Government of Pakistan
Ministry of Aviation (Aviation Division)
Pakistan Meteorological Department
Sector: H-8/2, Islamabad.

Tel:051-9250364
Fax:051-9250368

Date: 4th July 2022

Outlook for Monsoon (JAS), 2022

Synoptic situation:

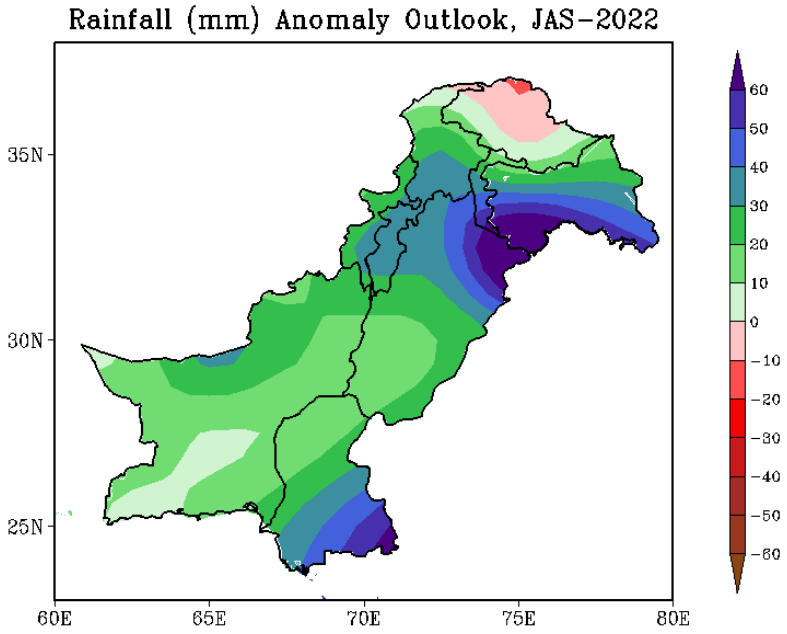
The South Asian monsoon (SAM) is considered a large-scale coupled air–sea–land interaction phenomenon that brings seasonal rainfall to the Indian subcontinent. The El Niño–Southern Oscillation (ENSO) and Indian Ocean Dipole (IOD) are two well-known temporal oscillations in sea surface temperature (SST), which are both known to influence the interannual variability of SAM rainfall. These variabilities in the SST are coupled to the atmospheric Walker circulation. The El Niño (La Niña) conditions over the Pacific Ocean are often linked to weak (strong) SAM.

During the monsoon season (JAS 2022), the latest global models forecast indicate that the La Niña conditions are likely to continue during the upcoming monsoon season. The recent forecasts from coupled global models suggest that the negative IOD conditions are likely to develop during the monsoon season. Based on the global and regional circulation patterns, the outlook for monsoon 2022 in Pakistan is as under:

Seasonal Outlook:

Overall, a tendency for **above normal precipitation** is likely over the country during forecast season (JAS).
First half of the monsoon from 1st July to Mid-August is likely to be wetter than last half (mid-August to end of September).
Monsoon rainfall is expected to be above normal over Punjab and Sindh whereas slightly above normal rainfall is expected over remaining parts of the country.
Temperature would be above normal during the monsoon season.

*Area weighted normal rainfall of Pakistan during Jul - Sep is **140.8 mm**.*



Impacts:

- Possibility of extreme hydro-meteorological events over catchment areas cannot be ruled out, that may generate riverine floods in the major rivers.
- Heavy rainfall events may trigger flash flooding in hilly areas and urban flooding in plain areas i.e. major cities of Sindh, Punjab, AJK and KP during the season.
- Above normal temperatures in high altitudes are likely to increase rate of snowmelt in the Northern Areas subsequently increasing the chances of base flow in the Upper Indus basin.
- Sufficient water availability for irrigation and power sectors will be a good impact.

Note: The current outlook is based on the June atmospheric conditions. Keeping in view the rapid changes in climate system dynamics, the monthly outlook will be updated during the last week of each month.