures seamless integration of military resources under a civilian led command during large-scale disasters.

b. **NGOs and Civil Society Organizations (CSOs)**. Coordination with national and international NGOs provide pre-agreed access to humanitarian assets, volunteers and local networks. This prevents delays during critical initial hours of disaster response.

c. **Private Sector**. Coordination with private logistics, transport and communication companies guarantee that their resources can be mobilized quickly for emergency supply chains, IT support and rapid infrastructure restoration.

d. **Multi-Agency Sectoral Coordination**. Daily sectoral coordination prevents duplication of efforts, identifies services gaps and ensures accountability among all actors. During disaster response, multi-agency sectoral coordination is essential for efficient service delivery:-

(1) **Health Sector**. Coordination among hospitals, mobile medical teams and health NGOs ensures that triage, emergency care and disease surveillance are systematically addressed. Daily meetings allow monitoring of patient inflow, stock levels of medicines and outbreak risks.

(2) **WASH (Water, Sanitation and Hygiene)**. Coordinated efforts between municipal authorities, NGOs and UN agencies ensure clean water provision, waste management and disease prevention in temporary shelters. Regular briefings help prioritize areas of highest need and monitor progress.

(3) **Shelter and Relief**. Collaboration among government agencies, NGOs and the private sector ensure timely distribution of essential items. Daily meetings facilitate tracking of population coverage, site safety and gender-sensitive arrangements.

e. **Humanitarian Coordination**. A dedicated Humanitarian Coordination within the NEOC acts as the central liaison between the government, NGOs and UN agencies. Centralized liaison ensures strategic coordination, enhances situational awareness and strengthens trust between government and humanitarian actors:-

(1) Functions include information management, situational reporting and prioritization of requests from the field.

(2) Acts as a single point of contact for NGOs and UN agencies, streamlining approval processes for relief activities and reducing duplication.

(3) Supports joint assessment missions and coordinated planning, ensuring that humanitarian standards are upheld.

(4) Monitors donor funded projects and ensures transparency.

f. **Private Sector Engagement**. Leveraging private sector expertise and infrastructure reduces response time, improves operational efficiency and introduces innovative solutions to disaster management challenges. Engaging the private sector can significantly enhance disaster response capacity through:-

(1) **Logistics**. Companies with transport networks, warehousing and cold chain facilities supplement government capabilities, enabling faster distribution of relief items.

(2) **Technology**. IT firms and telecom companies provide EWS, GIS mapping, drone surveys and mobile apps for real-time reporting and coordination.

(3) **Finance**. Financial institutions assist with emergency funding, risk financing instruments and rapid disbursement of cash assistance to affected populations through mobile banking.

CHAPTER – 6

RECOVERY AND REHABILITATION

1. **Legal Framework**. As per Section 11 (c) of NDM Act 2010, "NDMA is required to lay down Ex-Gratia Assistance Guidelines on account of loss of life and also assistance on account of damage to houses and for restoration of means of livelihood". Accordingly, NDMA prepared "Guidelines for Minimum Ex-Gratia Assistance to the Persons affected by Natural and Man-Made Disasters" which were approved by the Honourable Prime Minister of Pakistan in 2016 and circulated throughout the country. Keeping in view the experiences of Floods 2022, NDMA has drafted necessary amendments in Ex-Gratia Assistance Guidelines which shall be shared with all concerned once approved by the NDMC. All provinces being the preliminary responsible are mandated to formulate respective Ex-Gratia Assistance Guidelines on account of loss of life and damage to houses and for restoration of means of livelihood.

2. **Short Term Recovery (0-6 months)**. RNA is a critical first step post-disaster to determine the scale, type and impact of damage. In Pakistan, this is typically conducted under the coordination of NDMA, PDMAs and relevant line ministries. Key elements include:-

a. **Multi-Sectoral Assessment**. Covering health, education, infrastructure, agriculture, housing and livelihoods.

b. **Data Collection Methods**. Field surveys, remote sensing (satellite imagery), drone reconnaissance and community-level reporting.

c. **Timeline**. Rapid assessment within 24-72 hours post-disaster ensures early mobilization of resources.

d. **Integration with GIS**. Mapping affected areas for prioritization of response.

e. **Outcome**. Provides evidence-based guidance for resource allocation, emergency funding and coordination with humanitarian partners.

f. **Multi-Pronged Approach**. Disasters often displace communities, damage housing and disrupt livelihoods. A multi-pronged approach is critical:-

(1) **Interim Shelter**. Temporary shelters (tents, prefabricated structures, or community centres) are culturally appropriate, safe and resilient to weather conditions. NDMA often coordinates with PDMAs and NGOs for relief camp establishments.

(2) **Cash Assistance**. Direct cash transfers enable affected families to meet immediate needs (food, medicines, rent). Programs are linked to various financial transition means available.

(3) **Livelihood Support**. Short term employment programs (cash-for-work, agricultural input provision, skill training) help restore economic stability

and prevent long term dependency. Coordination with microfinance institutions and local NGOs enhances effectiveness.

g. **Critical Infrastructure**. Maintaining or restoring critical infrastructure is vital to prevent secondary disasters and ensure continuity of life:-

(1) **Water Supply**. Damage to pipelines or contamination of drinking water is addressed via mobile water treatment units, bottled water distribution and repair of existing systems.

(2) **Electricity**. Rapid deployment of generators, repair teams and temporary grid restoration ensures hospitals, communication centres and emergency shelters remain operational.

(3) **Transport and Roads**. Clearance of debris, temporary bridges and road repairs are prioritized to allow humanitarian access.

(4) **Communications**. Mobile networks, satellite phones and emergency radio networks ensure coordination between NDMA, PDMAs/ field teams.

h. **Psychological and Social Support**. Disasters cause trauma and disruption in social networks. Effective response must address psychological/ social needs:-

(1) **Psychosocial Support**. Counselling, trauma therapy and mental health outreach by trained professionals/ volunteers. School based programs for children and group sessions for women and men enhance resilience.

(2) **Community Mobilization**. Local communities are engaged in needs assessment, distribution of aid and shelter management. This empowers affected populations, ensures culturally sensitive interventions and strengthens social cohesion.

(3) **Capacity Building**. Training local volunteers in first aid, search and rescue and basic disaster preparedness fosters long term resilience.

3. **Medium Term Recovery (6-24 months)**. Reconstruction planning in Pakistan must be anchored in the BBB approach, ensuring that restored infrastructure, services and social systems are more resilient than pre-disaster conditions. This aligns with Sendai Framework Priority - 4 and NDMA's national guidelines. BBB promotes integrating hazard resistant standards, future climate projections and land use planning into all reconstruction processes. It requires revising zoning laws in hazard prone districts, discouraging rebuilding in floodplains/ unstable slopes and prioritizing resilient materials and methods. Planning process should be informed by PDNA assessments, sectoral loss/ damage data and provincial recovery frameworks to ensure systematic, long-term resilience rather than reactive rebuilding. All reconstruction of public and private infrastructure, housing, health facilities, schools, bridges, roads, irrigation systems must follow risk informed engineering designs that respond to

Pakistan's multiple hazard threats; floods, earthquakes, landslides, cyclones, drought and GLOFs etc. This risk-informed approach must be integrated into project development, provincial planning and all donor funded reconstruction, with NDMA/ PDMA oversight for quality assurance and compliance. Examples include:-

a. **Flood resistant housing**. Housing using raised plinths, local materials, improved drainage, floodwalls, waterproof materials and site relocation where unavoidable risks exist.

b. **Earthquake resistant structures**. Structures following Pakistan Building Code (PBC-2021), with mandatory structural reinforcements in high seismic zones.

c. **Drought resilient water infrastructure**. Water infrastructure including lined canals, rainwater harvesting systems and solar-powered water pumps in arid regions.

d. **Climate smart public buildings**. Public buildings designed with energy efficiency, ventilation, heat resilient roofing and disability friendly features.

e. **Recovery Components**. Resilient recovery requires restoring livelihoods of affected populations across rural and urban areas. Key components include:-

(1) **Agriculture**

(a) Provision of improved seed varieties, fertilizers, farm tools, small scale irrigation assistance and livestock restocking for flood and drought-affected communities.

(b) Promotion of climate resilient crops, integrated pest management and soil restoration techniques.

(c) Assistance in rehabilitating damaged tube wells, watercourses and community water storage schemes.

(2) **Small Businesses and Local Markets**

(a) Micro-grants and soft loans through Small and Medium Enterprises Development Authority (SMEDA), provincial social protection authorities and partner NGOs to help small enterprises restart operations.

(b) Support to re-establish damaged marketplaces, carpentry shops, handicraft units, fisheries and local services.

(c) Digital literacy and e-commerce training for youth and women entrepreneurs.

(3) **Vocational and Skills Training**. Risk-informed approach must be integrated into project development, provincial planning and all donor

funded reconstruction, with NDMA/ PDMA oversight for quality assurance and compliance.

(a) Technical and vocational training programs (TEVTA, NAVTTC) for trades such as masonry, plumbing, electrical works, IT skills aligned with reconstruction needs.

(b) Women focused livelihood programs (stitching centres, livestock management, food processing) to accelerate inclusive recovery.

f. **Institutional Capacity Building**. Long term resilience requires stronger institutions at PDMA, DDMA, Tehsil and Union Council levels. Institutional strengthening ensures that recovery is not a onetime activity but builds the foundations for future risk management and improved response capacity. Capacity strengthening should include:-

(1) **Training and certification** for government officials on DRR, recovery planning, ICS, GIS mapping, hazard assessment and climate adaptation.

(2) Establishment or upgrading **District Emergency Operations Centres (DEOCs)** with communication, EWS and SOPs.

(3) Enhancing capacity of municipal departments for **debris clearance, drainage management, building inspections and hazard mapping**.

(4) Developing standardized **post disaster assessment tools**, ensuring uniformity in reporting losses, damages and recovery needs.

(5) Integrating DRR and climate resilience into **local development plans**, district budgets and sectoral planning.

(6) **Strengthening coordination mechanisms** between NDMA, PDMAs, DDMAs and line departments using digital monitoring platforms, portals and resource-tracking systems.

4. **Long Term Reconstruction**. Embedding DRR into national and provincial urban planning ensures that cities grow safely, infrastructure remains functional during hazards and vulnerability reduces over time. For Pakistan, this means:-

a. **Risk Informed Master Planning**

(1) Urban and municipal master plans must reflect updated multi hazard maps (floods, earthquakes, landslides, heatwaves, smog etc).

(2) City Development Authorities should integrate hazard zoning to regulate construction in floodplains, fault-line zones and unstable slopes.

(3) Inclusion of climate risk projections ensures future hazards are accounted for and long-term vulnerabilities reduced.

b. **Land Use Regulations Based on Hazard Assessments**

(1) Land use by laws mandates low risk land allocation for settlements, industrial zones, educational institutions, hospitals/ critical infrastructure.

(2) No development zones are enforced around rivers, nullahs, wetlands, active flood ways and steep mountainous terrain.

(3) Safe relocation plans are developed for highly vulnerable informal settlements especially in vulnerable zones.

c. **Integrating DRR in Infrastructure Planning**. Roads, bridges, culverts and embankments must be designed with hazard resilient specifications:-

(1) Flood resistant embankments.

(2) Earthquake resilient structural designs.

(3) Adequate drainage to prevent urban flooding.

(4) Slope stabilization in Northern regions.

d. **NEOC/ PMD/ PCIW/ SUPARCO data** is integrated at the planning stage to avoid infrastructure in hazard hotspots.

e. **Infrastructure Lifeline Facilities** Hospitals, communication systems, NEOC/ PEOC sites, power, water supply) must be built to continue functioning during disasters.

f. Institutionalizing Pakistan School Safety Framework at the heart of community response. A school to be positioned as the central DRR Hub and a training and resilience building resource of the surrounding community.

g. **Building resilience** at household and community level significantly reduces disaster losses. In Pakistan's context:-

(1) **Minimum Resilience Standards**

(a) Conduct infrastructure audit of all public and private buildings.

(b) NDMA, PEC and Building Code of Pakistan-2021 should enforce hazard-specific standards:-

i. Earthquake resistant structures in KP, GB, AJ&K, Quetta.

ii. Flood resistant housing in Punjab, Sindh, KP riverine belts.

iii. Windstorm resistant roofing in coastal and desert areas.

(c) Incorporation of low-cost resilient design options for rural areas (e.g., raised plinths, reinforced walls, cross-bracing).

(2) **Upgrading Existing Housing**

(a) Infrastructure audit of all public and private buildings.

(b) Programs for retrofitting vulnerable buildings in high-risk zones.

(c) Incentivizing use of local, sustainable materials (compressed earth blocks, bamboo reinforcement, fiber/ heat resilient roofing).

(3) **Resilient Infrastructure Expansion**

(a) Ensuring transport networks, utilities and communication lines are climate/ disaster resilient, especially in vulnerable zones.

(b) Strengthening schools and hospitals under "BBB".

(4) **Adaptation Policy**. Government policy can accelerate adoption of DRR practices across all sectors:-

(a) **Financial Incentives for Compliance**

i. Financial assistance and tax incentives may be provided to both public and private entities that adopt and comply with resilient construction standards.

ii. Subsidies may be offered for retrofitting existing structures with resilient materials such as steel reinforcement, RCC frames and disaster resilient roofing.

(b) **Housing Reconstruction Grants**

i. Post disaster recovery funding linked with adherence to DRR standards (as done in 2005 ERRA earthquake model).

ii. Conditional cash grants for affected households adopting hazard resilient housing designs.

(c) **Private Sector and Construction Industry Engagement**

i. Soft loans for builders and contractors who follow PEC-approved hazard resilient designs.

ii. Encouraging public-private partnerships for resilient infrastructure development (roads, dams, drainage, public buildings).

(5) **Community Involvement**. Effective DRR and reconstruction require local ownership and direct involvement of communities:-

(a) **Community Needs Assessment**

i. Communities are encouraged to participate in damage and needs assessment (DNA) process.

ii. Ensure representation of women, elderly, differently abled and marginalized groups.

(b) **Community Based DRR (CBDRM) Structures**

i. Strengthen Village Disaster Management Committees (VDMCs)/ Community Emergency Response Teams (CERTs).

ii. Enable communities to identify high risk areas (flood routes, unstable slopes), evacuation paths and shelter sites.

(c) **Locally Appropriate Designs**

i. Housing designs co-created with communities ensure cultural acceptability and affordability.

ii. Use participatory planning tools (hazard mapping, resource mapping, community design sessions).

(d) **Accountability and Transparency**

i. Public posting of reconstruction plans, budget allocations and progress updates to ensure community oversight.

ii. Feedback mechanisms (hotlines, social accountability forums) to address community concerns rapidly.

(e) **Livelihood and Social Recovery**

i. Integrate livelihood rehabilitation (cash-for-work, skills training, agriculture recovery) into reconstruction.

ii. Promote local labour and artisans in the rebuilding process, ensuring economic revival.

5. **"Build Back Better (BBB)" Principles**. Pakistan's NDRP and National Building Codes emphasize **climate smart reconstruction** to reduce vulnerability to future disasters:-

a. **Hazard-Specific Structural Designs**

(1) **Flood-resilient housing** using raised plinths (minimum safe elevation as per local flood history), reinforced foundations, flood resistant bricks and use of openings for water passage in super critical flood zones.

(2) **Earthquake resilient construction** following Building Code of Pakistan (BCP-2007) with seismic resistant joints, proper steel reinforcement and quality-controlled concrete.

(3) **Wind and storm-resistant roofs** in coastal areas, including anchoring systems and wind break design.

b. **Use of Sustainable and Locally Available Resilient Materials**

(1) Compressed stabilized earth blocks (CSEB), treated timber, fiber reinforced blocks and high-durability cement for waterlogging zones.

(2) Salt resistant materials in coastal Sindh and Thar, where salinity degrades conventional construction.

(3) Heat resistant roofing materials in high temperature regions (Punjab plains, Sindh) to reduce heatwave vulnerability and energy load.

c. **Resilience Through Design**. Resilience through design measures directly support “BBB” principles and reduce long term reconstruction costs:-

(1) **Integrated drainage systems** around new settlements.

(2) **Rainwater harvesting systems** and climate-smart roofing.

(3) Orientation of buildings for **natural ventilation** to reduce heat stress.

(4) Use **permeable pavements** and green belts for reducing urban flooding.

d. Pakistan’s shift toward **risk informed development planning** is a central requirement under the NDRP and the Sendai Framework:-

(1) **Integration of DRR Across Ministries and Sectors**

(a) Embedding DRR checklists and climate risk screening in all PC-1, PC-2 and PC-3 (standard forms used in Pakistan's development project lifecycle by the Planning Commission (PC) for proposal, feasibility, and progress reporting) project documents.

(b) Requiring ministries (Housing, Power, Water Resources, Health, Education) to integrate hazard resistant standards in development programs.

(c) DRR guidelines in **National Development Framework (NDF)**, **Five Year Plans** and **PSDP** allocations.

(2) **Mandatory Risk Assessments for All Infrastructure**

(a) Every major project dam, highways, power plants, housing schemes must undergo **Environmental and Climate Resilience Screening** led by NDMA, Ministry of Climate Change and Planning Commission.

(b) Local governments required to align district development plans with **District Disaster Management Plans (Damp’s)**.

(3) **Budgetary Provisions for DRR**

(a) Ring fenced funds for resilience (Funds reserved for Emergency procurement for 0.5 million People).

(b) Failure to integrate DRR now leads to rejections or revisions PC-1 projects in risk prone areas.

(4) **Institutional Capacity Building**

(a) Training of line departments, planners and consultants to

implement DRR integration standards.

(b) Development of national toolkits for DRR mainstreaming (building codes, risk maps, DRR indicators).

e. NDRP stresses inclusivity and equitable recovery, ensuring no vulnerable group is left behind:-

(1) **Gender Sensitive Reconstruction**

(a) Designing shelters and houses with:-

i. Separate, safe WASH facilities for women and girls.

ii. Private spaces for breastfeeding and caregiving needs.

iii. Secure lighting, safe access paths and lockable spaces.

(b) Ensuring women's participation in:-

i. Damage assessments.

ii. Beneficiary selection committees.

iii. Cash-for-work and livelihood restoration.

(2) **Disability Inclusive Design**. All reconstructed facilities must follow **Universal Design Principles**, ensuring:-

(a) Ramps, handrails, tactile paths and non-slip surfaces.

(b) Accessible latrines and water points.

(c) Emergency exits usable by people with mobility challenges.

(d) Accessible signage, including braille and high-contrast indicators.

(3) **Inclusion in Decision Making**. Representation of women, elderly, persons with disabilities and minorities in:-

(a) Village Reconstruction Committees (Vices),

(b) Monitoring bodies.

(c) Social accountability mechanisms.

(4) **Inclusive Livelihood Restoration**

(a) Tailored livelihood support for women headed households, people with disabilities and marginalized groups.

(b) Skills training and microfinance programs accessible to all.

(5) Accountability is a core principle of NDRP, ensuring trust, transparency and proper use of reconstruction funds:-

(a) **Structured Community Participation**. Establish **Community Based Disaster Management Committees (CBDMCs)** that participate in:-

i. Needs assessments.

ii. Reconstruction planning.

iii. Monitoring of ongoing works.

iv. Beneficiary verification.

(b) **Social Accountability and Transparency**. Public disclosure of:-

i. Funds allocated.

ii. List of beneficiaries.

iii. Progress reports.

iv. Reconstruction standards.

v. Display boards at reconstruction sites showing approved design, government/ partner contribution and timeline.

(c) **Grievance Redress Mechanisms**

i. Dedicated complaint centres at district and tehsil levels.

ii. Toll free helplines and SMS complaint systems.

(d) **Community Monitoring Teams**

i. Community led audits of reconstruction quality.

ii. Use of digital tools (GIS based monitoring, mobile data collection apps) to ensure transparency.

(e) **Partnerships with Local Organizations**. Engaging women led groups, disability rights organizations and local NGOs to support monitoring and awareness.

CHAPTER – 7

FINANCING AND RESOURCE MOBILIZATION

1. **National Disaster Risk Financing Strategy**. Pakistan's disaster financing has historically been event driven, where funds are mobilized after a major emergency through ad-hoc grants, supplementary budgets or donor appeals. For an effective NDRP, approach has been shifted toward proactive, pre-disaster financing, ensuring resources are available before a hazard materializes. This approach has resulted in:-

a. **Advance financing of risk assessments, vulnerability mapping and simulation exercises** conducted ahead of crisis seasons (monsoon, winter, drought cycles etc).

b. **Integration of disaster risk financing into national and provincial planning cycles,** ensuring that PSDP and ADPs include mandatory DRR allocations.

c. International recognition of **DRR as an investment** rather than a cost, ensuring that every rupee spent on preparedness reduces future losses exponentially.

2. **National Disaster Management Fund (NDMF)**. NDMF serve as Pakistan's primary financial instrument for DRR, response and established to channel government and donor financing at federal level. Under the NDM Act, 2010, the Federal Government constituted a fund called the NDMF, to be administered by the National Authority (NDMA) for meeting expenses for emergency preparedness, response, mitigation, relief and reconstruction (NDM Act: Chapter IX "Finance, Accounts and Audit", section on "National fund for disaster management", pp. 17–18). Under the NDRP, NDMF has been positioned as a central pillar of national risk financing by ensuring it supports the full disaster management cycle. This aligns with the Act's definition of "disaster management" covering preparedness, response, recovery/rehabilitation and reconstruction (NDM Act: Definitions, p. 2). NDMF has been utilized for the following:-

3. **Provincial Contingency Funds (PCFs)**. Each PDMA maintains a legally mandated Provincial Disaster Contingency Fund that:-

a. Is separate from general revenue budgets and protected from reappropriation.

b. Allows instant activation upon NDMA/ PDMA triggers or forecast based warning (e.g., monsoon threat levels, GLOF alerts, heatwave red alerts etc).

c. Supports rapid deployment of rescue teams, emergency transport, temporary shelter, water supply, medical response and logistics.

d. Funds localized preparedness activities such as river training, embankment strengthening, fuel reserves, winter contingencies and SAR capacity building.

e. **Legal and Institutional Measures**

(1) Funds have been established under **NDM Act**, ensuring transparency

and audit compliance.

(2) Resource utilization tracking systems has been implemented (As per National DM Logistics Stock Reserves Instructions - 2023) at PDMA level.

(3) Local government co-financing mechanisms have been encouraged for high-risk districts.

f. This framework has improved predictability of funding, enabling **quick recovery and reconstruction** without reliance on donor pledges or supplementary budgets.

g. This mechanism aligns with Sendai Framework Priority-3 on **investing in resilience** and is already being piloted in several developing countries through the World Bank's Disaster Risk Financing (DRF) programs.

h. To ensure equitable access to disaster risk financing across Pakistan, the NDRP has institutionalized:-

(1) District-level participation supported through **further micro-subsidies** for highly vulnerable districts. [NDM Act 2010: s.20; s.25; s.30]

(2) Ensures **uniform national coverage**, supporting NDMA's mandate of coordinated federal-provincial disaster preparedness. [NDM Act 2010: s.9; s.16]

i. Enhances public trust through transparent, rule-based financing release defined in the NDRP and NDMA's Financial Rules. This strengthens Pakistan's transition from reactive disaster relief to **anticipatory and pre-financed emergency management**. [NDM Act 2010: s.29; s.30; s.32].

4. **External Funding and Donor Coordination**

a. **Purpose**. A permanent, government led but multi-stakeholder coordination platform that brings together donors (bilateral, multilateral), UN agencies, IFIs, climate funds, NGOs and private sector for fast, predictable and aligned financing and operational support during preparedness, response and early recovery. [NDM Act 2010: s.9; s.29].

b. **Implementation**. Ministry of Climate Change (MoCC)/ EAD (co-chair) plus NDMA as operational lead; a Steering Group with representatives from World Bank, ADB, UN OCHA/ UN RC, GCF/ UNDP, major bilateral donors and a civil-society seat. [NDM Act 2010: s.9].

c. To reduce long-term disaster losses, Pakistan needs strong private sector participation in resilient construction and infrastructure improvement. Under NDRP (Recovery and BBB Pillars), following incentives are applied:-

(1) **Resilient Real Estate and Urban Planning**

(a) Promotion of **model resilient housing schemes** in flood-prone rural areas incorporating raised plinths and improved drainage.

(b) **Private-led development of green infrastructure** such as permeable pavements, retention ponds, bio-swales and urban wetlands to reduce urban flooding.

(c) Mandatory **resilience compliance certificates** for private construction in line with building codes aligned with PEC, NDMA and municipal regulations.

(2) **Resilient Energy and Transport Investments**

(a) Engagement of IPPs and energy companies in **hardening power infrastructure,** including underground cabling, surge protection and elevation of transformers.

(b) ESG-based disaster financing is applied as a recognized global best practice under NDRP "Risk Financing" and "Partnership Framework" pillars.

(3) **Pre-Disaster Agreements (MoUs and Framework Agreements)**. NDMA and PDMA enter into pre-disaster agreements with corporations specifying:-

(a) **Type of support** (e.g., shelter materials, food packs, hygiene kits, fuel, rescue equipment, tents).

(b) **Annual contribution amounts** or mobilization triggers.

(c) **Defined logistics roles** (e.g., company to deliver goods to DEOC location).

(d) **Pre-identified priority vulnerable groups** to avoid delays in distribution.

(e) These arrangements ensure **predictable and structured support** rather than ad-hoc donations.

(4) **ESG Funds Pooled into Disaster Trusts**. Companies contribute directly to national mechanisms such as:-

(a) **NDMF projects** focused on resilience, community-based DRR and infrastructure strengthening.

(b) **Provincial DRR funds** supporting local preparedness activities.

(c) **District-level disaster response funds** for emergency procurement of boats, dewatering pumps and medical supplies.

(5) **Sector-Specific ESG Contributions**. Industries-specific contributions are aligned with disaster needs:-

(a) **Oil and gas companies** provide fuel, generators and safety equipment.

(b) **Telecom companies** support CBEW systems, telecom towers hardening, portable network nodes for disaster zones.

(c) **Banking and fintech** sectors deliver mobile cash transfers for emergency relief (safe, fast, transparent).

(d) **Food and beverage companies** supply dry ration kits, bottled water and mobile kitchens.

(e) **Construction companies** provide rapid shelter units, prefabricated structures and debris removal machinery.

(6) **Enhance Accountability & Transparency**. ESG incorporate:-

(a) **Clear tracking of ESG contributions** audited by NDMA and PDMAs.

(b) **Pre-defined KPIs** to ensure companies' contributions reach intended beneficiaries.

CHAPTER – 8

MONITORING, EVALUATION AND LEARNING (MEL)

1. **Response Time**. Time to activation (from trigger to NEOC activation) measures how quickly the NEOC transitions from monitoring mode to full activation once pre-defined "trigger thresholds" (e.g., warning levels, river gauge thresholds, or provincial requests) are met. Faster activation reflects strong early warning linkages, clarity of SOPs and functional chain-of-command.

2. **Golden Period**. International standards (including UN OCHA's emergency response benchmarks) emphasize that the first 72 hours are the golden period in saving lives, delivering relief and stabilizing communities.

3. **Recovery Timeframe**. Recovery funding disbursed within 6 / 12 months assesses the efficiency and timeliness of recovery financing, including NDMA managed funds, NDMF instruments, provincial allocations and donor supported recovery programs.

4. **Build Back Better (BBB)**. Number of "BBB" reconstruction projects completed is aligned with the Sendai Framework Priority-4 (BBB), this tracks the implementation of reconstruction projects that incorporate resilience, environmental sustainability, inclusive design and hazard-resistant engineering standards.

5. **Reporting Mechanisms**. To ensure transparent and synchronized implementation of national disaster management priorities, a tiered reporting system should be institutionalized. [NDM Act 2010: s.9; s.16; s.20; s.41]:-

   a. **Daily reporting during crisis/ peak hazard seasons** (monsoon, winter emergencies, drought spells etc) will allow real-time tracking of response activities, field deployments, resource utilization and inter-agency coordination.

   b. **Fortnightly/ Monthly reporting during normal periods** ensures continuous progress monitoring of preparedness initiatives, capacity development, stockpiling, community outreach and hazard mitigation projects.

   c. These reports should follow a **standardized national reporting template** aligned with the NDRP, detailing inputs, outputs, outcomes and risk indicators.

   d. NDMA compile these into a **post disaster report**, highlighting gaps, best practices and required policy interventions.

   e. Integration with **NEOC dashboards and GIS-based systems** will help verify field information and support evidence-based decision making.

6. **Post Disaster Reviews and Lessons**. A timely post disaster review ensures that lessons from major disasters floods, earthquakes, cyclones, industrial accidents, smog emergencies, or cold waves are documented while operational memories are still fresh. Pakistan's disaster management system (NDMA, PDMAs, DDMAs) emphasizes rapid AARs after each significant incident :-

a. **Effectiveness of EWS** (NEOC EW Tech, PMD forecasts, seasonal outlooks, flash-flood alerts).

b. **Response activation timelines**, including NEOC/ PEOC activation and interdepartmental coordination.

c. **Field-level operations**, such as rescue, relief, logistics, communications and the functioning of ICS.

d. **Resource adequacy** (PPE, HAZMAT, boats, shelter equipment, medical supplies).

e. **Decision-making processes** and adherence to SOPs. This systematic evaluation allows NDMA and PDMAs to adjust the National Monsoon Contingency Plan, NDRP procedures and hazard-specific guidelines (smog, winter, drought, GLOF) before the next cycle.

f. A comprehensive AAR must incorporate perspectives from every level of Pakistan's disaster architecture. Effective lesson-learning requires **multi-stakeholder engagement**, ensuring transparency and improved coordination.

g. Adopting adaptive management ensures Pakistan's NDRP is not only compliant with global best practices but also resilient in the face of uncertainty, making it more effective in protecting lives, livelihoods and infrastructure.

CHAPTER – 9

INTEGRATION WITH NATIONAL DEVELOPMENT PLANNING

1. **Linkages with Climate Policy**. Alignment of the NDRP with the National Disaster Risk Reduction Strategy (NDRRS) ensures that recovery efforts are embedded within a national framework emphasizing risk reduction rather than being ad-hoc. NDRRS 2025-2030 provides strategic priorities, including hazard-specific risk assessments, institutional capacity strengthening and enhancement of EWS [NDM Act 2010: s.9; s.10; s.14; s.16; s.17; s.20; s.21; s.25; s.26]. Through this alignment:-

   a. **Recovery Initiatives** systematically incorporate risk reduction measures, reducing the likelihood of repeated losses in future disaster events.

   b. **Investment planning** during recovery prioritizes risk-informed infrastructure, such as flood resilient roads, earthquake resistant schools and climate adaptive water systems.

   c. **Institutional coordination** is strengthened, ensuring that provincial and district recovery plans reflect national priorities and follow standardized protocols for monitoring, evaluation and reporting.

   d. **Key performance indicators (KPIs)** from the NDRRS are embedded within NDRP actions, allowing assessment of recovery effectiveness in building long-term resilience.

2. **Climate Adaptation**. Climate change increasingly intensifies disasters, including monsoon flooding and glacier lake outburst floods (GLOFs) heatwaves and smog events. Climate adaptation and mitigation measures are integrated into recovery plans to ensure that reconstruction restores livelihoods and infrastructure while anticipating future climate risks [NDM Act 2010: s.9; s.10; s.14; s.16; s.17; s.25; s.26]. This includes:-

   a. **Climate-Adaptive Infrastructure**. Roads, bridges and shelters are rebuilt using designs resilient to floods, landslides and extreme temperatures.

   b. **Sustainable Livelihoods**. Post-disaster agricultural recovery plans promote climate-smart agriculture (drought-resistant crops, efficient irrigation) to prevent future economic losses.

   c. **Energy and Emissions Considerations**. Recovery programs promote clean energy solutions (solar-powered water pumps, energy-efficient public buildings) to reduce greenhouse gas emissions.

   d. **Capacity Building**. Local communities and officials are trained to integrate climate scenarios into recovery planning, ensuring adaptation measures are practical and locally accepted.

3. **Ecosystem-based Disaster Risk Reduction (DRR)**. Ecosystem-based DRR leverages natural systems to reduce vulnerability while delivering environmental co-benefits. Incorporation of Eco-DRR within the NDRP supports sustainable recovery by addressing root causes of disasters rather than only their impacts [NDM Act 2010: s.9; s.10; s.14; s.16; s.17; s.25]. Key approaches include:-

a. **Watershed Restoration**. Degraded upstream catchment areas are rehabilitated to reduce flood peaks, prevent soil erosion and improve water retention.

b. **Reforestation and Afforestation**. Tree planting along riverbanks and degraded hillsides stabilizes slopes, reduces landslide risk and enhances carbon sequestration.

c. **Wetland and Mangrove Conservation**. Wetlands and coastal mangroves are protected to buffer storm surges, retain sediments and preserve biodiversity.

d. **Urban Green Infrastructure**. Parks, green roofs and permeable pavements are integrated into reconstruction to reduce urban flooding and heat stress.

4. **Integration with Infrastructure Planning and Land-Use**. Disaster risk assessments are integrated into the planning and execution of infrastructure projects to ensure investments remain resilient and sustainable. Given Pakistan's exposure to hydro-meteorological and seismic hazards, risk assessments are embedded in infrastructure planning [NDM Act 2010: s.9; s.10; s.14; s.16; s.17; s.25] through the following measures:-

a. **Mandatory Risk Screening**. National and provincial infrastructure projects undergo hazard and vulnerability analysis prior to approval, including assessment of flood, seismic, landslide and extreme weather risks.

b. **Resilience-Based Design**. Engineering solutions reflect identified hazards, such as elevated and reinforced roads and bridges in flood-prone areas and contingency overflow measures in dams and drainage systems.

c. **Policy Integration**. National Disaster Risk Management Framework and NDMA guidelines are used as reference instruments, making disaster risk assessments a prerequisite for project funding and approval.

d. **Monitoring and Evaluation**. Post-construction monitoring ensures infrastructure maintains resilience over time, with adaptive measures applied as hazard profiles evolve.

e. **Strategic Land-Use**. Strategic land-use planning and zoning reduce exposure to natural hazards:-

(1) **Flood Plains and Riverbanks**. Development restrictions along major rivers such as the Indus, Chenab and Jhelum minimize loss of life and property from seasonal flooding.

(2) **Unstable Slopes and Landslide-Prone Areas**. In hilly regions of KP, GB and AJ&K, slope stabilization studies and controlled settlement planning reduce landslide risks.

(3) **Urban Planning Integration**. Hazard maps are integrated into municipal planning in cities such as Karachi, Lahore and Islamabad to ensure safer zoning, evacuation routes and emergency access.

(4) **Legal Enforcement**. Enforcement of building codes and development regulations is strengthened, complemented by incentives and compensation mechanisms to support relocation from high-risk areas.

f. **Operability of Critical Facilities**. Critical facilities are designed and managed to remain operational during and after disasters to prevent cascading impacts:-

(1) **Hospitals and Health Facilities**. Hospitals are constructed with seismic-resistant designs, backup power and secure water and sanitation systems to ensure continuity of care.

(2) **Schools**. Resilient school buildings protect children and function as community shelters, incorporating safe school standards, emergency exits and disaster preparedness training.

(3) **Lifeline Infrastructure**. Roads, bridges, power grids and communication networks incorporate redundancy and hazard-resistant engineering to maintain functionality during disasters.

(4) **Community Based Integration**. Facilities are linked with local EWS and evacuation plans; schools and public buildings serve as emergency shelters equipped with essential supplies.

5. **Alignment with Sendai Framework/ Sustainable Development Goals (SDGs)**. The Sendai Framework for Disaster Risk Reduction (2015-2030) provides the global blueprint for reducing disaster risks. Pakistan's NDRP adopts its four priorities as core pillars [NDM Act 2010: s.9; s.10; s.14; s.16; s.17; s.25]:-

a. **Priority 1 – Understanding Disaster Risk**

(1) Risk knowledge is strengthened through hazard mapping, risk assessments and inter-agency data sharing.

(2) Climate change, urbanization and socio-economic vulnerabilities are integrated into risk analysis.

(3) A national risk database links meteorological, hydrological, geological and anthropogenic hazards.

b. **Priority 2 – Strengthening Disaster Risk Governance to Manage Risk**

(1) NDRP is embedded within national and provincial disaster management frameworks, ensuring legal enforceability.

(2) Roles and responsibilities of NDMA, PDMAs, DDMAs, municipal authorities and line agencies are clearly defined.

(3) Coordination among government, military, civil society and private sector is institutionalized.

c. **Priority 3 – Investing in DRR for Resilience**

(1) Financial resources are allocated for resilient infrastructure, early warning systems and community preparedness.

(2) Risk financing mechanisms are leveraged to mitigate economic losses.

(3) Resilience considerations are mainstreamed into urban planning, health, education and critical infrastructure.

d. **Priority 4 – Enhancing Disaster Preparedness for Effective Response and "BBB"**

(1) SOPs guide pre-disaster alerts, emergency response and post-disaster recovery.

(2) Simulations, capacity-building exercises and community drills are conducted regularly.

(3) "BBB" principles are applied to strengthen long-term resilience in recovery and reconstruction.

e. **Aligning DRR with SDGs** ensures that DRR contributes to broader national development objectives:-

(1) **SDG-11: Sustainable Cities and Communities**

(a) Urban risk reduction strategies, resilient housing and hazard protection measures are implemented in high-risk cities.

(b) Access to safe public spaces and essential urban services is enhanced.

(2) **SDG-1: No Poverty and SDG-2: Zero Hunger**. Social protection and food security measures are integrated to reduce disaster-induced poverty and malnutrition.

(3) **SDG-13: Climate Action**. Climate adaptation strategies are linked with DRR initiatives in flood-prone and glacier-fed river basins.

(4) **SDG-17: Partnerships for the Goals**. Multi-stakeholder partnerships with UN agencies, development partners and the private sector support financing and technology transfer.

f. **By mapping NDRP outputs to SDG indicators**, Pakistan demonstrates how DRR interventions contribute to sustainable development and national resilience.

g. **Pakistan's NDRP adopts Sendai Framework Monitoring Indicators** to track progress and performance. This approach strengthens accountability, improves data-driven decision-making and enhances Pakistan's compliance with both Sendai Framework commitments and SDG targets through:

(1) **Disaster Mortality and Economic Loss Indicators**

(a) Annual tracking of disaster-related deaths, missing persons and affected populations.

(b) Reporting of direct economic losses relative to GDP and sectoral impacts.

(2) **Early Warning and Risk Information Coverage**. Measurement of population coverage receiving early warnings through community-level systems.

(3) **DRR Investment and Resilience Metrics**. Documentation of DRR investments, resilience compliance of critical infrastructure and integration of DRR in national budgets.

(4) **Link with National Reporting Mechanisms**. Sendai indicators are included in NDMA annual reports and aligned with Pakistan's voluntary national reviews for the SDGs.

CHAPTER – 10

COMPOSITE RESPONSE MATRIX (CRM)

DEW 3 months & Seasonal Alerts 6 months in advance - CRM: Actions by all – In all disasters				
Organization	Actions Template: National & Global Stakeholders			
	D – 90 to D – 30	D – 30 to D Day	D Day to D + 30	D + 30 to D + 90
Academia through NIDM (NDMA)	• Update archives, Artificial Intelligence Based Practices: as per DEW • Specific tasking of DRR societies • Collated inclusion of international academia input • Academia interface survey in Vulnerable Zones • Integrate inputs with PDMAs • Develop community training plans	• Make practical plans • Reconfirm impact estimates of ARC • Enhance community trainings • Ready National Volunteers in Zones	• Monitor volunteers & DRR societies • Ensure learned HR to join PDMAs/ DDMAs • Be part of national relief & donations plan • Prepare plans to raise contributions • Invoke international academia recovery support	• Share observations with Government of Pakistan (GoP), international academia • Determine next research & training needs • Develop independent analyses reports • Issue guidance to national academia
NEOC (Tech, DRR) (NDMA)	• Develop & issue DEW • Share community readiness plans DRR • Coordinate with military, NGOs, UN • Conduct DEW specific SimEx & CISE • Develop national need gap analysis • Collate national infrastructure, agriculture, services audits	• Engage ministries, diplomats, DMA's • Update Prime Minister Office (PMO) on national readiness • Confirm DEW with PMD, SUPARCO etc. • Coordination with regional equivalents, military • Rehearse plans with provincial governments • Make ready multi layered logistics	• Activate Provincial Coord (PCC) • Generate multi-tiered response • Keep PMO informed on losses, Ex-Gratia • Confirm losses & develop ePDNA • Manage external logistic support, donations	• Update GoP on disaster (PDNAs) • Monitor & evaluate national response • Guide rehabilitation and coordination appeal support • Revision of Plans, as required • Recoup stocks & ready for poly crises • Redefine scope next SimExs, Training, logistics, etc.

DEW 3 months & Seasonal Alerts 6 months in advance - CRM: Actions by all – In all disasters				
Organization	Actions Template: National & Global Stakeholders			
	D – 90 to D – 30	D – 30 to D Day	D Day to D + 30	D + 30 to D + 90
PDMAs (All sectors)	• Maintain readiness as 1st & 2nd tiers • Update audits, needs survey: infrastructure, agriculture, services • Add technical compliance at districts levels • Clear encroachments in flood plains • Deploy mobile EOCs in / close to vulnerable Zones • Ready logistics stocks as per policy, NGOs coordination • Capacity built of INSaR, local volunteers	• Assign provincial resources to vulnerable Zones • Finalize relocation plans, as required • Execute grand risk communications • Implement national plans (NDMP, NDRP) • Train with resident military, LEAs • Revisit flood plains, strategic infrastructure survey • Pre-position plant equipment, as required	• Conduct search & rescue operations, Ex-Gratia • Establish relief camps (with medicines, rations) • Coordinate additional support (NDMA), if required • Smooth regulations of NGOs Operations • Regulate provincial donations	• Conduct physical surveys to reconfirm ePDNA • Recoup logistics stocks • Complete transparent Ex-Gratia SOPs • Complete relief cycle till rehabilitation and review • Ensure safe return of relocated people • Clear debris, restore livelihoods
Local Volunteers, & SAR (INSaR)	• Update HR database & hold refresher training • Register additional HR: Boy Scouts, Girl Guides • Contingency rehearsals with communities in vulnerable Zones • Integrate local plans with military, LEAs, PDMAs • Inspect INSaR equipment inventory and seek support	• Keep Regional INSaR teams equipped • Review specialties and standards • Participate with communities • Stay interoperable: other USARs teams	• Employ trained teams with DDMAs • Support in camps management • Activate reserves, if required	• Recoup resources & data collection • Transfer of care responsibility • Recalibrate future training & plans • Incentivize technical HR

DEW 3 months & Seasonal Alerts 6 months in advance - CRM: Actions by all – In all disasters				
Organization	Actions Template: National & Global Stakeholders			
	D – 90 to D – 30	D – 30 to D Day	D Day to D + 30	D + 30 to D + 90
Infrastructure & Audit (NDMA)	• Sensitize infrastructure audit in DEW's vulnerable Zones • Compile data and suggest plans • Maintain material hubs, with NR, PDMA • Add into NIDM's local rebuild needs	• Guide: infrastructure survey, retrofit, Zones clear operations • Suggest: public, private protective techniques • Issue advisories: immediate action	• Collate infrastructure damages intel • Release from material hubs: template • Collaborate with public reconstruction organizations • Provide regional resilience models	• Recoup material hubs through NR, NGOs • Refine templates – rebuild & maintenance • Participate in quality control • Guide inspections: private, industry build
Media & Alert Application (NDMA)	• Develop DEW risk communication plans • Pre-coordinate with all mediums • Organize Television talks, media seminars • Seek global networks pre-support	• Radiate NDMA disasters application's messages • Register: worship places for communication • United Disasters Media Support Groups Operations • Global media connectivity	• Ensure accurate impact reporting • Prepare all for next phases • Control panic, synergize response • Be part of Pakistan appeal messaging	• Incentivize national support • Elevate hope & national narrative • Showcase Pakistan's resilience efforts • Share reports with global partners
Operations & Logistics (NDMA)	• Maintain national stocks, inspect status • Direct others to raise policy stocks • Plan resources commitment sequence • Pre-coordinate PM's Relief packages • Plan logistics transport (ground, air, sea) • Ready PM's assistance overseas	• Pre-position logistic stocks in vulnerable Zones • Pre-reconnaissance relief camps, plan logistics support • SimExs with PDMAs/ DDMAs • Coordination military mobilization plans	• Organize flow of all resources • Invoke NGOs support in logistic • Prepare to receive foreign support • Coordinate national donations & use • Update PMO on current operations • Apply response variants, when required	• Sustain assistance, if required • Rebuild national stocks & financial capacity • Regulate international SAR, loan articles etc. • Conclude transparent Ex-Gratia • Stock for parallel overseas assistance

DEW 3 months & Seasonal Alerts 6 months in advance - CRM: Actions by all – In all disasters				
Organization	Actions Template: National & Global Stakeholders			
	D – 90 to D – 30	D – 30 to D Day	D Day to D + 30	D + 30 to D + 90
Military	• Update plans & stock military hubs • Rehearse employment: Engineers, Aviation, Medical • Mock drills: DDMAs, LEAs, communities • Ensure response equipment readiness • Participate in national NDMA SimEx	• Work with PDMAs & area administration • Deploy anticipatory resources • Prepare floods breach sites, PDMAs • Position military plant equipment: in vulnerable Zones • Joint International Logistics Supply Plan: with NDMA Operations & Logistic	• Mobilize, as planned / contingencies training • Conduct joint Search & Rescue operations • Aviation survey, evacuation, reconnaissance • Logistic supplies in camps (with others)	• Hand over stable areas to DDMAs • Repatriate foreign military equipment, as required • Support in poly crises stages • Drawdown & review for stage next • Continue operations in selected areas, if required
International Coordination, Diplomacy (NDMA)	• Initiate appraisals: Ministry of Foreign Affairs (MoFA) & ambassadors • Reconfirm pre-assured logistics support • Invite diplomatic participations in CISEs • Conclude finance flow: with Pakistan Ambassador, diaspora	• Seek foreign SAR support (if required) • Keep Pakistan embassies updated • Digital forums diaspora for support • Hold updates for Parliament & Ministries • Brief international ambassadors at NEOC, with MoFA	• Trigger pre-assured assistance articles • Galvanize Pakistan appeal & attract global finance • Reach out additional regions, as required • Keep parliament & leaders informed	• Audit diplomatic interventions • Support local recovery & reconstruction • Secure space for added international collaborations • Oversee diaspora's finance support to NDMF

DEW 3 months & Seasonal Alerts 6 months in advance - CRM: Actions by all – In all disasters				
Organization	Actions Template: National & Global Stakeholders			
	D – 90 to D – 30	D – 30 to D Day	D Day to D + 30	D + 30 to D + 90
Pakistan NGOs (NDMA Coordination)	• Pre-survey vulnerable Zone (as per DEW) • Operationalize Cluster approach: NDMA • Conduct CBDRM trainings • Engage with donors: proactive finance • Participate in Anticipatory Actions plans	• Initiate donors' AAs projects • Rehearse employment sequence • Establish camps in assured vulnerable Zones • Coordinate with NDMA, PDMAs • Avoid redundancies, wastages • Coordinate with NDMA, PDMAs	• Support PDMAs in initial relief • Apply contingency plans, when needed • Take selective control of impact Zones • Sustain relief, as per capacity • Raise donors support (national, international)	• Continue flow of excess needs articles • Sustain donations • Support in rebuild of temporary shelters, as required
Pakistan National Sources (NDMA Coordination)	• Potential mapping of national resources • Engage & leverage ESG as part of Disaster Management (DM) • Align pledges (in kind or financial) • Follow NDMA national relief plan • Develop NR as anticipatory action	• Support in GoP Relief Account • Develop NR's own protective care • Extend equipment support to DDMAs • Indicate potential assistance area: NDMA	• Activate financial collation communication NDMA / GoP • Physically supply articles • Join co-located impacted DDMAs	• Sustain finance aid, as possible • Plan for greater future needs • Add on diaspora support in NR
International NGOs (NDMA Coordination)	• Observe national needs' gap & deficits • Finalize own provision responsibility • Follow NDMA plans to avoid overlaps	• Plan interventions in exclusive Zones • Work with local NGOs, as required • Participate in community training	• Respond to NDMA directions in vulnerable Zones • Harmonize with area governments	• Maintain support (NDMA, PDMA) • Provide funds for limited rebuild • Upgrade long term needs

DEW 3 months & Seasonal Alerts 6 months in advance - CRM: Actions by all – In all disasters				
Organization	Actions Template: National & Global Stakeholders			
	D – 90 to D – 30	D – 30 to D Day	D Day to D + 30	D + 30 to D + 90
	• Initiate own Anticipatory Protocols	• Stay engaged with donors & media	• Report additional needs to donors	
UN Organization (NDMA Coordination)	• Develop inter-agency plans with NDMA • Approach donors for proactive support • Prepare to support National Appeal • Control duplications & redundancies	• Hold conference to support GoP Appeal • Prepare firm UN interventions • Select specific coordinated sectors	• Observe & respond in plan sequence • Update Rapid Needs assessment • Join in Pakistan Appeal	• Support GoP's digitized PDNA • Focus on pre-coordinated zones • Reach donors for long term financial needs • Design quantum 'Reconstruction Appeal'
Donors	• Reassure pre commitments, as per DEW • Confirm, estimate for risk finance • Initiate pledges to GoP, NDMA • Provide anticipatory finance	• Add compliance-based finance support • Identify critical food security needs • Prepare to respond GoP Appeal	• Urgent release of pre-assured finance • Add contingency needs, if required	• Design global support (GCF etc.) • Upgrade Monitoring & Evaluation • Finalize observations for review
Risk Finance GoP Finance NDMF	• Align GoP proactive spending for DRR • Pre-arrange finance for Ex Gratia, international assistance • Keep stocks recouped • Guide provinces to have own PDMF	• Activate PM Relief Accounts • Pre-secure GoP approvals for expenditure • Steer NDRF & international finance (GCF) to DRR	• Act only as federal reserve • Pre-secure from Ministry of Finance, MoFA • Keep PM updated	• Draw method to finance rebuilt • Audit provincial projections for PM information • Stabilize EAD allocations, ex synergy • Develop international projections proposals with Ministries

National Disaster Management Authority

Government of Pakistan

Prime Minister's Office

https://www.ndma.gov.pk/