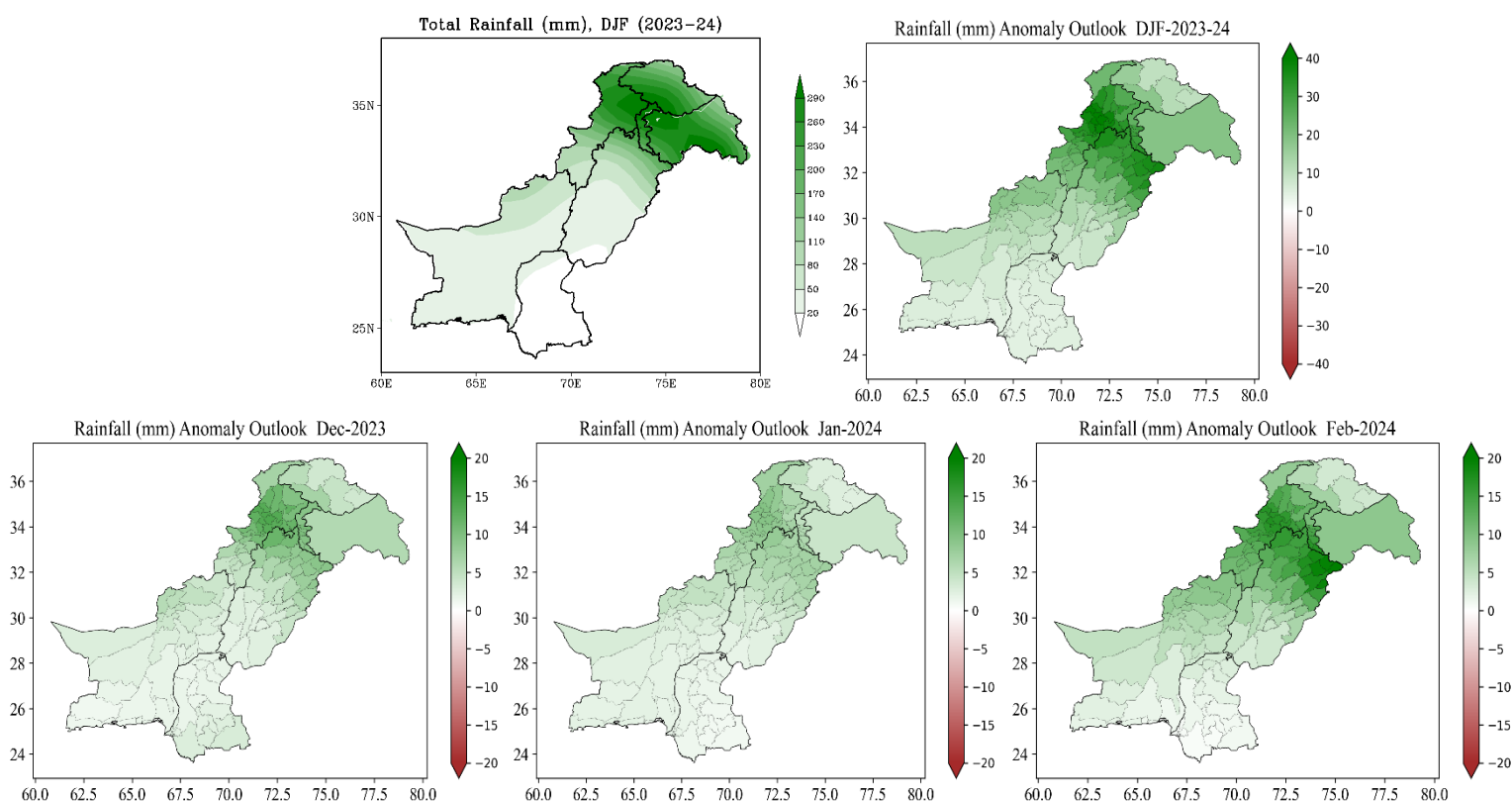


Seasonal Agro-Climat outlook for December 2023 - February 2024

Brief Introduction

Pakistan Meteorological Department issues monthly and seasonal forecast at the end of each month using global climate models. As the result of a single model and single data set are not considered reliable for prediction and forecast for a longer period, therefore models developed by different institutes and different data sets are being used for accuracy along with different boundary conditions for each model output. At present, 13 recommended models are adopted to obtain multi-model ensemble for seasonal predictions.

Seasonal Projections (Precipitation)



A tendency of normal to slightly above normal precipitation is likely over most parts of the country during the next three months (DJF) particularly over the northern parts including Khyber Pakhtunkhwa, northern Balochistan, upper Punjab and adjoining Kashmir.

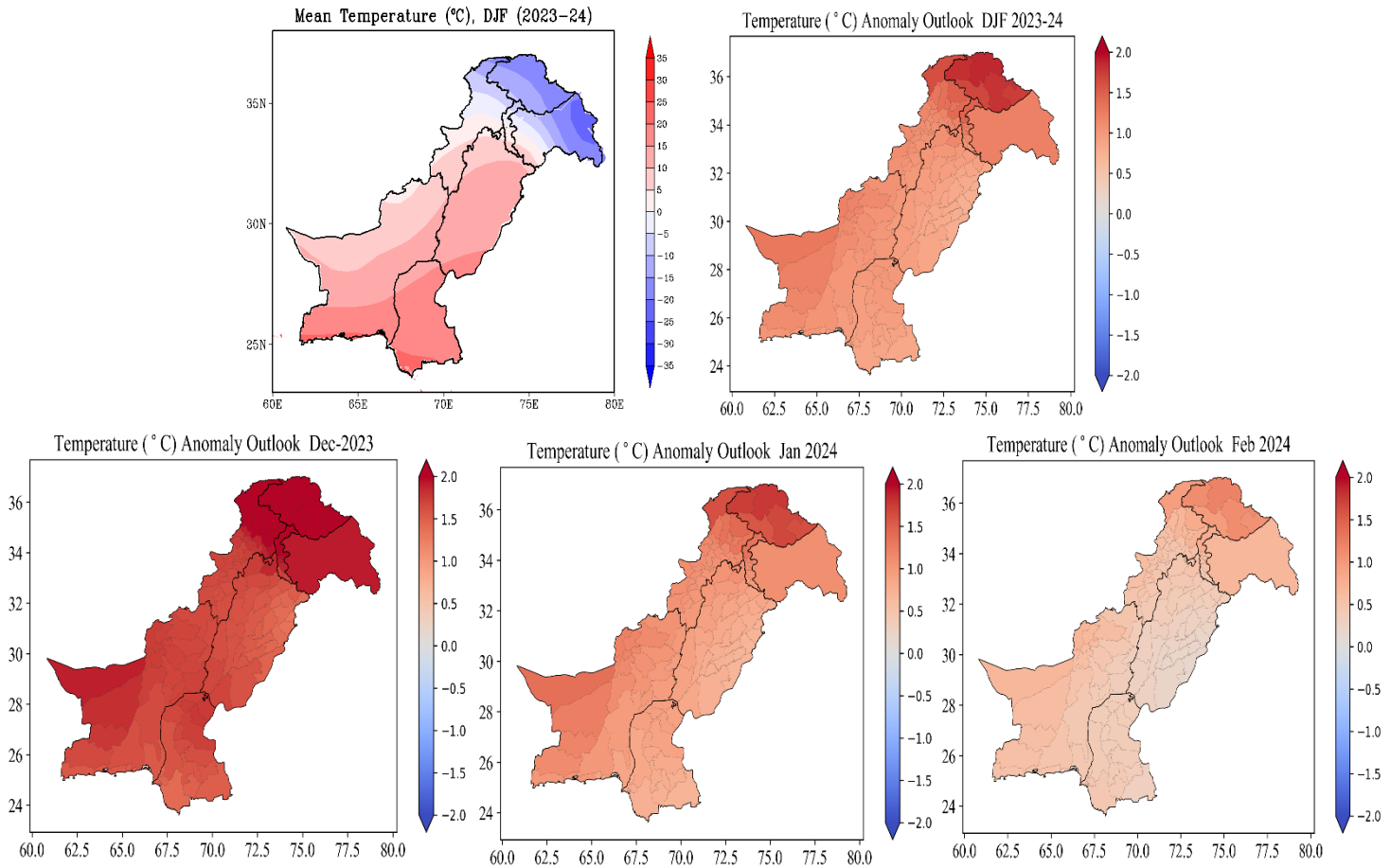


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Month Wise Situation

- During December 2023, nearly normal to slightly above rainfall (snowfall over the high mountain in upper Khyber Pakhtunkhwa) is likely over most parts of the country particularly the central parts of Khyber Pakhtunkhwa.
- Nearly normal precipitation is likely over most parts of the country particularly Sindh during January 2024 .
- In February 2024, normal to slightly above normal precipitation is expected over most parts of the country particularly the upper Punjab and Khyber Pakhtunkhwa.

Seasonal Projections (Mean Air Temperature)

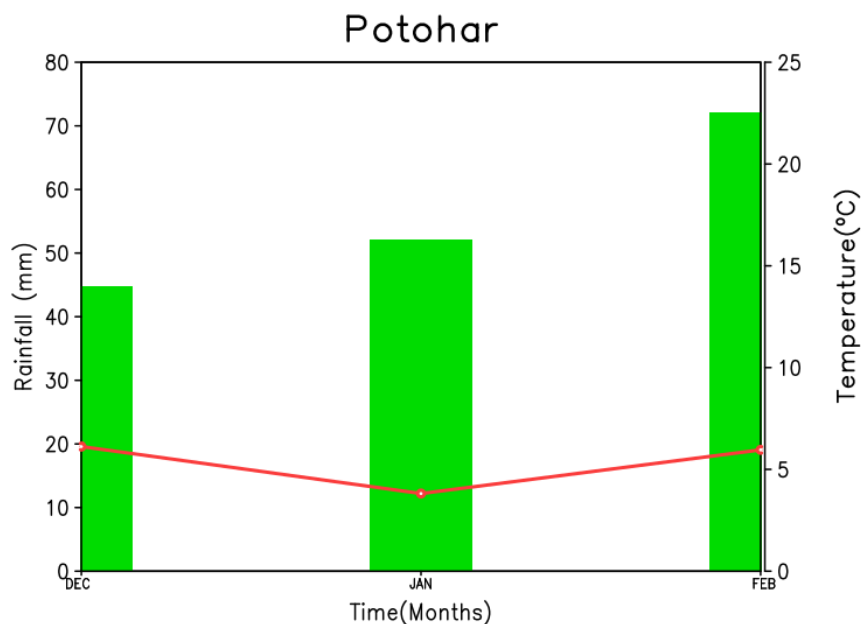


A tendency of normal to slightly above normal mean temperature is likely over most parts of the country during the period (DJF) particularly the northern belt of Khyber Pakhtunkhwa and Gilgit Baltistan.

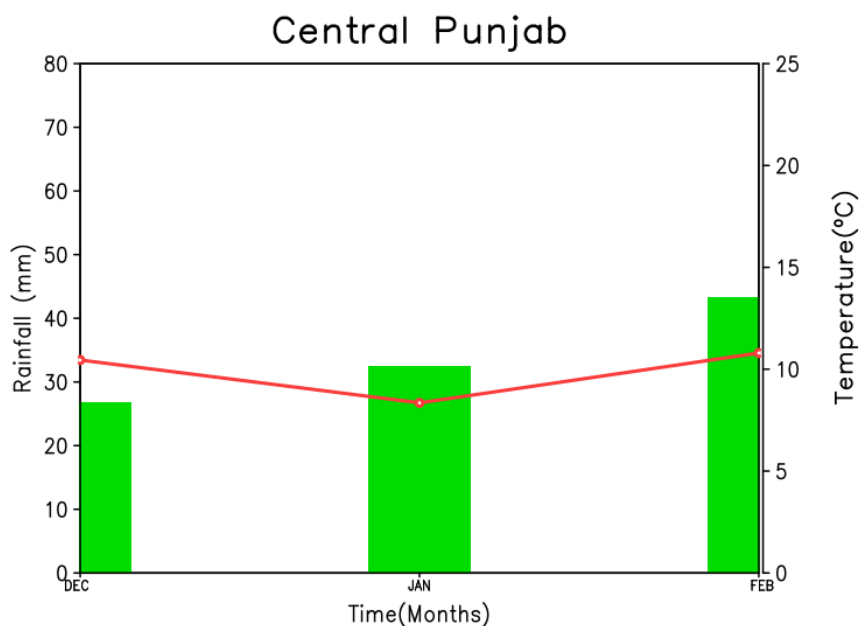
Month Wise Situation

- During December 2023, above normal mean temperature is likely over most parts of the country particularly over western Baluchistan and northern parts of the country including upper Khyber Pakhtunkhwa, Gilgit Baltistan and Kashmir.
- Nearly normal to slightly above normal mean temperatures are expected in most parts of the country especially the northern belt of Khyber Pakhtunkhwa and Gilgit Baltistan, during January 2024.
- In February 2024, nearly normal mean temperatures are likely in most parts of the country.

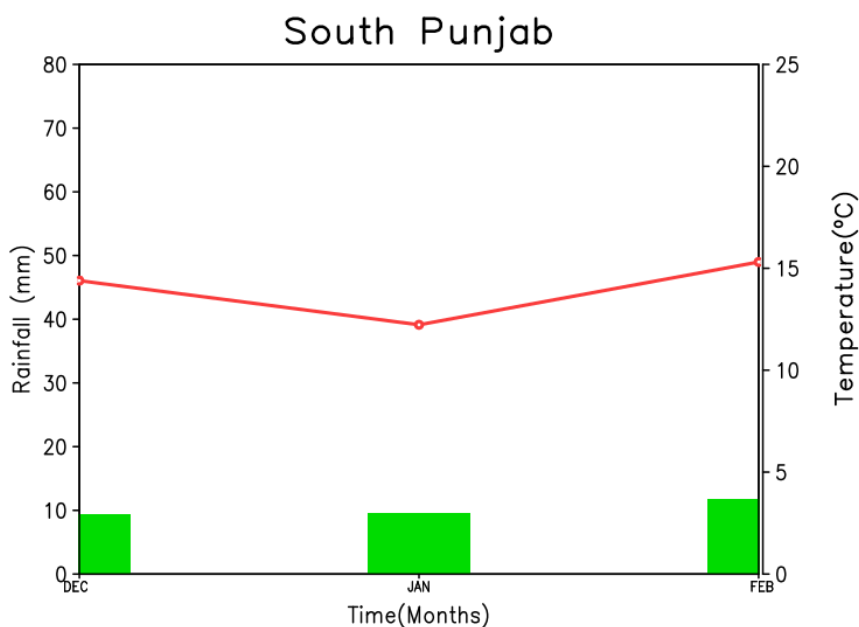
Outlook for Agroclimatic Zones



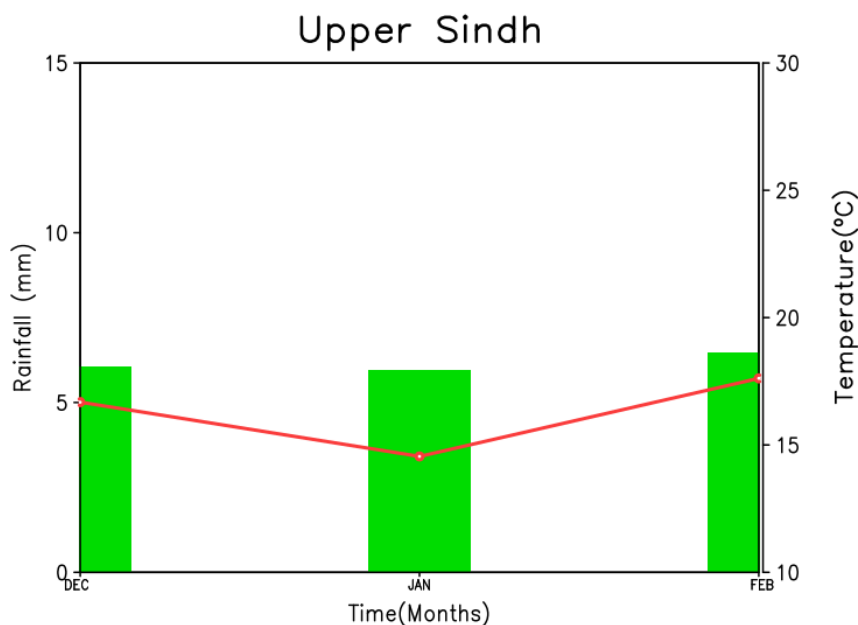
The **Potohar Region** is expected to receive considerable amount of precipitation during the period (DJF). The mean temperature is expected to drop in January and increase again gradually following the seasonal pattern.



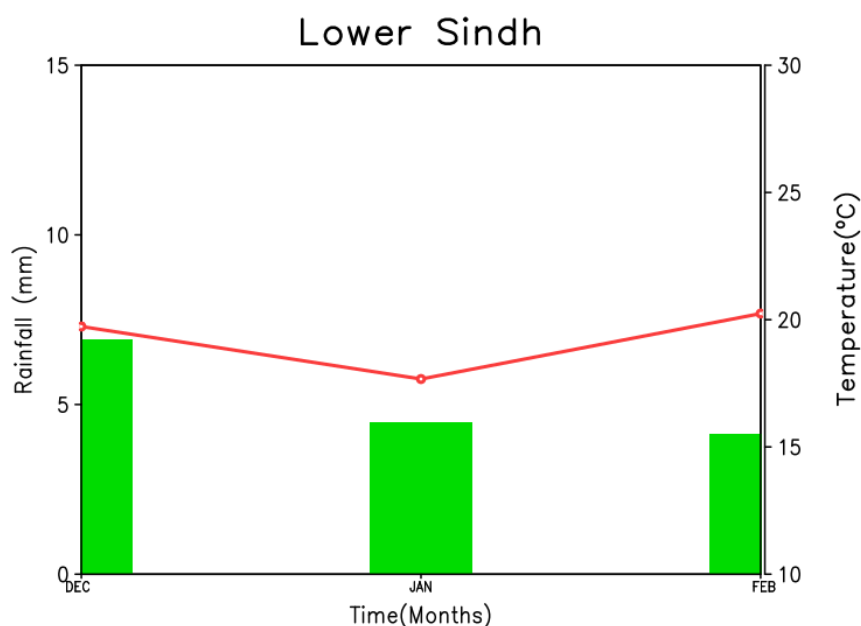
Similarly, **Central Punjab** is expected to receive lesser rainfalls during the period (DJF). The mean temperature is projected to decrease in January and increase again as per seasonal pattern.



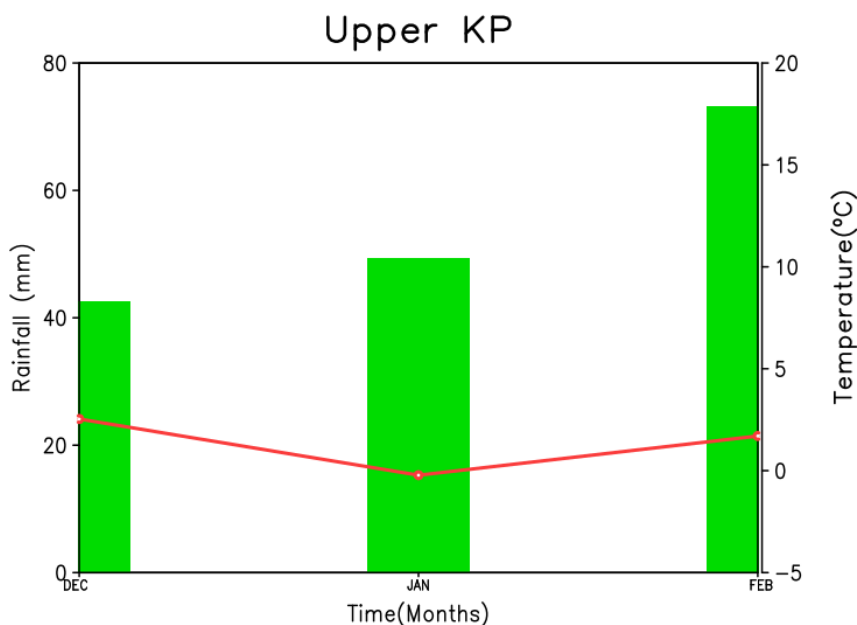
Southern Punjab is expected to receive very few rainfalls during the next three months (DJF). The mean temperature is expected to drop down in January and rise gradually following the seasonal pattern.



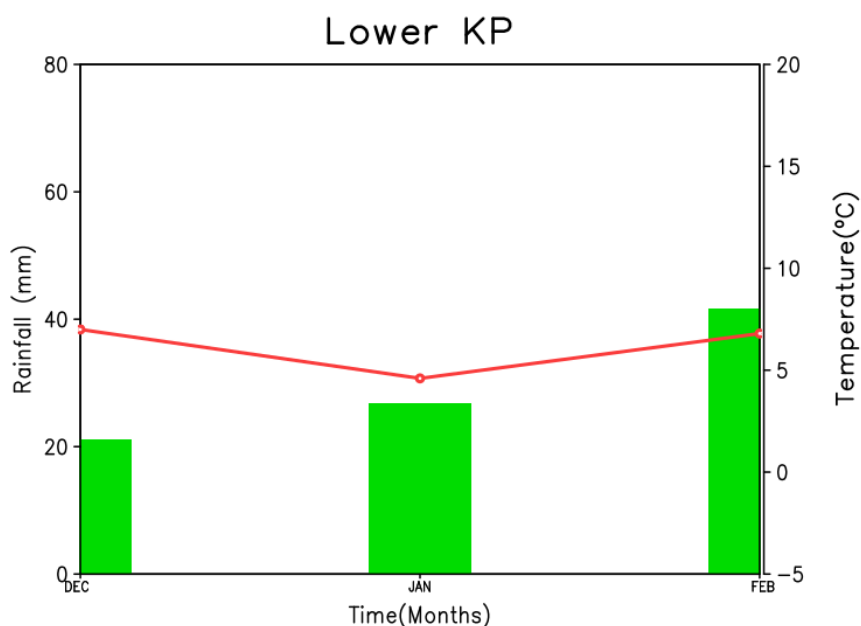
Upper Sindh is expected to receive very few rainfalls during the mentioned period (DJF). The mean temperature is expected to approach its lowest value in January and increase again following the seasonal pattern.



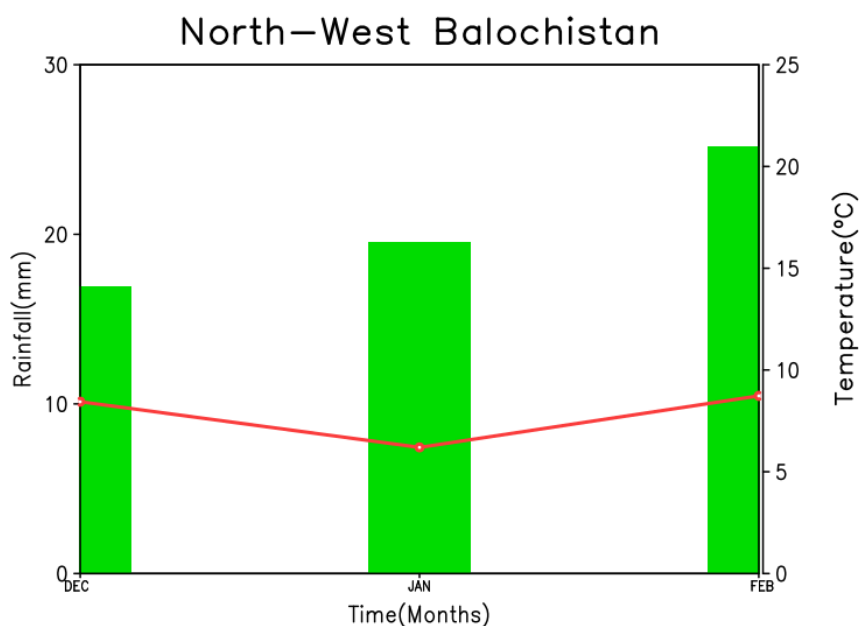
Lower Sindh may receive a few rainfalls in the period (DJF). The mean temperature is expected to decrease in January and then gradually increase following the seasonal pattern.



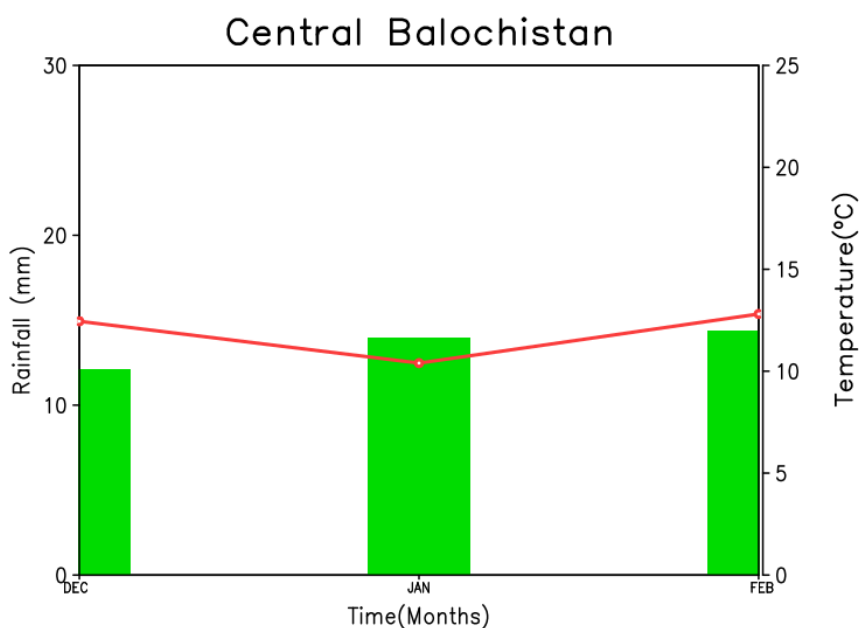
Upper Khyber Pakhtunkhwa may receive considerable amount of precipitation throughout the period (DJF). The mean temperature is expected to approach its lowest value in January and increase again following the seasonal pattern.



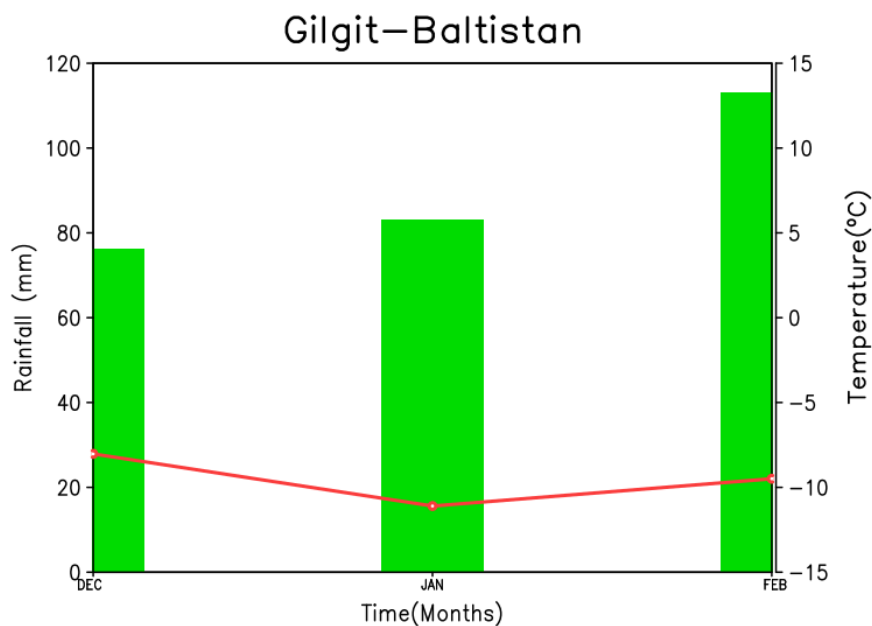
Lower Khyber Pakhtunkhwa may comparatively receive lower amount of precipitation during the period (DJF). The mean temperature is expected to drop down in January and gradually increase again following the seasonal pattern.



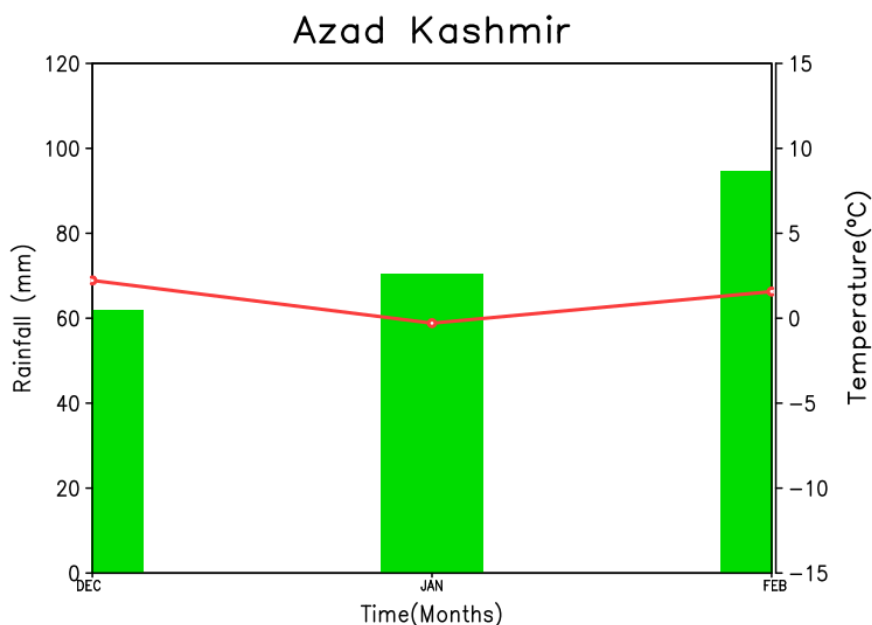
North-Western Baluchistan may receive fewer precipitation throughout the period (DJF). The mean temperature is expected to decrease in January and then increase following the seasonal pattern.



Central Baluchistan is expected to receive lesser rainfalls during the period (DJF). The mean temperature is expected to decrease in January and increase again following the seasonal pattern.



Gilgit Baltistan is expected to receive valuable amount of precipitation throughout the period (DJF). The mean temperature is expected to drop down in January and then increase again in February following the seasonal pattern.



Kashmir would also receive considerable amount of precipitation during the period (DJF). The mean temperature is expected to first decrease in January and then gradually increase following the seasonal pattern.



Advisories for Farmers Based on the Recent and Expected Weather conditions

At present, the major agricultural soils (particularly in the upper half) hold considerable reserves of the moisture contents based on the weather conditions in the recent months. Accordingly, the standing crops and vegetable/orchards are growing with satisfactory pace in most parts of the country. However, few severe weather events (heavy rainfall / hails / windstorm) observed at isolated places have damaged the seasonal vegetables and fruits.

During the next three months (DJF), in addition to seasonal decrease in temperatures, slightly above normal rains (along with snow over the high mountains) are expected in the country especially over the upper parts. Additionally, occurrence of frost in particular plains / sub-mountainous regions of the country is also expected from mid of December up to 2nd / 3rd week of January.

Importantly, December is an important month for the early growth of Rabi crops in most of the agricultural plains of the country particularly over the upper half. Farmers of these regions may take precautionary measures to protect their crops, vegetables and orchids from the harmful impacts of expected cold weather conditions. Besides, farmers of northern areas and northern Baluchistan etc may complete the sowing of their Rabi crops in time and arrange suitable irrigation for healthier growth of their crops at initial levels.