Sindh

WINTER CONTINGENCY PLAN

2025 - 2026

Provincial Disaster Management Authority (PDMA)
Rehabilitation Department
Government of Sindh

Provincial Winter Contingency Plan 2025 – 2026 of Sindh

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ACRONYMS

AQI	Air Quality Index
CAFs	Civil Armed Forces
CBOs	Community-Based Organizations
CSOs	Civil Society Organizations
C&W	Communication and Works Department
DDMA	District Disaster Management Authority
DEOC	District Emergency Operational Center
DM	Disaster Management
DRR	Disaster Risk Reduction
ENSO	El Niño–Southern Oscillation
FWO	Frontier Works Organization
GBV	Gender-Based Violence
HH	Households
IEC	Information, Education and Communication
INGO	International Non-Governmental Organization
IOD	Indian Ocean Dipole
KN95	Chinese Standard Respiratory Mask (Equivalent to N95)
MME	Multi-Model Ensemble
NDJ	November–December–January
NDMA	National Disaster Management Authority
NEOC	National Emergency Operational Center
NHA	National Highways Authority
NGO	Non-Governmental Organization
NWCP	National Winter Contingency Plan
PDMA	Provincial Disaster Management Authority
PEOC	Provincial Emergency Operational Center
PLWs	Pregnant and Lactating Women
PMD	Pakistan Meteorological Department
PWDs	Persons with Disabilities
PWCP	Provincial Winter Contingency Plan
SEPA	Sindh Environmental Protection Agency
SOPs	Standard Operating Procedures
UN	United Nations
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
USAR	Urban Search and Rescue
WHH	Welthungerhilfe

EXECUTIVE SUMMARY

Sindh enters the 2025–2026 winter season navigating an increasingly complex risk landscape shaped by climate-induced variability and recurring extreme weather patterns. Unlike Pakistan's northern regions, Sindh's winter hazards manifest primarily through cold waves, dense fog, urban and peri-urban smog, rainfall-triggered emergencies, and stress on critical lifeline services. These conditions routinely disrupt mobility, public health systems, energy supply, and vulnerable livelihoods, particularly in low-income settlements, coastal communities, and informal labor sectors.

Given the province's exposure and its high population density, the Provincial Disaster Management Authority (PDMA) Sindh has adopted a forward-leaning posture to ensure that government line departments, district administrations, armed forces, UN & humanitarian partners, and communities operate with unified situational awareness and well-orchestrated response protocols.

Under the National Disaster Management Act 2010 and aligned with the National Winter Contingency Plan (NWCP) 2025, the Provincial Winter Contingency Plan (PWCP) Sindh, sets out a comprehensive operational roadmap spanning Preparedness, Response, Recovery, and Rehabilitation. It leverages multi-sectoral inputs, seasonal forecasts, and projected climate impacts to streamline provincial readiness and secure continuity of essential public services.

Through this plan, PDMA Sindh reinforces its commitment to safeguarding lives and sustaining essential services during the winter period. The PWCP 2025–2026 positions Sindh's institutions to act decisively, maintain operational continuity, and drive province-wide resilience through structured coordination and disciplined execution.

PAKISTAN MEREOLOGICAL DEPARTMENT

Outlook for November-December-January (2025-2026)

1. Seasonal Rainfall Outlook:

The seasonal outlook is based on the outputs of nine global seasonal prediction models with optimal skill. The models' outputs are combined using the Multi-Model Ensemble (MME) technique to generate operational outlooks for seasonal rainfall and temperature. Currently, the Indian Ocean Dipole (IOD) is in a negative phase but is expected to make transition to a neutral phase during the season. Likewise, the El Niño–Southern Oscillation (ENSO), currently in a marginally negative phase, is also expected to shift to a neutral phase towards the end of the season.

Given these conditions, the forecast indicates a general tendency for below-normal rainfall in most parts of the country with the highest deficits expected over northern Punjab, much of Khyber Pakhtunkhwa, Kashmir, and Gilgit-Baltistan. In contrast, the southern regions are expected to experience rainfall that is closer to normal, with a reduced negative anomaly as per the region's climatological patterns during the season NDJ 2025 (Figure 2, 3).

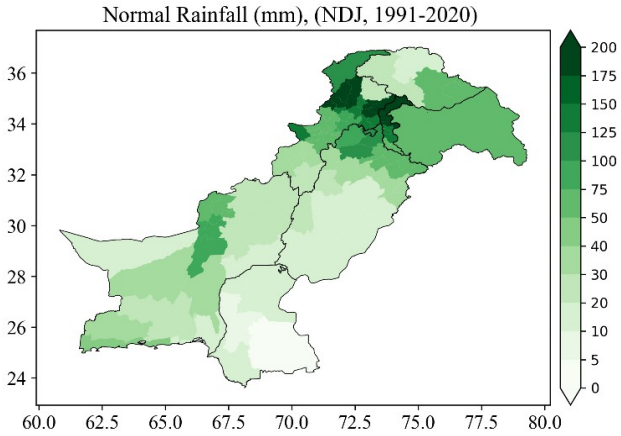


Figure 2: *Normal (1991-2020) rainfall (mm) for NDJ*

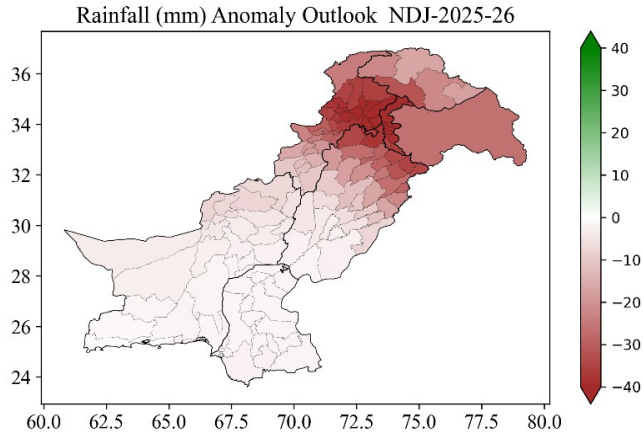


Figure 3: *Monthly rainfall (mm) anomaly for NDJ 2025*

The probabilistic rainfall outlook reflects a consensus among all models used in the ensembles. The tercile probability output (Figure 4) indicates that most ensemble members predict the likelihood of below normal rainfall in northern half of the country, whereas, a few of southern regions, including much of Sindh and its adjoining areas of Balochistan are likely to receive near normal rainfall during the season NDJ 2025.

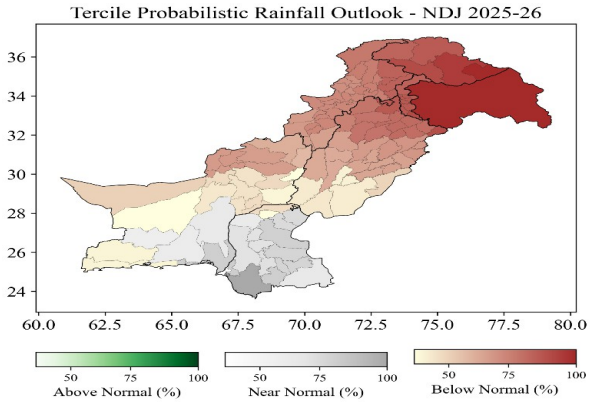


Figure 4: Probabilistic (%) rainfall outlook for NDJ 2025

2. Seasonal Temperature Outlook

Mean temperatures are expected to remain above normal throughout the country, with maximum departure over eastern Gilgit Baltistan during NDJ 2025 (Figure 5, 6).

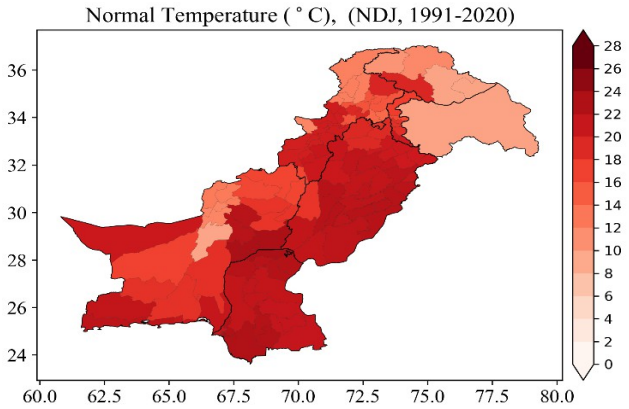


Figure 5: *Normal (1991 - 2020) temperature for NDJ*

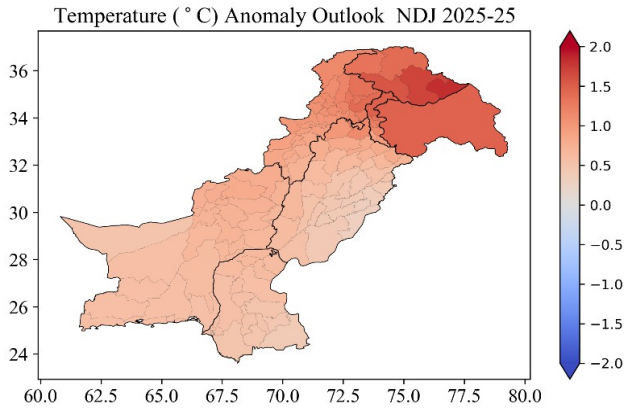


Figure 6: *Monthly temperature anomaly outlook for NDJ 2025*

The tercile probabilistic temperature outlook (Figure 7) shows that most models predict above-normal temperatures across the country, with the highest likelihood over northern parts (Gilgit-Baltistan, Kashmir, northern Khyber Pakhtunkhwa and northern Punjab) during the forecast season.

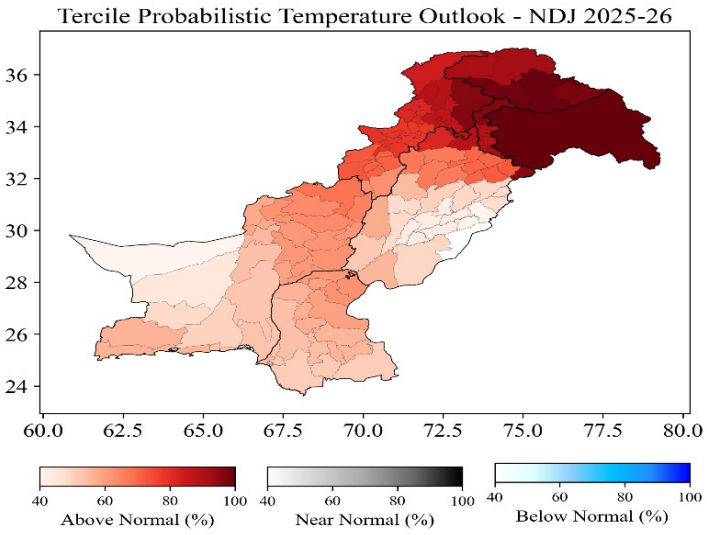


Figure 7: *Probabilistic (%) temperature outlook for NDJ 2025*

IMPACTS

Agriculture

- Soil Moisture for Rabi Crop Sowing: Below-normal rainfall will likely lead to reduced soil moisture, potentially impacting early Rabi crop sowing (e.g., wheat, barley). Farmers may need to rely more on other means of irrigation where available.

- Water Supply for Agriculture: The forecasted dry conditions could result in lower water availability for irrigation, especially in rain-fed areas, driving up production costs and accelerating depletion of limited water resources.

- Pest and Disease: The above-normal temperatures may promote pest and diseases in winter crops, necessitating proactive pest and weed management in, regions where warmer, dry conditions could stress crops.

Health

- Smog and Air Quality: Warmer and drier conditions may result in poor air quality, especially in plain and low-lying areas especially urban areas) increasing smog formation. This can exacerbate respiratory issues, impacting vulnerable groups including asthma and pulmonary disease patients.

- Warmer-than-normal temperatures, especially in central and southern regions, may prolong dengue transmission conditions. This scenario underscores the need for enhanced surveillance, rapid-response mechanisms, and strengthened community-level public health preparedness.

Road & Transport

- Transportation and Fog: Night time conditions are favorable for fog formation in plain areas, particularly in center and upper Sindh, affecting visibility on highways and potentially disrupting road and air travel. Travelers should be prepared for delays during morning hours due to fog.

Water Resources

- Reservoir and Irrigation Levels: The below-normal rainfall may reduce water replenishment in reservoirs, potentially affecting water availability for agriculture and the power sector. Water management authorities are therefore advised to closely monitor reservoir levels and manage water distribution judiciously to ensure adequate supplies during the upcoming spring season.

SINDH AT A GLANCE

Sindh, Pakistan's third-largest province by area, occupies the lower Indus basin, covering 140,915 km², which accounts for 18% of Pakistan's total landmass. The province shares its borders with Balochistan to the west, Punjab to the north, India to the east, and the Arabian Sea to the south, making it a geographically diverse and strategically significant region. The Indus Delta, the sixth-largest in the world, forms a vital part of Sindh's 250 km coastline, supporting unique ecosystems and acting as a natural buffer against coastal erosion and storm surges. Sindh's terrain features a mix of geographical zones: the fertile alluvial plains flanking the Indus River, the arid and inhospitable Thar Desert to the east, and the rugged Khirthar Mountain range to the west. This diversity contributes to the province's ecological and economic significance, but it also exacerbates its vulnerability to climate and environmental hazards.

Administratively, Sindh is divided into 30 districts, grouped into six divisions: Karachi, Hyderabad, Sukkur, Mirpurkhas, Larkana, and Shaheed Benazirabad. Karachi, the provincial capital, serves as the economic and industrial hub of Pakistan, hosting two of the country's largest seaports i.e. Port Qasim and Karachi Port, making Sindh a gateway for trade and commerce. The province's economy is supported by a mix of industries, including manufacturing, finance, and agriculture, with the latter concentrated along the Indus River. Despite its industrialization and urbanization, rural Sindh remains reliant on subsistence farming, contributing to the province's socio-economic disparity.

The Global Climate Risk Index 2026 (covering 1995-2024) ranks Pakistan as the fifth most vulnerable country, highlighting its exposure to climate events like the devastating floods in 2022, and Sindh, with its low-lying topography and dependence on the Indus River, is particularly at risk. Extreme weather events, including recurrent flooding during monsoons, prolonged droughts, and heatwaves, disrupt livelihoods, destroy infrastructure, and exacerbate socio-economic inequalities. The province's vulnerability is further heightened by rapid urbanization, poor land-use planning, and deforestation.

During winter months, these challenges are compounded by residual impacts from the monsoon season, which leads to agricultural disruption. Sindh's unique geography and climate conditions demand targeted disaster risk reduction (DRR) measures and climate-resilient infrastructure to mitigate these vulnerabilities and support its population through increasingly unpredictable seasonal hazards.

GEOGRAPHICAL AND STRUCTURAL VULNERABILITIES OF SINDH

Sindh's geographical and structural vulnerabilities significantly heighten its exposure to climate-induced disasters and seasonal hazards. During winter, the desert experiences harsh cold nights, with temperatures dropping significantly. This, combined with persistent food insecurity and malnutrition, places the already vulnerable population, particularly women and children, at heightened risk. The dual threats of malnutrition and extreme weather further strain the limited healthcare and social protection services available in the remote areas.

Adding to these challenges is the pervasive threat of fog, particularly in urbanized and industrial regions of Sindh, such as Karachi, Hyderabad, and Sukkur, during the winter season. Smog, caused by vehicular emissions, industrial pollutants, and agricultural burning, not only degrades air quality but also poses serious health risks. It exacerbates respiratory illnesses, particularly in children, the elderly, and individuals with pre-existing conditions. Meanwhile, fog significantly reduces visibility, leading to frequent road accidents, disrupting transportation, and hampering access to healthcare and markets in both urban and rural areas. These visibility issues also affect the timely delivery of relief and essential goods to vulnerable communities.

The recurring nature of monsoon-induced disasters in Sindh leaves little time for communities to recover before winter arrives. Families displaced by floods often lack proper shelter and basic necessities such as warm clothing, blankets, and heating, which are critical to surviving the cold season. In coastal areas, salinity intrusion caused by rising sea levels and inadequate freshwater flows upstream compounds agricultural losses, further undermining food security and livelihoods.

Structural vulnerabilities also stem from rapid urbanization and poorly planned infrastructure in urban centers such as Karachi and Hyderabad. The lack of proper drainage systems, encroachments on natural waterways, and unregulated construction exacerbate urban flooding. In rural Sindh, the absence of robust infrastructure, such as resilient roads and bridges, hampers access to relief services and markets during emergencies, isolating communities when they most need support. The compounded effects of smog, fog, and these structural deficiencies necessitate coordinated mitigation and response strategies to protect Sindh's population from overlapping hazards.

WINTER RISK ASSOCIATED WITH VULNERABLE POPULATION

The harsh winter season in Sindh brings unique challenges to vulnerable populations, especially those living in makeshift accommodations or open spaces.

Vector and water borne diseases

Prolonged water stagnation in ditches, natural ponds, and low-lying areas, become breeding grounds for mosquitoes, amplifying the spread of vector-borne diseases, which disproportionately affect vulnerable masses including elderly people, PWDs, PLWs, Children and trans, with limited access to healthcare and preventive measures like mosquito nets. This also helps the spread of waterborne diseases such as diarrhea and cholera. Communities living near these stagnant water bodies, especially in makeshift shelters, are highly susceptible due to poor sanitation and lack of clean drinking water.

Respiratory and Cold-Related Illnesses

Without proper protection against the cold, vulnerable groups, including children, the elderly, and individuals with chronic illnesses, face an elevated risk of respiratory infections, hypothermia, and other cold-related conditions. Damp conditions caused by water stagnation worsen these health challenges, particularly for those without access to adequate heating, winter clothing, or proper shelter.

Malnutrition and Food Insecurity

The impact of winter on malnutrition in Sindh is profound, especially for vulnerable groups such as children, pregnant women, and lactating mothers. Cold weather increases caloric requirements, yet many families face severe food insecurity due to damaged livelihoods and disrupted agricultural cycles. Limited access to healthcare and nutritional support further compounds the problem. For these communities, malnutrition not only weakens their resistance to cold but also heightens their susceptibility to infections, making immediate nutritional interventions critical.

Road Accidents and Restricted Access to Services due to low visibility

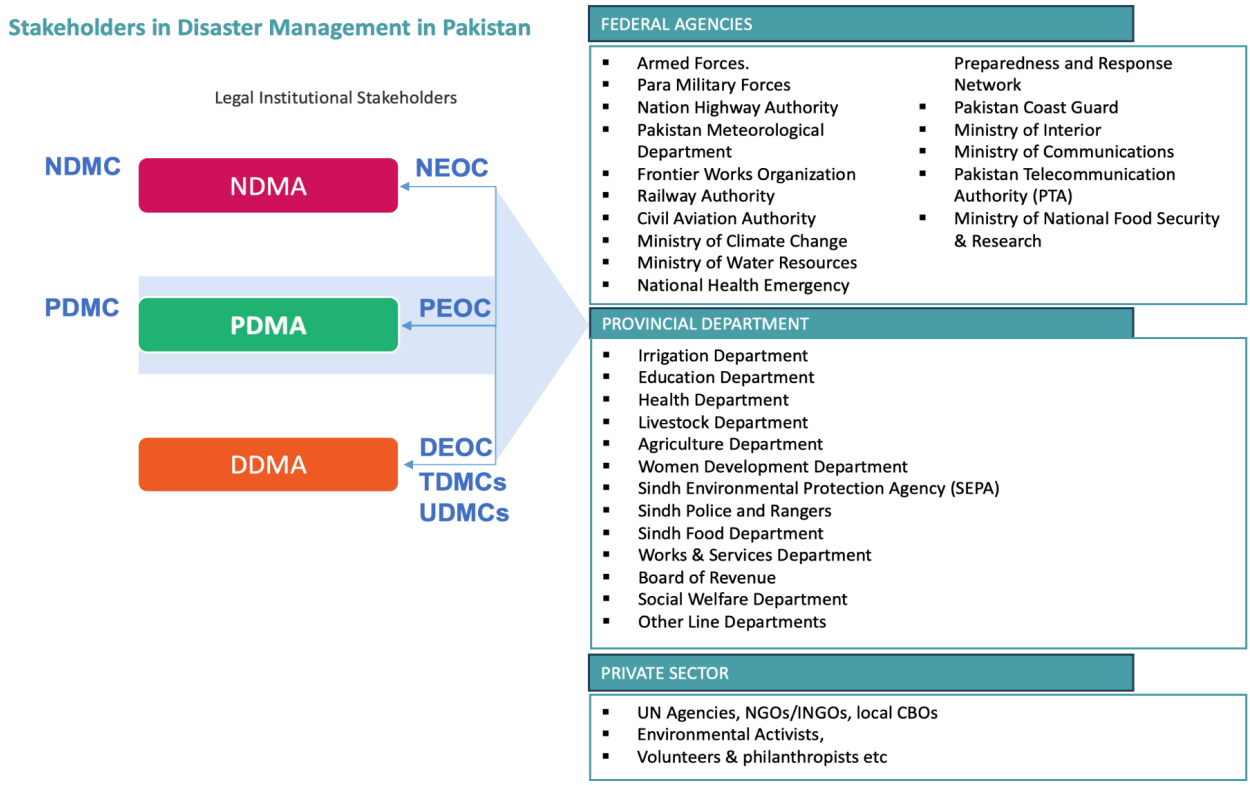
Fog, typically occurring in colder conditions, reduces visibility to mere meters, making driving hazardous and leading to a rise in accidents. The dense, low-lying fog often blankets roads, disrupting transportation networks and delaying the movement of vehicles, goods, and people. These delays impact the timely delivery of essential services, particularly in remote and underserved areas, leaving vulnerable populations without critical relief during harsh winter months.

DISASTER RISK MANAGEMENT COORDINATION

The Provincial Disaster Management Authority (PDMA) Sindh, in collaboration with District Disaster Management Authorities (DDMAs), plays a pivotal role in addressing the compounded vulnerabilities faced by communities during the winter season, particularly those affected by internal displacement and are compelled to live in tents, damaged houses or in open spaces due to flooding and cold weather in areas of Sindh. These vulnerable populations often find themselves living in makeshift shelters or open spaces without proper protection, making them highly susceptible to the impacts of winter hazards, including cold-induced illnesses and increased exposure to waterborne and vector-borne diseases. The absence of essential preventive items such as mosquito nets, hygiene kits, and warm clothing exacerbates the situation, particularly for women, children, and the elderly, who are the most at risk.

To mitigate these challenges, PDMA's winter contingency plan focuses on strong coordination with local authorities to improve access to remote or hard-to-reach areas through better logistical planning and the mobilization of resources, ensuring that even the most isolated communities are not left behind in relief efforts.

Looking ahead, PDMA aims to strengthen inter-agency collaboration with NGOs, UN agencies, the private sector, and local communities to address gaps in service delivery.



NDMA GUIDELINES FOR WINTER CONTINGENCY PLAN

To ensure proactive measures and timely preparedness for potential winter-related hazards, NDMA has outlined the following guidelines for effective disaster management and response.

- Risk and Vulnerability Assessment: Conduct immediate assessments of regional risks to identify choke points and hazard-prone areas.
- Strengthen Local Monitoring Mechanisms: Activate existing monitoring and reporting systems within local administrations, DDMAs, and relevant line departments in vulnerable areas.
- Community Engagement: Mobilize local communities in historically hazardous areas to establish continuous monitoring and feedback mechanisms for early warnings and alerts.
- Awareness Campaigns: Develop and disseminate general and region-specific awareness campaigns to educate the public about potential threats and hazards.
- Field Visits and Reconnaissance: Coordinate field visits with local administrations, line departments, C&W, Rescue 1122, USAR teams, and Armed Forces/CAFs/Levies to enhance situational awareness and preparedness.
- Mock Exercises: Organize both departmental and joint mock exercises with all stakeholders to ensure readiness of personnel and equipment.
- Pre-Positioning of Equipment: Collaborate with NHA, FWO, local C&W departments, and other stakeholders to deploy necessary machinery at vulnerable and choke points in advance.
- Resource Management: Assess the need for additional resources and control vehicle movement in vulnerable areas to minimize risks and safeguard lives. Conduct a stock audit of existing resources for optimal allocation.
- Medical Preparedness: Deploy medical resources, including paramedics, equipment, and essential medicines, in regions based on identified risks and vulnerabilities.
- Road Restoration: Prioritize Road restoration tools, and essential supplies in high-risk areas. Law enforcement agencies and traffic police should advise travelers about potential road closures, slippery conditions, and safety measures.
- Resource Optimization: Identify critical resource gaps and reallocate supplies from less threatened areas to ensure preparedness in vulnerable regions.
- Traveler and Tourist Facilitation: Activate forward facilitation centers for travelers and tourists in key regions. Collaborate with local hotels and transport associations to provide support during emergencies.
- Public Warnings: Issue timely warnings to travelers and tourists about risks associated with hazardous locations.
- Emergency Operations Centers (EOCs): Establish district and provincial-level EOCs for real-time monitoring and coordination of the situation.

NDMA GUIDELINES FOR PDMA, DDMA, AND RELEVANT DEPARTMENTS TO MANAGE SMOG RELATED RISKS

The National Disaster Management Authority (NDMA) has issued comprehensive smog guidelines to help Provincial Disaster Management Authorities (PDMAs), District Disaster Management Authorities (DDMAs), and other relevant line departments/ entities for proactive measures, targeted awareness campaigns, and coordinated efforts among departments to address the challenges posed by smog, particularly in urban and industrial regions of province.

Specific Measures & Actions	Responsible Departments/Agencies
Enforce strict regulations to curb pollution sources, including vehicular emissions, industrial pollutants, and illegal waste burning.	SEPA, Traffic Police, Industries Dept
Actively monitor and penalize crop residue burning in agricultural areas, a significant contributor to smog.	SEPA, Agriculture
Collaborate with local authorities to regularly report Air Quality Index (AQI) levels.	SEPA
Use AQI data to inform and implement region-specific policies for smog management.	SEPA
Conduct workshops, public announcements, and campaigns in schools, community centers, and religious spaces to educate the public on smog precautions.	SEPA, Education, Information Health, I/NGOs.
Disseminate smog-related information through social media, radio, and local announcements, ensuring outreach to rural and remote areas.	Information Dept, Health PDMA/DDMA, I/NGOs.
Distribute high-quality masks (N95/KN95) to vulnerable populations, including children, elderly individuals, and those with pre-existing respiratory conditions.	Health Department/ I/NGOs
Provide air-purifying equipment and offer guidance on reducing exposure to smog.	SEPA.
Coordinate with health departments to ensure adequate medical facilities and services for respiratory ailments in smog-prone regions.	SEPA, Health Department
Impose temporary limitations on industrial operations and vehicular traffic during peak smog periods.	SEPA, Industries Dept, NHA
Encourage carpooling in government offices, schools, and colleges to reduce vehicle use.	Concerned Line Depts
Consider temporarily closing schools to safeguard children's health during severe smog episodes.	School Education & Literacy Dept
Develop and regularly update smog-specific disaster management strategies, incorporating preventive and emergency response measures.	PDMA Sindh, SEPA, Health Dept
Engage local NGOs and community leaders to ensure widespread adoption of safety measures.	DDMAs, I/NGOs.
Issue real-time advisories and warnings about areas with high smog density and low visibility through electronic signs, SMS alerts, and social media.	NHA/ Traffic Police
Educate drivers on safe practices, such as using fog lights and reducing speed, during smoggy conditions.	NHA/ Traffic Police
Enforce strict speed limits on highways and motorways to minimize accidents caused by poor visibility.	NHA/ Traffic Police

STANDARD OPERATING PROCEDURES (SOPs) FOR WINTER CONTINGENCY PLAN

Following SOPs provide a structured approach to managing winter and all associated secondary hazards and challenges through all phases of disaster management i.e. Prevention, Preparedness, Response, and Recovery.

1. ACTIVATION TRIGGERS MATRIX

Hazard	Tier	Triggers	Immediate Actions	Responsible
Cold wave	Watch	Forecast: Temp Drop > 4◦C Below Normal or Cold Wave Predicted for 3 Consecutive Days.	Weather reports/ outlooks	PMD, PDMA
	Alert	Upper Sindh: ≤ 5◦C Central Sindh: ≤ 8◦C Lower Sindh: ≤ 11◦C	Advisory issuance and review of winter supplies stock	PMD, PDMA/ DDMA
	Critical	Upper Sindh: ≤ 2◦C Central Sindh: ≤ 5◦C Lower Sindh: ≤ 8◦C	Emergency response and support	Health Dept, Education, NHA, PDMA/DDMAs
Fog	Watch	Visibility: 500m−1km (Radiation Fog).	Public advisories	PMD, NHA, PDMA
	Alert	Visibility: < 200m (Dense Fog) for > 3 Hours.	Petrol Deployment	NHA/ Traffic Police
	Critical	Visibility: < 50m (Zero Visibility/Blind Fog).	Traffic Control/ Health staff deployment	NHA/ Traffic Police, Health & Education
Smog/Air Quality Index (AQI)	Unhealthy	AQI: 151−200 (Common in Karachi and entire province).	Public Advisories	SEPA, Health, PDMA
	Very unhealthy	AQI: 201−300 (Persistent For 48 Hours).	Use of Mask/ outdoor limits	SEPA, Health, PDMA/DDMAs
	Hazardous	AQI: >300 (Extreme Toxicity/Smog).	Emission control/ Health outreach	SEPA, Health dept

2. PREVENTION & MITIGATION PHASE

Risk Analysis & Planning

- Conduct district-wise winter hazard mapping for cold-wave intensity, fog-prone corridors, and urban smog hotspots.
- Use historical weather and air-quality data to identify micro-regions with recurrent cold stress across Sindh.
- Integrate winter-risk parameters into the provincial disaster risk-reduction framework.

Infrastructure & Safety Measures

- Install fog-management measures on highways: reflective road studs, fog lights, hazard beacons, and visibility signage on motorways, highways, and rural links.
- Improve rural roads and critical access routes to ensure connectivity during low-visibility periods.
- Strengthen school infrastructure to ensure safe early-morning access, including boundary lighting, pickup/drop-off safety zones, and fog-adapted transport guidance.

Public Safety & Environmental Measures

- Promote safe heating practices, proper ventilation, and prevention of carbon-monoxide poisoning through targeted campaigns.
- Reduce smog through coordination with Environment Department on crop-residue burning restrictions, brick-kiln operations, and vehicular emissions control.
- Encourage use of clean stoves and fuel-efficient heating to mitigate indoor smoke exposure.
- Prevent Gas leakage incidents, ensure proper ventilation in rooms using heaters

Livelihoods & Agriculture Protective Measures

- Train farmers on frost-mitigation techniques (mulching, night-time irrigation, plastic tunnel use, and frost-resistant seeds).
- Promote winter livestock protection measures (windbreaks, insulated shelters, and feed preservation).

Community Awareness

- Conduct multilingual mass-awareness campaigns (Sindhi/Urdu) on cold-wave safety, fog navigation, frostbite prevention, smog-related health risks, gas leakage, and safe water handling.

3. PREPAREDNESS PHASE

Operational Readiness

- Update district winter contingency plans focusing solely on winter-specific hazards (cold waves, fog/smog, respiratory outbreaks, water-borne diseases).
- Establish district and taluka control rooms for real-time coordination under the Deputy Commissioners.
- Maintain winter-specific resource inventories: blankets, warm clothing, heating equipment, visibility gear, emergency lights, medical supplies, and respiratory protection masks.

Health Preparedness

- Pre-position essential medicines for pneumonia, influenza, asthma, bronchitis, and diarrheal diseases (which rise during winter).
- Prepare rapid-response health teams for mobile outreach in fog-affected or low-visibility areas.
- Integrate winter-disease surveillance (respiratory infections, influenza-like illnesses, acute watery diarrhea, dengue and malaria persistence in warmer districts, etc.).

Transport & Road Safety Preparedness

- Coordinate with Traffic Police, Motorway Police, and Transport Department for fog-time travel advisories.
- Enforce restricted travel during zero-visibility conditions.
- Equip district teams with fog lamps, reflective cones, road barriers, and visibility jackets.

Education Sector Preparedness

- Issue timing-adjustment protocols for schools during heavy fog, especially early-morning shifts.
- Train teachers and school management on cold-wave safety, first aid, and safe transport routing.

Community Engagement

- Mobilize Civil Defense, local volunteers, and NGOs to support early-warning dissemination, first aid, and community-level outreach.
- Distribute IEC material focusing on winter safety, children's health, livestock care, and household heating.

4. RESPONSE PHASE

Emergency Activation

- Deputy Commissioners declare winter emergency alerts based on PMD early warnings (cold waves, dense fog, smog spikes).
- Activate district control rooms and deploy field teams.

Protection of Vulnerable Populations

- Prioritize support to isolated communities, remote villages, elderly groups, pregnant women, persons with disabilities, labourers, and school children.
- Set up temporary warming centers at schools, community halls, and health facilities during severe cold spells.

Health Response

- Deploy mobile health units to treat respiratory infections, hypothermia, frostbite, diarrhea, and smog-related complications.
- Monitor hospital caseloads for influenza, pneumonia, and acute respiratory infections.
- Provide masks in smog-affected areas, especially urban centers.

Transport & Public Safety Response

- Issue real-time travel advisories through radio, SMS, and district administrations.
- Temporarily close high-risk road segments when visibility drops below safe thresholds.
- Provide on-ground traffic assistance in fog-dense corridors.

Agriculture & Livestock Support

- Provide field advisories on frost-protection measures during extreme cold nights.
- Support livestock owners with emergency fodder distribution, vaccination drives, and shelter guidance.

Relief Support

- Distribute blankets, warm clothing, dry food, heating aids (safe and approved), and water-purification supplies.
- Ensure equitable coverage through coordinated cluster mechanisms.

5. RECOVERY & REHABILITATION PHASE

Assessment & Documentation

- Conduct post-winter damage assessments covering household impacts, agriculture losses, livestock mortality, health burdens, and disruptions to education or mobility.
- Submit evidence-based assessment reports to PDMA Sindh for financial and material support.

Livelihood & Agriculture Rehabilitation

- Support farmers with frost-affected crop recovery (seeds, fertilizers, small tools).
- Rehabilitate water sources contaminated or disrupted during winter.
- Promote winter-resilient agricultural practices for long-term resilience.

Health & Community Recovery

- Continue post-season medical surveillance for winter-related diseases.
- Provide psychosocial support in communities that experienced hardship.

Infrastructure Rehabilitation

- Repair winter-damaged rural roads, school infrastructure, water facilities, and community structures.
- Strengthen visibility infrastructure on highways to prepare for future winters.

Post-Action Review

- Conduct debrief sessions with district administrations, line departments, and humanitarian partners.
- Update Winter Contingency Plan based on lessons learned and on-ground challenges.

GENDER-SENSITIVE AND VULNERABLE GROUPS SUPPORT STRATEGY FOR WINTER RESPONSE

The winter response measures for gender and vulnerable groups require coordinated efforts from various stakeholders, including government bodies, UN agencies, NGOs, sector-based organizations, and community members. The National and Provincial Disaster Management Authorities (NDMA & PDMA) lead strategic planning and coordination, ensuring resource allocation and preparedness at their respective national and provincial levels, while DDMAs implement localized response plans and facilitate delivery to marginalized communities. UN agencies and I/NGOs are responsible for providing technical support and resources, while they also execute specific programs tailored to vulnerable groups, such as women, trans, children, the elderly, and persons with disabilities. Community-Based Organizations (CBOs) and Civil Society Organizations (CSOs) contribute by working at the grassroots level and addressing sector-specific needs to ensure inclusivity and community participation. Communities themselves are vital in actively participating in preparedness activities, assisting vulnerable individuals during emergencies, and offering feedback for continuous improvement. The collaborative efforts of all these actors ensure a comprehensive, gender-sensitive, and inclusive approach to winter preparedness and response.

Below is a detailed table outlining the winter response measures for different gender and vulnerable groups:

Gender/Vulnerable Group	Pre-Winter Measures	During Winter Measures	Post-Winter Measures
Elderly People	• Stock winter-specific supplies i.e. warm clothing, blankets, and energy-dense food. • Ensure access to flu vaccines and other seasonal medications. • Identify elderly-friendly evacuation routes and shelters. • Train local volunteers on assisting the elderly during emergencies.	• Provide heated, safe shelters with accessible facilities. • Distribute thermal wear and nutritional supplements. • Ensure regular health check-ups for chronic conditions. • Prolonged winter gas load-shedding must be addressed with alternate solutions integrated into winter planning.	• Include elderly in livelihood recovery programs. • Facilitate physical therapy and social support to combat isolation. • Provide long-term care services.
People with Disabilities (PWDs)	• Conduct evacuation drills considering various disabilities. • Provide specialized assistive devices (e.g., winter-ready	• Ensure priority shelter access and adaptive equipment.	• Replace or repair damaged assistive devices. • Build accessible homes and

	wheelchairs, hearing aids). • Develop accessible transport systems for evacuation. • Train caregivers in emergency support for PWDs. • Stock winter essentials, including warm clothing, blankets, and energy-rich food.	• Assign caregivers in shelters to provide personal assistance. • Distribute blankets. • Create Women and Girls Friendly Spaces to support adolescent girls in managing their menstrual health and hygiene effectively.	community infrastructure. • Integrate PWDs into community livelihood and support programs.
Women & PLWs (Pregnant and Lactating Women)	• Stock maternal and neonatal health kits (including insulated delivery kits). • Train healthcare workers and midwives for winter emergencies. • Ensure warm, private spaces in shelters for women and PLWs. • Address GBV risks through targeted planning. • Stock winter essentials, including blankets, and energy-rich food.	• Establish mother-and-child-friendly shelters with heating. • Provide warm clothing, infant formula, and sleeping bags. • Deploy mobile health units for maternal care. • Establish Women and Girls Friendly Spaces where mothers can comfortably and privately breastfeed their children. • Create Women and Girls Friendly Spaces to support adolescent girls in managing their menstrual health and hygiene effectively.	• Rebuild healthcare facilities with maternal health units. • Support women and PLWs in livelihood programs. • Provide GBV counseling and psychosocial support.
Children (12 years and below)	• Distribute warm clothing, gloves, and shoes. • Stock schools with emergency supplies and child-specific nutrition kits.	• Create heated child-friendly spaces with recreational activities. • Serve hot meals and conduct regular health screenings.	• Rehabilitate schools and playgrounds with resilient infrastructure. • Provide long-term nutrition programs.

	• Conduct child safety and evacuation drills in schools. • Ensure vaccination for common winter illnesses.	• Ensure educational continuity in temporary setups.	• Offer mental health services tailored to children.
Transgender Individuals	• Train transgender community leaders in winter-specific disaster response. • Designate safe, inclusive shelters with access to heating. • Ensure equitable inclusion in preparedness programs.	• Provide winter essentials, including warm clothing, blankets, and energy-rich food. • Monitor shelters to ensure inclusivity and safety. • Provide healthcare and psychosocial support.	• Facilitate skill-based recovery programs tailored for transgender individuals. • Address long-term housing and employment needs. • Include transgender voices in recovery planning.

ANNEX A: EMERGENCY CONTACT LIST

The communities and any other relevant entity can contact on following number in case emergency

Provincial Emergency Operation Center (PEOC)

Office	Contact No
Provincial Emergency Operation Center (PEOC), Provincial Disaster Management Authority, Government of Sindh	Emergency No: 1736 (Toll free) (021) 35381810 0335-5557362

List of divisional Commissioners

S#	Designation	District	Tel Off.	Fax
KARACHI DIVISION (021)				
1	Commissioner	Karachi	9205610-14, 9205607	99205652, 99205639
2	Deputy Commissioner	East	99231214, 99231215	99230994
3	Deputy Commissioner	West	99333177, 99333172	99333173
4	Deputy Commissioner	Kemari	99333177, 99333172	99333173
5	Deputy Commissioner	South	99205644	99202296
6	Deputy Commissioner	Central	99260037, 99260038	99260036
7	Deputy Commissioner	Malir	99333785-6	35001301
8	Deputy Commissioner	Korangi	99333922	99333923
HYDERABAD DIVISION				
1	Commissioner	Hyderabad	(022) 9200112 - 13	9200114, 9201316

2	Deputy Commissioner	Hyderabad	(022) 9200244	9200976
3	Deputy Commissioner	Jamshoro	(0223) 870135, 871942 - 44	871199, 871954
4	Deputy Commissioner	Dadu	(025) 9200250, 9200251	9200252
5	Deputy Commissioner	Matiari	(022) 2760033, 2760032	2760011
6	Deputy Commissioner	Tando Allahyar	(022) 9250702-3	9250703
7	Deputy Commissioner	Tando M. Khan	(022) 9260701-2-9	9260709
8	Deputy Commissioner	Thatta	(0298) 920061, 770359	R: 920058 O: 920069
9	Deputy Commissioner	Sujawal	(0298) 510051	510051
10	Deputy Commissioner	Badin	(0297) 920013	861471, 920021
SUKKUR DIVISION				
1	Commissioner	Sukkur	(071) 9310834, 9310835	O: 9310837 R: 9310619
2	Deputy Commissioner	Sukkur	(071) 9310601-600	9310602
3	Deputy Commissioner	Khairpur	(0243) 9280200, 9280201	9280202
4	Deputy Commissioner	Ghotki	(0723) 661616, 661675	O: 661677 R: 651628
SHAHEED BENAZIRABAD DIVISION				
1	Commissioner	Shaheed Benazirabad	(0244) 9370333, 81069	9370392, 381068

2	Deputy Commissioner	Shaheed Benazirabad	(0244) 381494, 9370337	9370338
3	Deputy Commissioner	N. Feroze	(0242) 92010, 448256	920103
4	Deputy Commissioner	Sanghar	(0235) 920116-7	920101
LARKANA DIVISION				
1	Commissioner	Larkana	(074) 9410244, 9410245	(R)9410293, (O)9410394-5
2	Deputy Commissioner	Larkana	(074) 9410318, 9410243	9410336, 9410293
3	Deputy Commissioner	Kamber Shahdadkot	(074) 9411100	9411102, 9411108
4	Deputy Commissioner	Shikarpur	(0726) 920200, 920201	920202
5	Deputy Commissioner	Jacobabad	(0722) 921201-2	921003
6	Deputy Commissioner	Kashmore	(0722) 570904, 35843006	570902
MIRPURKHAS DIVISION				
1	Commissioner	Mirpurkhas	(0233) 9290052, 9290053-54	9290055-59
2	Deputy Commissioner	Mirpurkhas	(0233) 9290069, 9290070	9290254
3	Deputy Commissioner	Umerkot	(0238) 920019-20	920020
4	Deputy Commissioner	Tharparkar	(0232) 920667, 920825	920818

Source: Commissioner Office - Contact Information

OPERATION WINGS, RESCUE 1122 (SINDH)

S#	Division	Name of Officer(s) / Focal Person(s)	Designation	Contact Details
1	Karachi (HQ) Wing - I	Asif Ali	Emergency Officer	0301-3406433
2	Karachi (HQ) Wing - II	Hassaan Ul Haseeb	Station In-charge	0334-3356007
3	Karachi District Station (KIHD)	Saad Ullah Bhutto	Emergency Officer	0332-4510567
4	District Station, Hyderabad	Roshan Ali Mahesar	Emergency Officer	0333-3116117
5	District Station, Mirpurkhas	Fayaz Samo	CLO/Station In-charge	0335-3548887
6	District Station, Shaheed Benazirabad	Roshan Ali Mahesar	Emergency Officer	0333-3116117
7	District Station, Sukkur	M. Awais	Station In-charge	0320-3625154
8	District Station, Larkana	Iftikhar Ahmed	CLO/Station In-charge	0333-1977776

PROVINCIAL DISASTER MANAGEMENT AUTHORITY,
REHABILITATION DEPARTMENT
GOVERNMENT OF SINDH
PLOT NO. 26-C, MAIN KHAYABAN-E-JAMI,DHA PHASE–VII, KARACHI.

Helpline No:
PDMA 1736

PDMA Office : 021-35381810 / PEOC : 0335-5557362 / Fax : 021-35314219 / Email : info@pdma.gos.pk

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