



weatherwalay

SEASONAL OUTLOOKS

Winter Outlook 2025

1. Overview

The overall precipitation pattern in **Pakistan** is projected to remain **below normal during the October–December 2025** period. Temperatures are expected to be **above normal in most regions**, while **air quality conditions are expected to deteriorate**, especially across urban plains. Increased fog and smog frequency is likely to affect **visibility, transportation, and public health**.

Pakistan has been divided into **three precipitation and climatic zones** for operational clarity and early warning planning.

2. Zone Classification

Zone	Areas Covered	Key Characteristics
Zone 1	Upper & Central Khyber Pakhtunkhwa (KPK), Gilgit-Baltistan (GB), Azad Jammu & Kashmir (AJK), Potohar Region	Mountainous and northern highlands; snow and rainfall-dependent catchments
Zone 2	Plains of Punjab, KP, Sindh	Low-lying plains, agricultural zones, dense urban areas
Zone 3	Balochistan & Coastal Sindh (Karachi, Thatta, Badin)	Arid and semi-arid zone, prone to winter dry spells

3. Seasonal Precipitation Forecast

Zone 1: Upper & Central KPK, GB, AJK, Potohar

- **Oct–Dec 2025:**
 - **Precipitation:** *Below normal*
 - **Implications:** Prolonged dry spells; reduced snow accumulation; low streamflow.
- **Jan–Feb 2026:**
 - **Precipitation:** *Near normal to slightly above normal*
 - **Implications:** Likelihood of isolated moderate to heavy winter storms and snow events.

Zone 2: Plains of Punjab, KP, Sindh

- **Oct–Dec 2025:**
 - **Precipitation:** *Below normal*
 - **Implications:** Increased drought stress, soil moisture deficit, reduced canal inflows.
- **Jan–Feb 2026:**
 - **Precipitation:** *Below normal*
 - **Implications:** Irrigation pressure likely to continue throughout the winter season.

Zone 3: Balochistan & Coastal Sindh

- **Oct–Dec 2025:**
 - **Precipitation:** *Below normal*
 - **Implications:** Typical winter dryness expected to persist or intensify.
- **Jan–Feb 2026:**
 - **Precipitation:** *Above normal*
 - **Implications:** Isolated rain-bearing western disturbances may lead to localized moderate rainfall events, improving moisture conditions.
- **Temperature:** *Normal to below normal* during January–February.

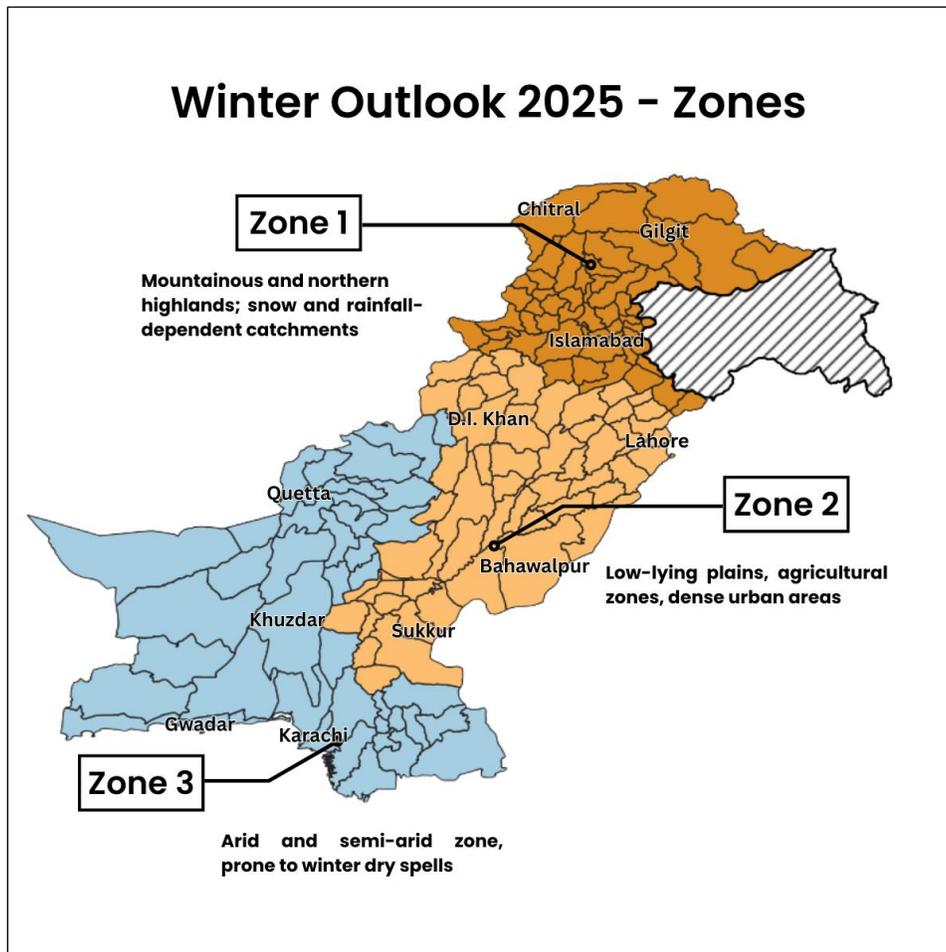


Figure 1 Winter Outlook 2025 Zones

4. Temperature Outlook

Zones 1 & 2

- Temperatures expected to remain **above average** throughout the season, particularly during October–December.
- Delay in onset of winter chill, contributing to prolonged dry spells and smog episodes.

Zone 3

- Temperatures expected to remain **near normal in early winter** and **slightly below normal** during January–February.
- Cooler night temperatures may support moisture retention following rainfall events.

5. Fog and Smog Outlook

• Zones 1 & 2

- **Above-average number of fog and smog days** expected between **November 2025 and February 2026**, particularly in Punjab, central KP, and northern Sindh.
- **High-risk locations:** Lahore, Faisalabad, Sahiwal, Multan, Peshawar, Sukkur.
- Low wind speeds and temperature inversions will trap pollutants near the surface, intensifying smog episodes.

• Zone 3:

- Fog episodes expected to remain *below average* overall, but **coastal haze events** may increase temporarily due to sea-land interactions and winter temperature gradients.

6. Air Quality Outlook

- Air quality is expected to **remain worse than normal** in most urban and peri-urban areas.
- **Smog intensity:** Likely to peak in **November to January**, with increased duration and frequency.
- Primary pollutants include **PM2.5, vehicular emissions, industrial pollution,** and **biomass burning residues** from surrounding agricultural lands.
- Prolonged poor air quality may increase **respiratory and cardiovascular health risks.**

7. Potential Impacts

Sector	Expected Impacts
Agriculture	Reduced soil moisture and delayed rains could affect Rabi crop growth and irrigation cycles.
Water Resources	Below normal flows in rivers and canals through early winter; improved flows possible late in Zone 3.
Public Health	High risk of respiratory illnesses due to prolonged smog; increased health service demand.
Energy	Warm early winter may shift energy demand patterns; late cold spells may cause sudden peaks.
Transport & Safety	Fog/smog events expected to cause road and air traffic disruptions , particularly along motorways and fog-prone plains.
Disaster Risk Management	Need for proactive monitoring, early warnings, and inter-agency coordination.

8. Recommended Early Actions

- **Air Quality & Fog Preparedness:**
 - Deploy real-time AQI and fog monitoring alerts in smog-prone districts.
 - Coordinate with motorway and traffic authorities for traveler advisories.
- **Water & Agriculture Planning:**
 - Encourage water conservation and precision irrigation practices.
 - Adjust cropping schedules and advisories for Rabi crops.
- **Health Response:**
 - Issue regular **smog health advisories**, N95 mask campaigns, and strengthen hospital surge capacity.
- **Institutional Coordination:**
 - PDMA/NDMA to activate seasonal preparedness mechanisms.
 - Cross-sector coordination between agriculture, energy, health, and transport departments.