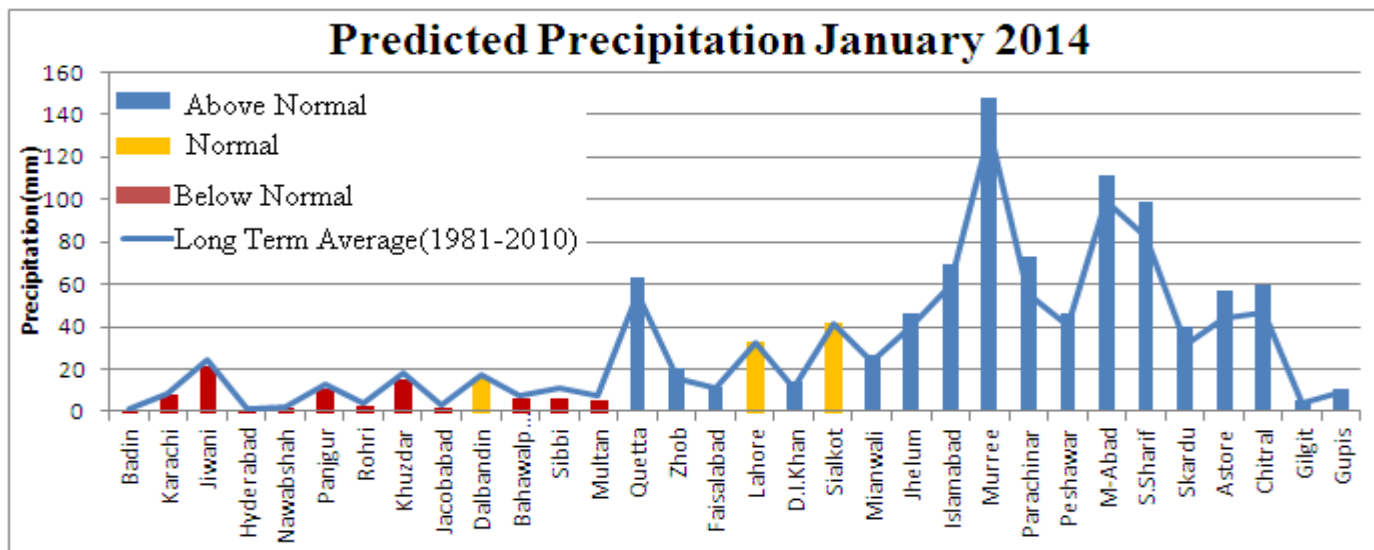
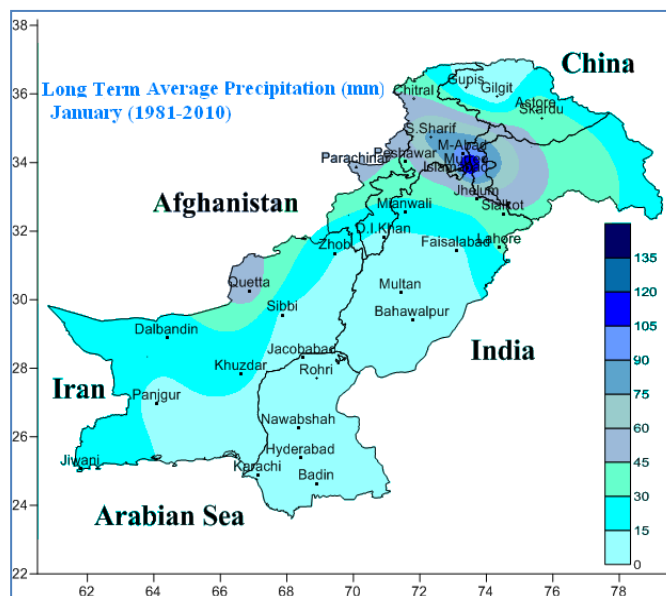
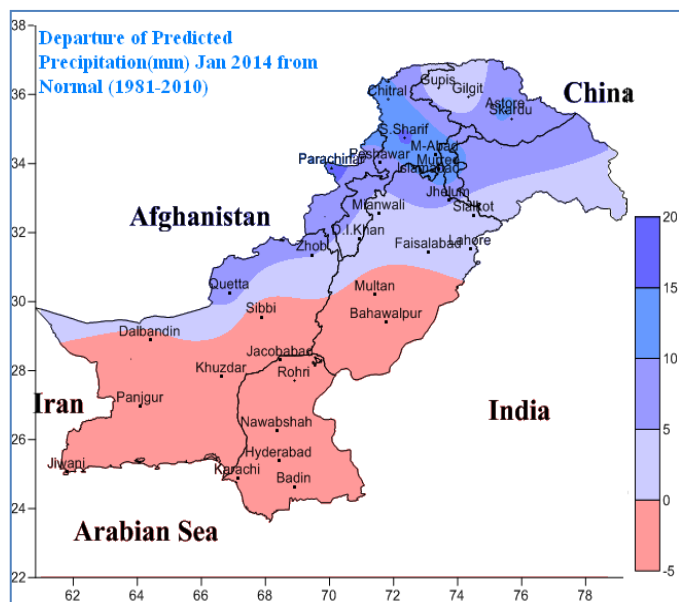


Experimental Precipitation Forecast January 2014

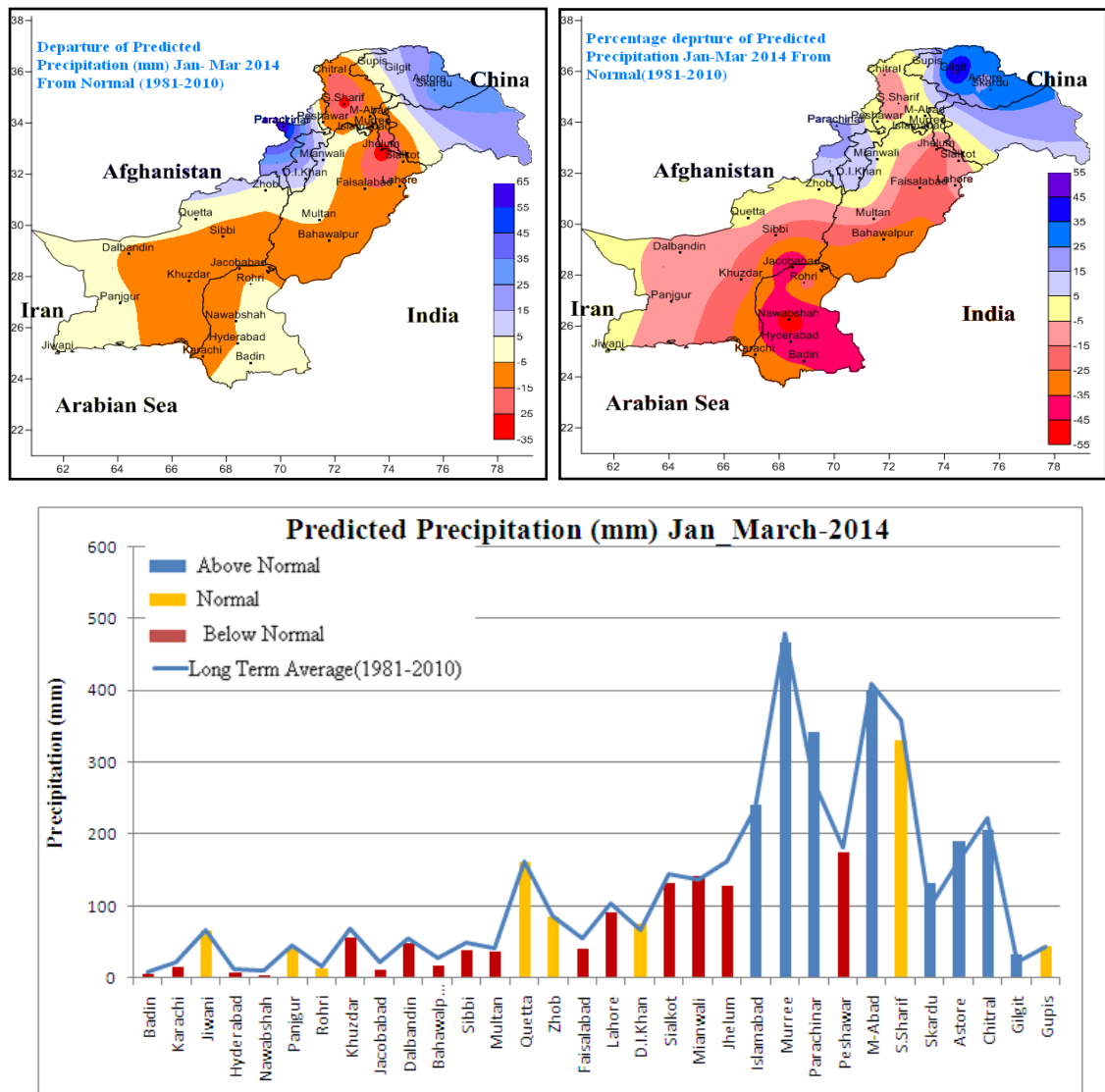
Seasonal prediction provides information that how the weather condition is expected as compared to the normal atmospheric conditions. Output of the Combined General Circulation Model (CGCM) is downscaled to obtain the seasonal forecast. Most parts of the country extended from coastal areas of Sindh and Balochistan to the southern parts of Punjab are expected to receive below normal (1981-2010) rainfall during the month of January 2014. However the northern half of the country along with the belt bordering Afghanistan is expected to receive above normal precipitation. Overall slightly above normal precipitation is expected in the country.



In the above figure stations are arranged according to the increasing latitude from left to right.

Experimental Precipitation forecast January-March 2014

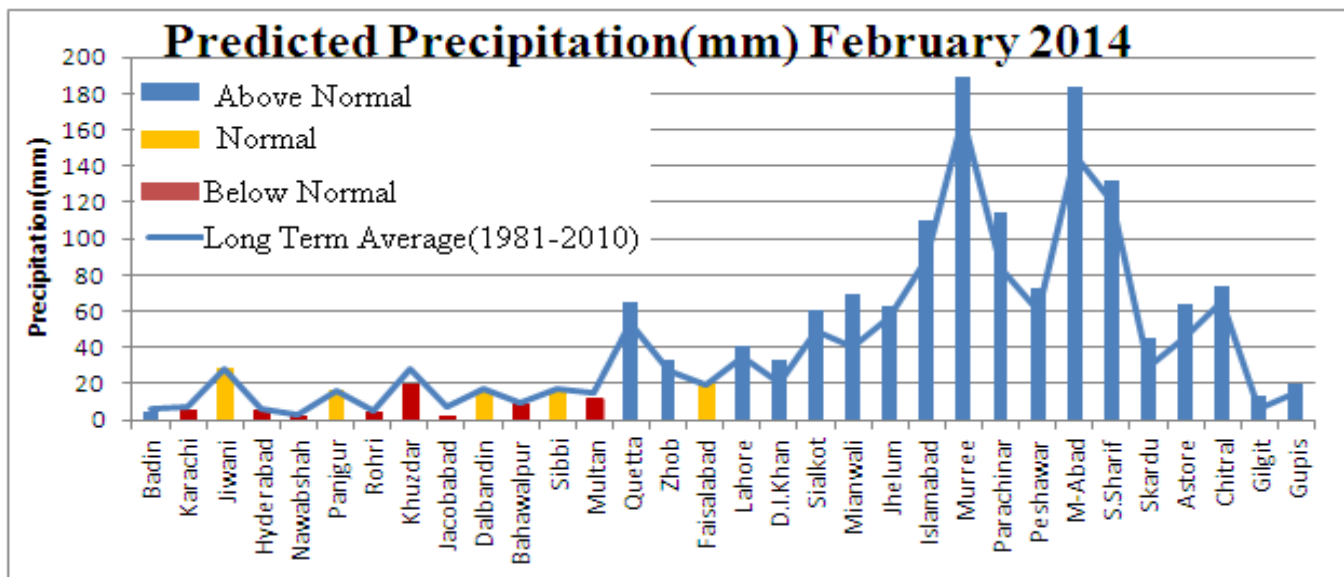
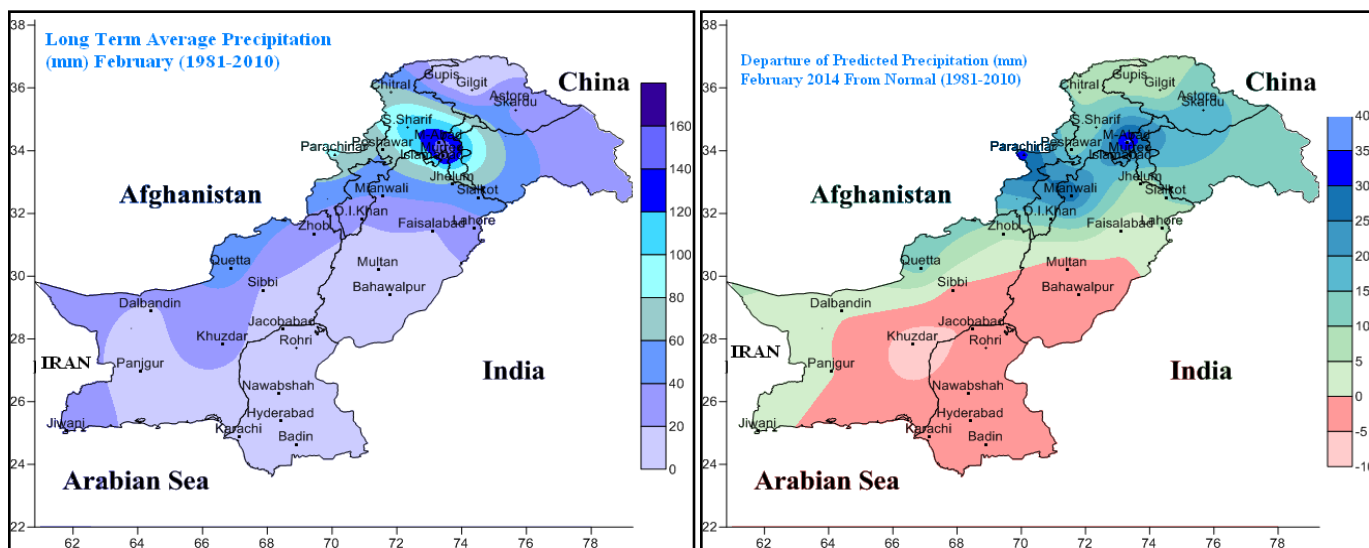
The statistical technique has been used to downscale the output of the CGCM (Combined General Circulation Model) to prepare the precipitation forecast on monthly and seasonal bases. During the season Northern tips of the country and some regions of Khyber Pakhtunkhwa are expected to receive above than normal rainfall. However below normal rainfall (mm) will be occurred in whole Punjab except its western boundary, similar pattern of rainfall is expected in Sindh province and major parts of the Baluchistan. Normal to above normal rainfall may be happened in mountain region of KP and adjoining areas of Punjab and Baluchistan.



In the above figure stations are arranged according to the increasing latitude from left to right.

Experimental Precipitation Forecast February 2014

Output of the combined general circulation model (CGCM) is used to predict the precipitation amount over the selected stations of Pakistan. The highlight of the February precipitation forecast is above normal (1981-2010) precipitation over large part of the country. Above normal precipitation is more prominent at the northern edge of Punjab along with adjoining Kashmir and Khyber Pakhtunkhwa regions. Whereas the whole of the Sindh province, adjoining Balochistan along with the southern parts of Punjab are expected to receive below normal rainfall. Overall above normal precipitation is expected in the country during the month February 2014.

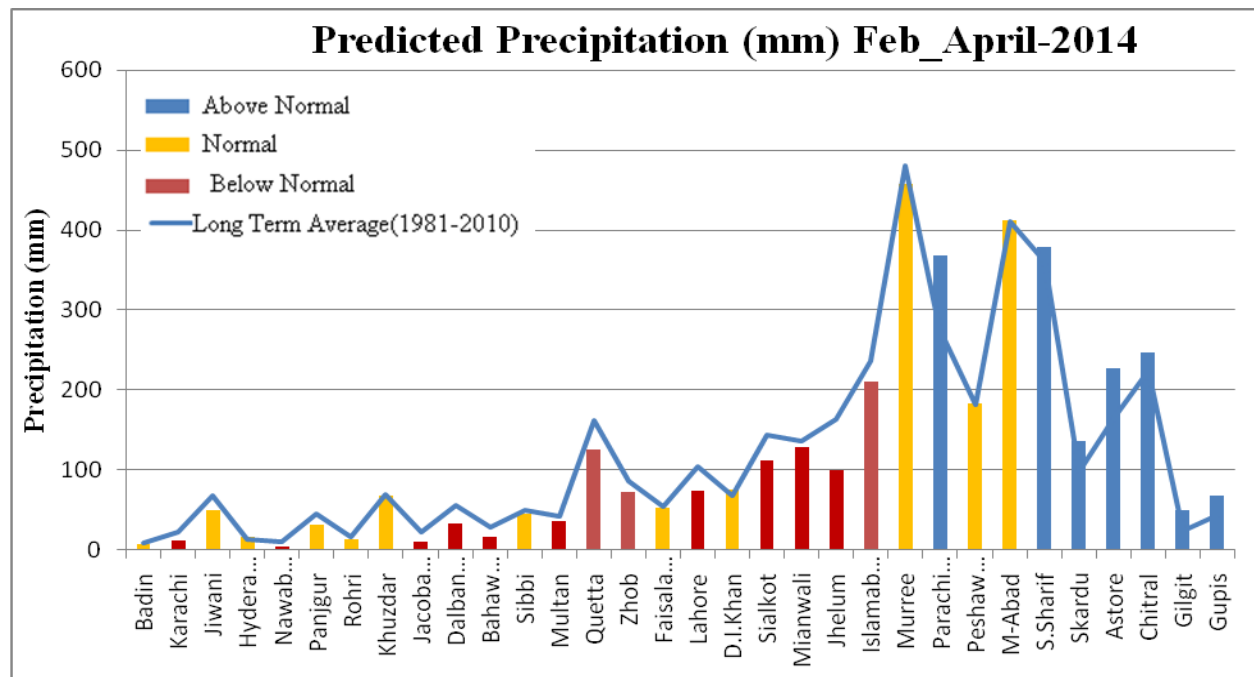
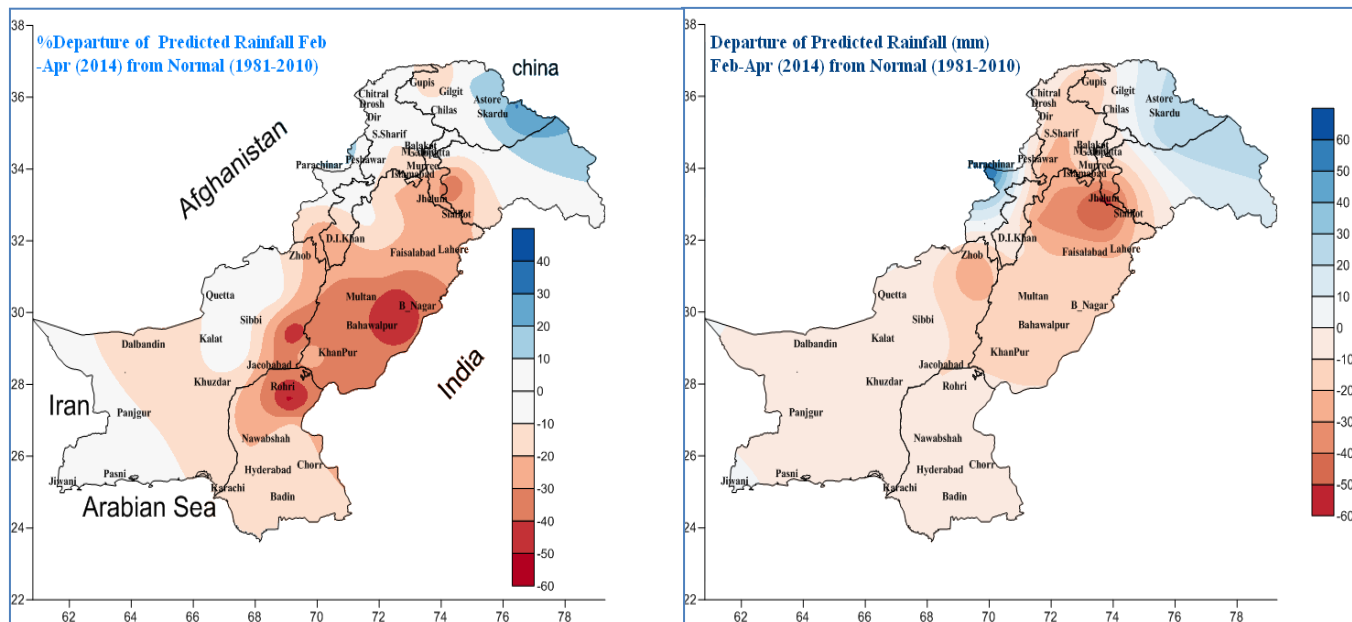


In the above figure stations are arranged according to the increasing latitude from left to right.

Precipitation Forecast for Feb- April (FMA) 2014

The synthesis of the Combined Global Circulation Model (CGCM) forecast for February to April 2014 indicates near normal conditions in the Southern parts of the country. The forecast for FMA shows above normal precipitation in Gilgit Baltistan region. Also Parachinar is expected to get slightly above normal (1981-2010) precipitation. The whole Punjab especially southern regions and adjoining areas of Baluchistan and khyber Pakhtoonkhwa may be under below normal conditions for this season.

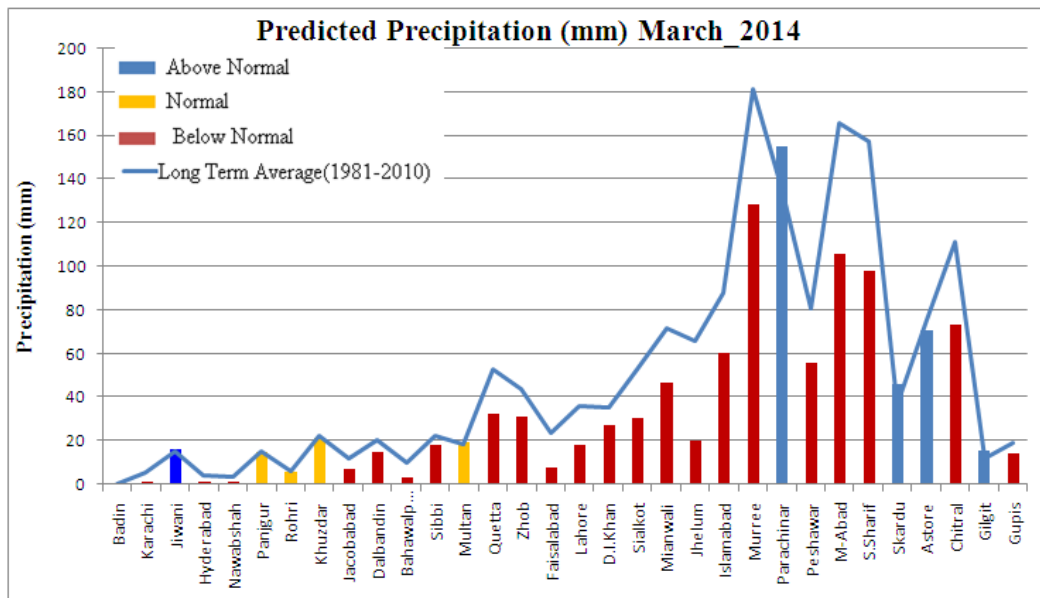
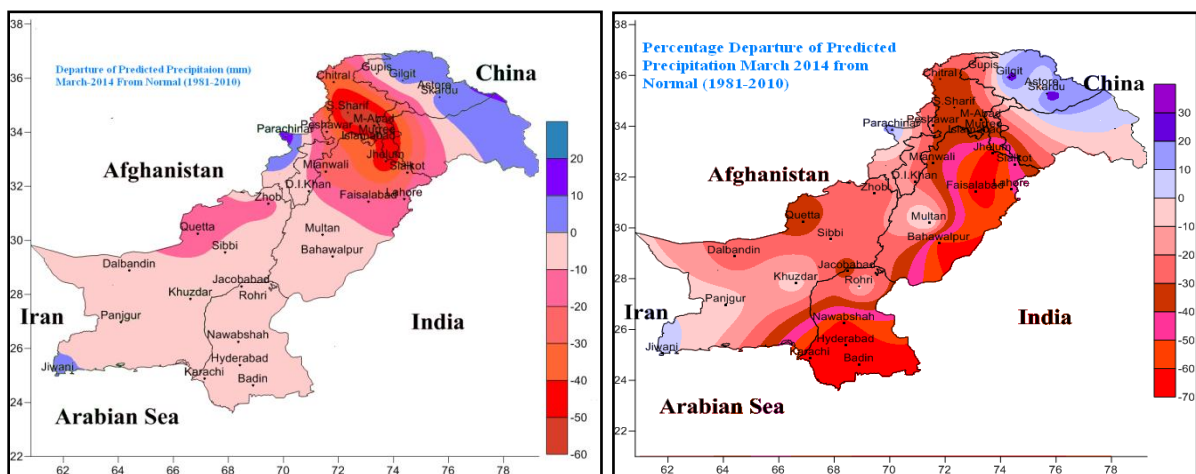
In aggregate, the total precipitation during March and April is likely to remain in normal range over the country. Agricultural plains of Punjab, Sindh and Balochistan are expected to receive less than average rainfall during last two weeks of March and the month of April. Dry conditions are desirable during the period to avoid pre and post harvest losses of Rabi crops. However, April is not going to be totally dry month. Some rains of heavy intensity associated with dust storm are expected. Farmers are advised to carry out their field operations in accordance with weather forecasts.



In the above figure stations are arranged according to the increasing latitude from left to right.

Experimental Precipitation forecast March 2014

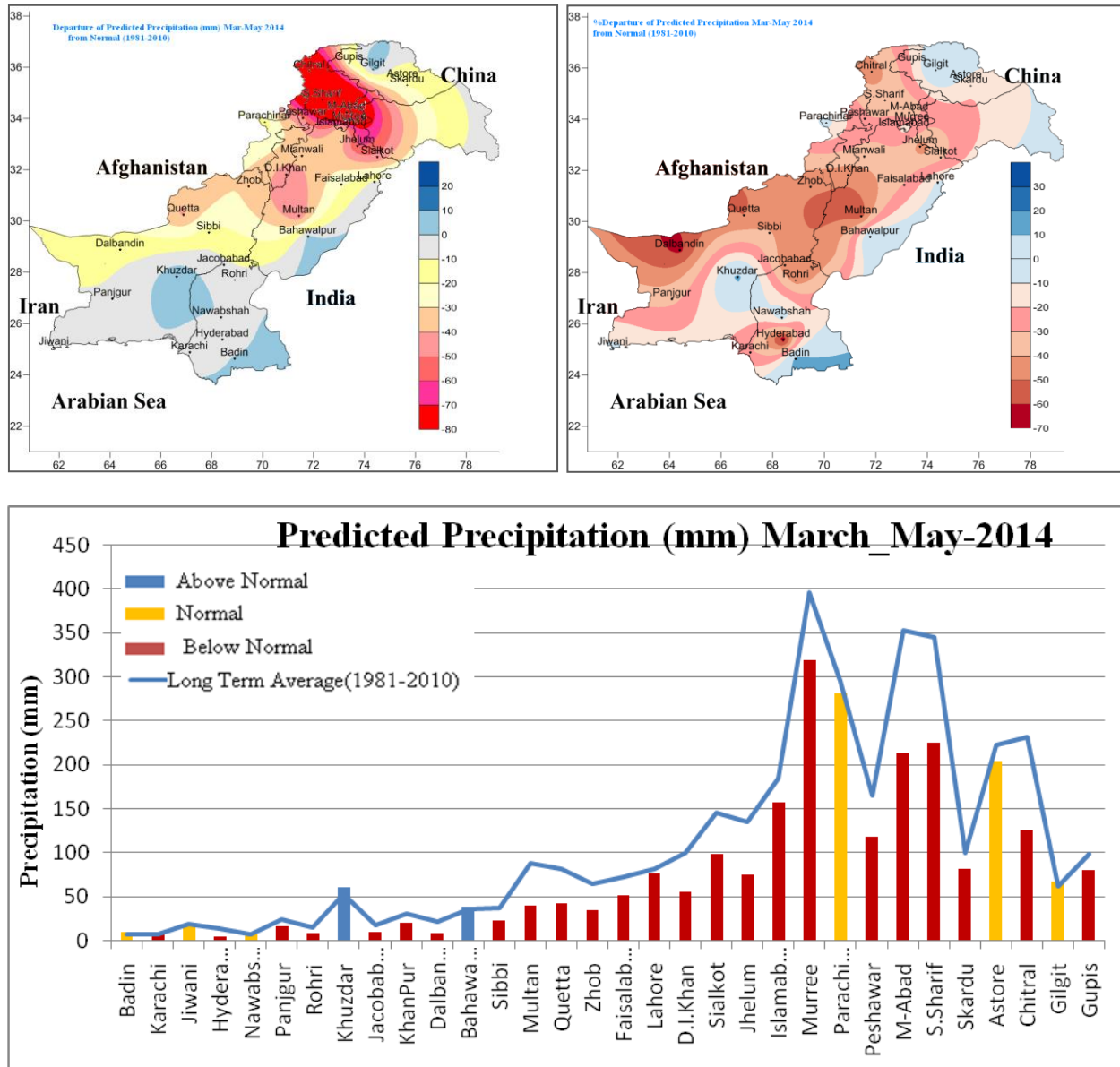
Output of the combined general circulation model (CGCM) is used to predict the rainfall amount over the selected stations of Pakistan on monthly and seasonal time scales. Most of the country including Sindh, Punjab, Khyber Pakhtunkhwa, most parts of Gilgit- Baltistan and Kashmir are expected to receive below Normal (1981-2010) Precipitation. Below normal precipitation is most prominent in the northern Punjab and Khyber Pakhtunkhwa. Only the northern parts of Gilgit Baltistan and Kashmir are expected to receive above normal Precipitation during the month of March 2014. Overall below normal precipitation is predicted in the country.



In the above figure stations are arranged according to the increasing latitude from left to right.

Experimental Precipitation forecast Mar-May 2014

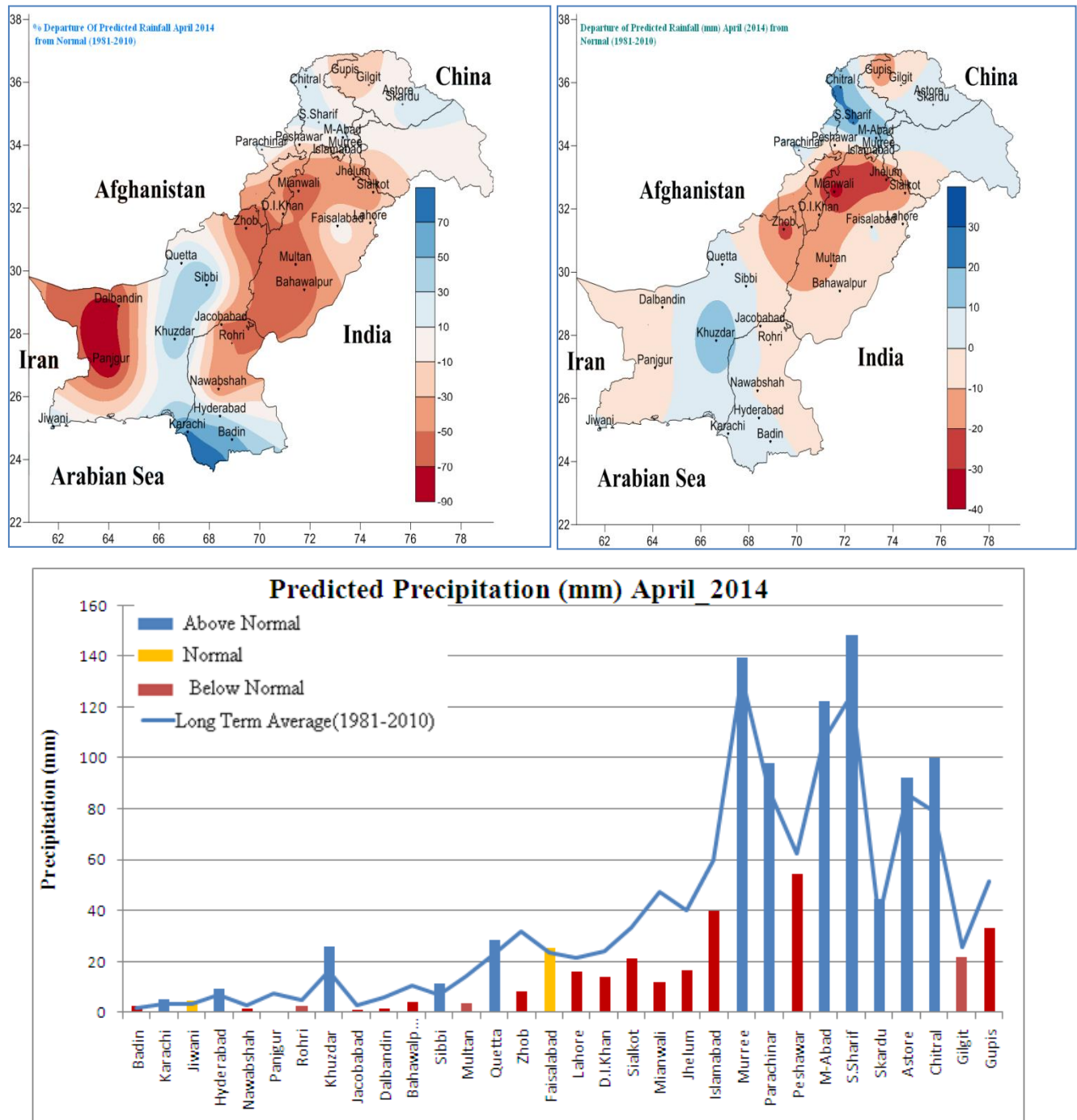
The synthesis of the Coupled Global Circulation Model (CGCM) forecast for March to May 2014 indicates normal to below normal rainfall in Khyber Pakhtoonkhwa, Punjab, Azad Jammu and Kashmir and north western parts of Baluchistan with maximum negative anomaly in the northern half of Khyber pakhtoonkhwa , adjoining areas of AJK and Punjab province. Normal rainfall (with a bias of ± 10 mm) is expected in Sindh, southern parts of Baluchistan, western parts of Punjab and upper areas of Gilgit Baltistan.



In the last figure stations are arranged according to the increasing latitude from left to right.

Precipitation Forecast for April- 2014

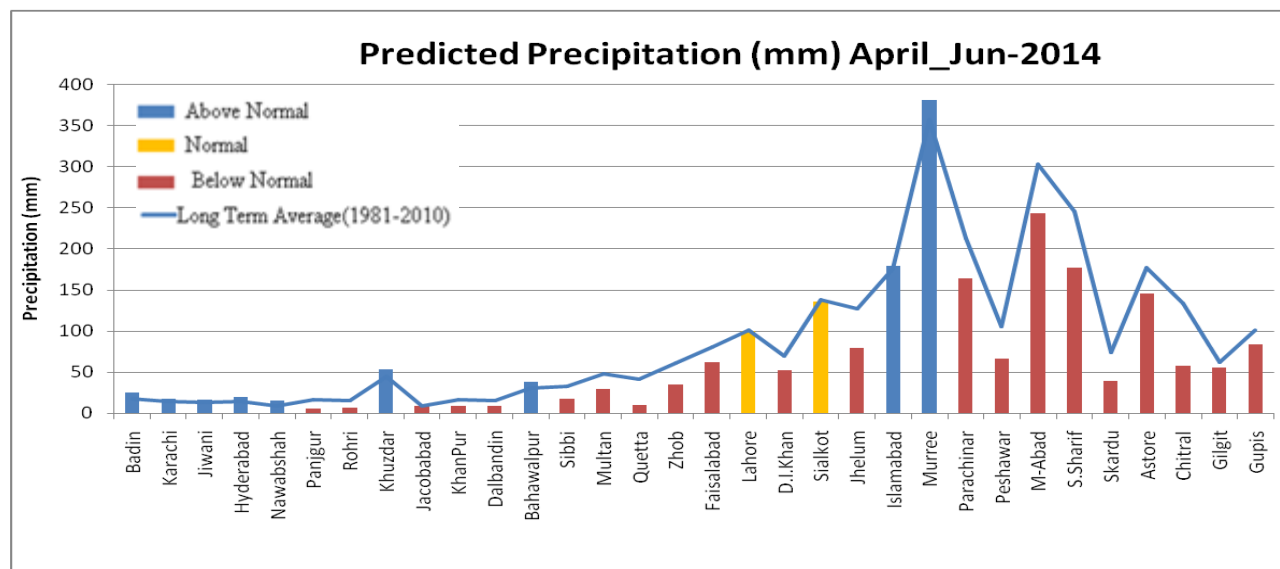
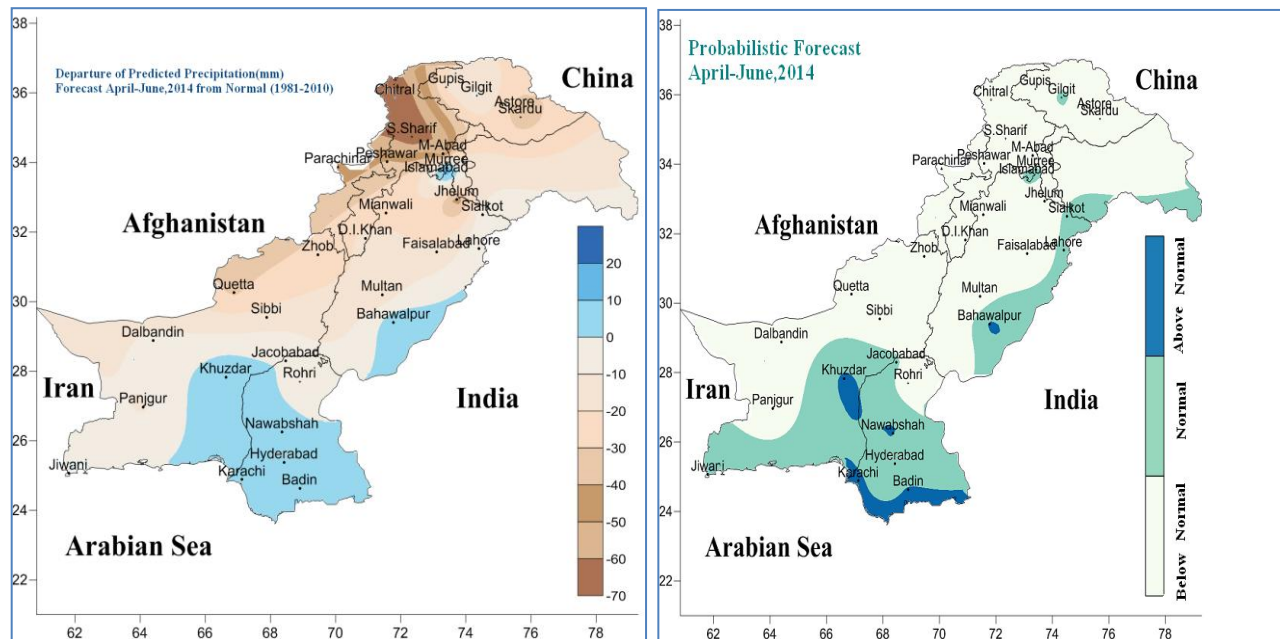
The output of the CGCM model shows that in April above normal rainfall is expected in southern parts of Sindh, central regions of Baluchistan and Gilgit Baltistan. The maximum positive departure is expected in northwestern parts of Khyber Pakhtoonkhwa. However below normal rainfall is expected throughout Punjab along with adjoining areas of Baluchistan, Sindh and Khyber Pakhtoonkhwa. The same pattern of precipitation may persist in southwestern region of Baluchistan. Azad Jammu & Kashmir are expected to experience average rainfall.



In the above figure stations are arranged according to the increasing latitude from left to right.

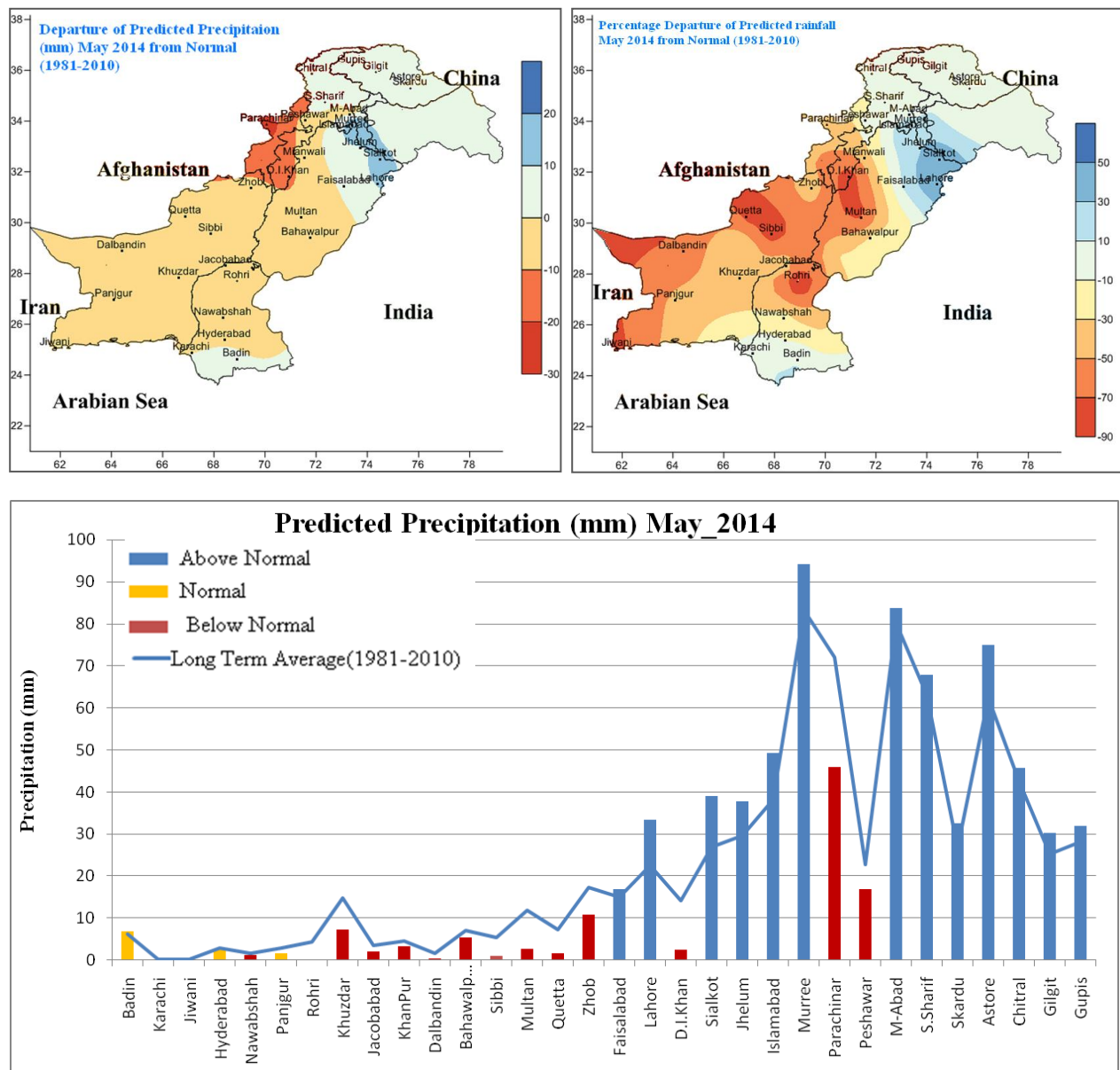
Experimental Precipitation Forecast April-June,2014

The three month outlook for predicted precipitation shows that there may be below normal rainfall in most parts of the country except some eastern parts of Punjab and southern regions of Sindh and its adjoining areas Baluchistan. Slightly above normal rainfall may occur in coastal areas of Sindh. During the season convective rainfall is expected in some regions like Khuzdar, Nawabshah and Bahawalpur.



Experimental Precipitation forecast May 2014

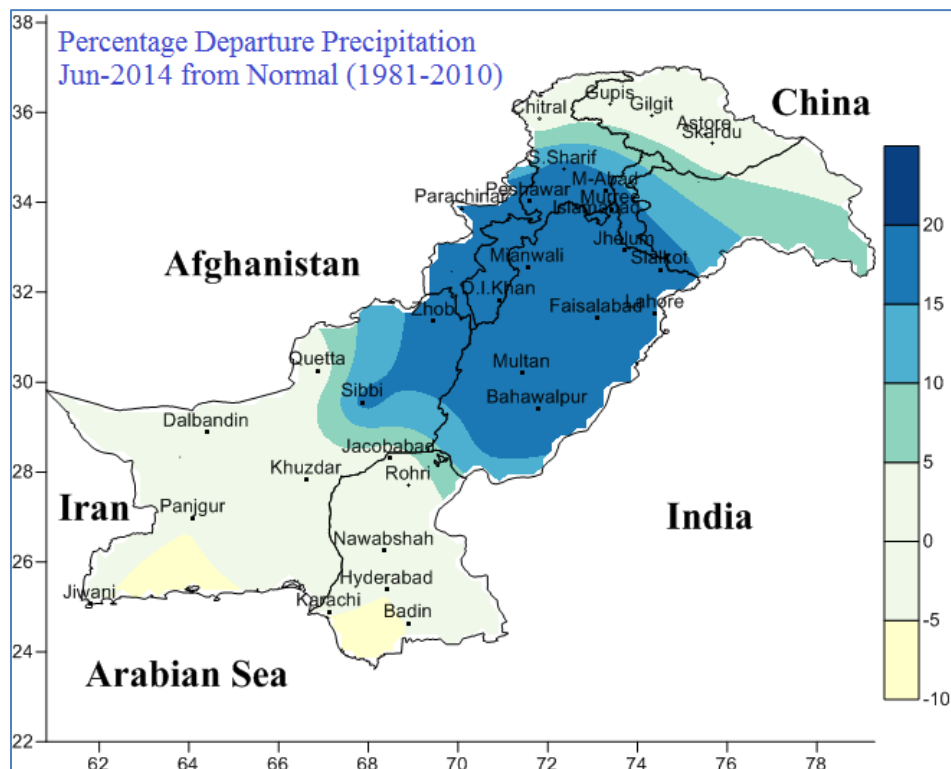
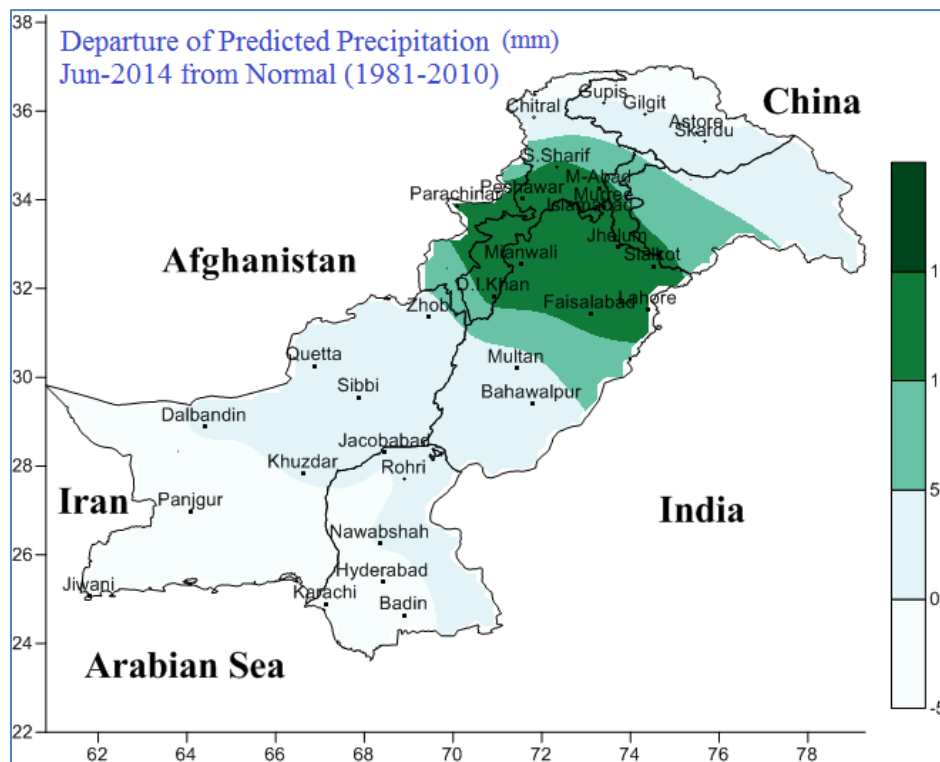
The output of the CGCM model shows that in May above normal rainfall is expected in northern Punjab and adjoining areas of Azad Jammu and Kashmir. Below normal rainfall is expected in south western parts of Khyber Pakhtoonkhwa with maximum negative anomaly in Parachinar. Almost normal rainfall (with a bias of ± 10 mm) is expected in the rest of the country.



In the last figure stations are arranged according to the increasing latitude from left to right.

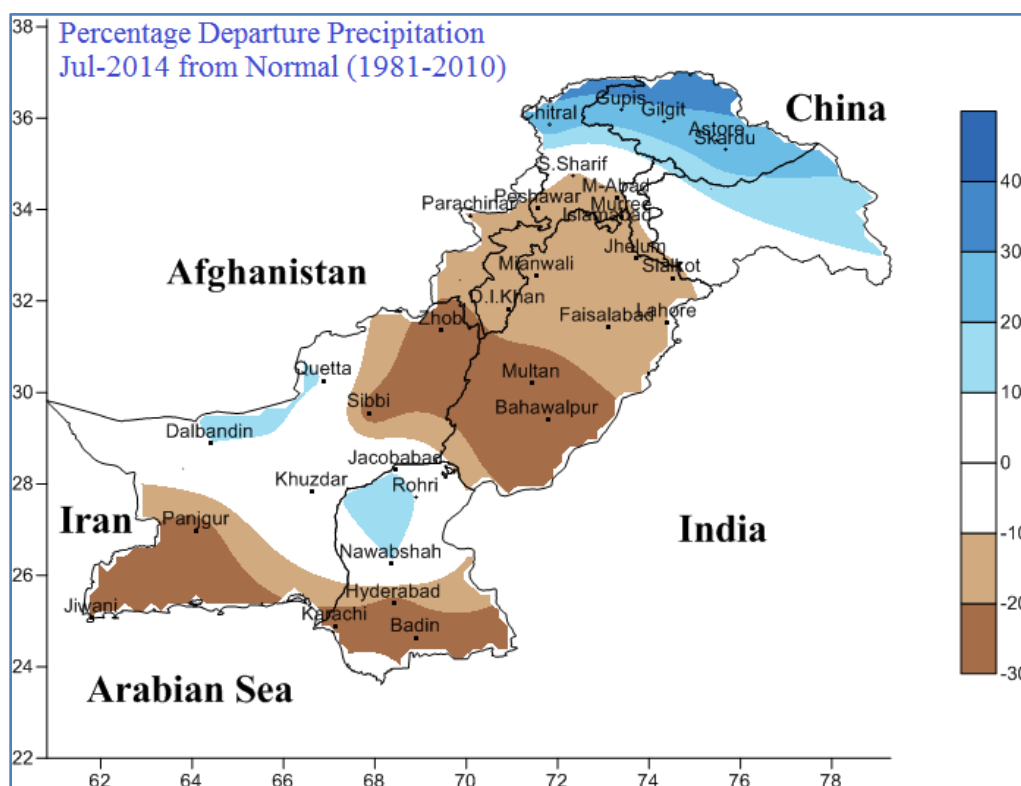
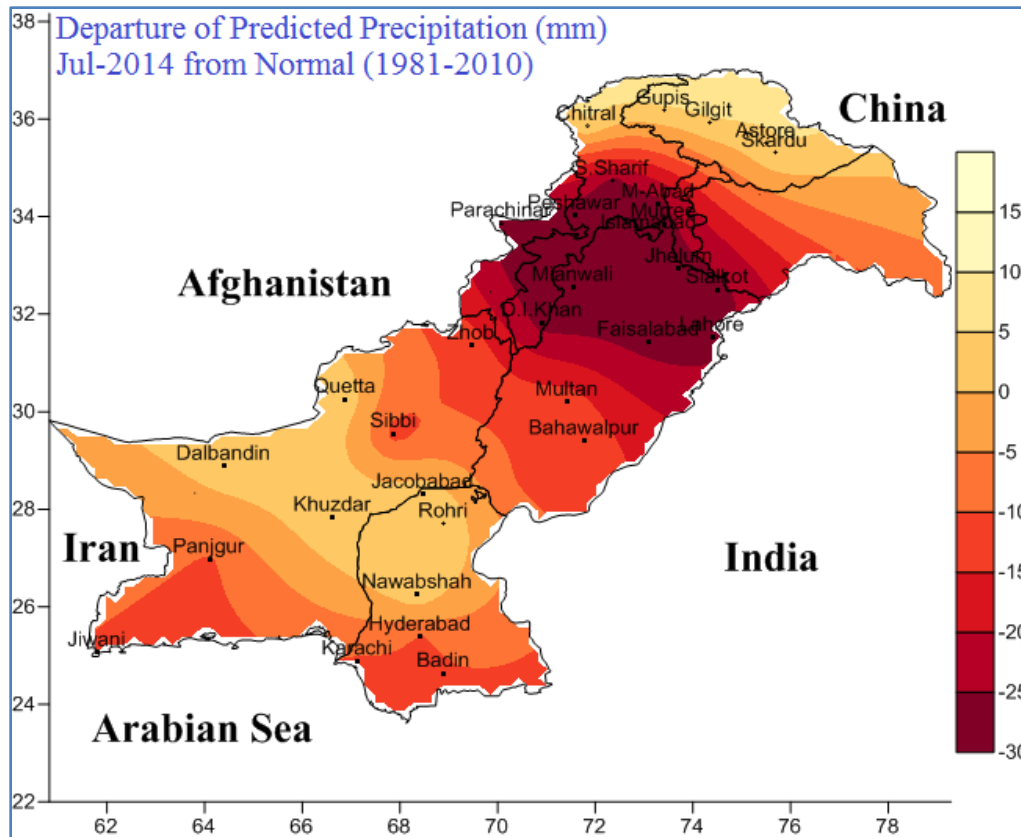
Experimental Precipitation Forecast June-2014 (with 1 month lead time)

The synthesis of the Coupled Global Circulation Model (CGCM) forecast for June 2014 indicates that almost normal rainfall is expected in most parts of the country. Slightly above normal rainfall may occur in the core monsoon region comprising of central to northern Punjab, and the adjoining areas of Khyber Pakhtoonkhwa and Azad Jammu and Kashmir. Southern parts of Baluchistan, Sindh and Gilgit Baltistan are expected to receive normal to below normal rainfall during the month of June. Due to rise in day time temperature slightly above normal precipitation may occur in central parts of Punjab and upper parts of Baluchistan.



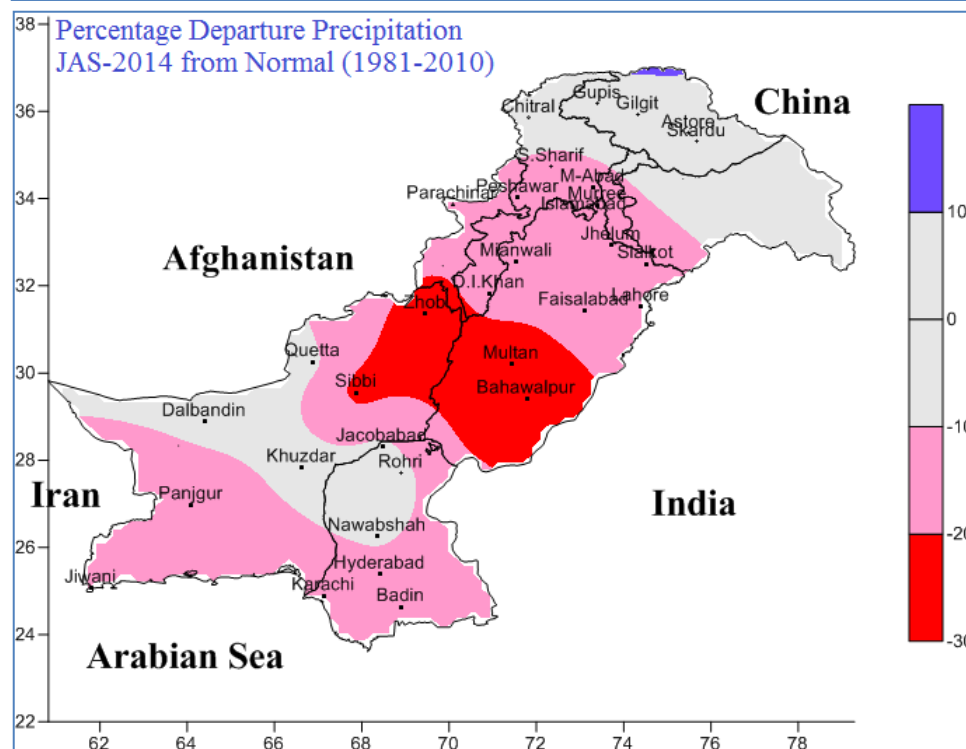
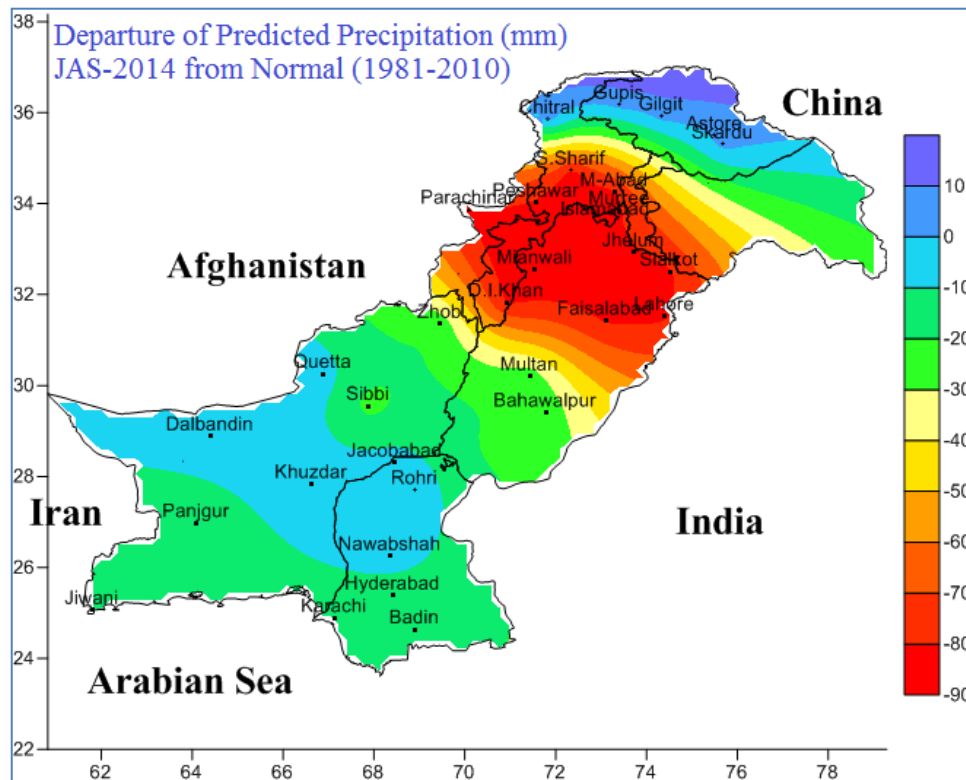
Experimental Precipitation Forecast July-2014

A statistical downscaling technique has been employed to prepare the precipitation forecast for the month of July 2014. It has been observed that normal to below normal rainfall is likely to occur in most parts of the country. Below normal rainfall is expected in central parts comprising of Punjab and adjacent areas of Khyber Pakhtoonkhwa and Baluchistan as well as the coastal areas of Sindh and Baluchistan provinces. Extreme northern tips including Gilgit Baltistan and northern parts of Khyber Pakhtoonkhwa are likely to receive above normal rainfall. Rest of the country will receive normal rainfall during the month of July 2014. The maximum departure in rainfall is observed in the core monsoon region which is 27% below normal.



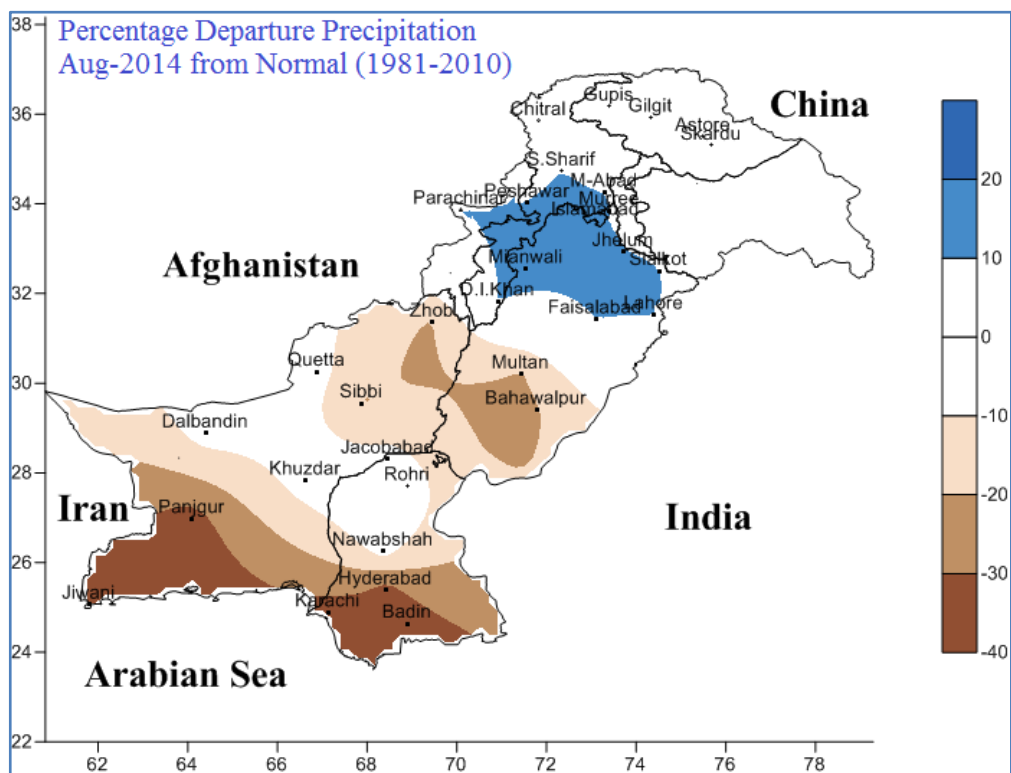
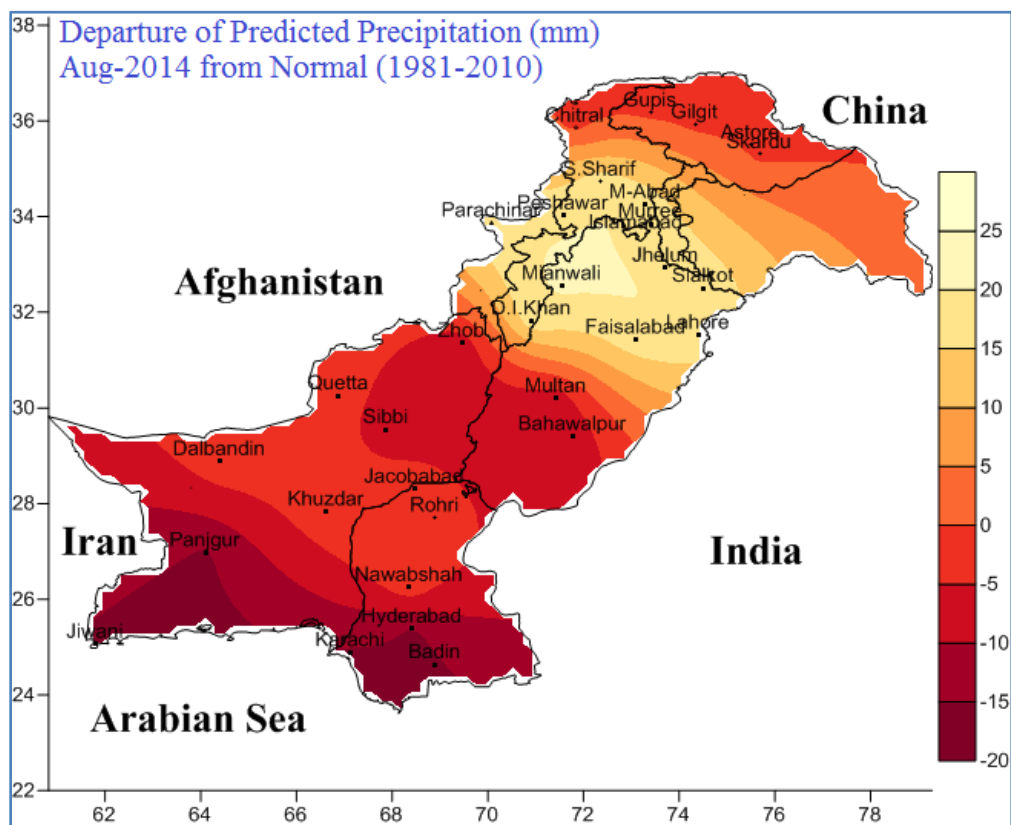
Precipitation Forecast July to September (JAS)-2014 (with 2 months lead time)

The monsoon 2014 outlook for predicted precipitation of Pakistan shows that normal to below normal precipitation is most likely in the country. There may be 10 to 20 percent below normal rainfall in the core monsoon region i.e. central to northern Punjab, Azad Jammu and Kashmir and central parts of Khyber Pakhtoonkhwa and coastal areas of Sindh and Baluchistan provinces. Northern parts of Khyber Pakhtoonkhwa, Gilgit Baltistan, central to western parts of Baluchistan and some adjoining areas of Sindh are expected to receive normal rainfall during the monsoon season.



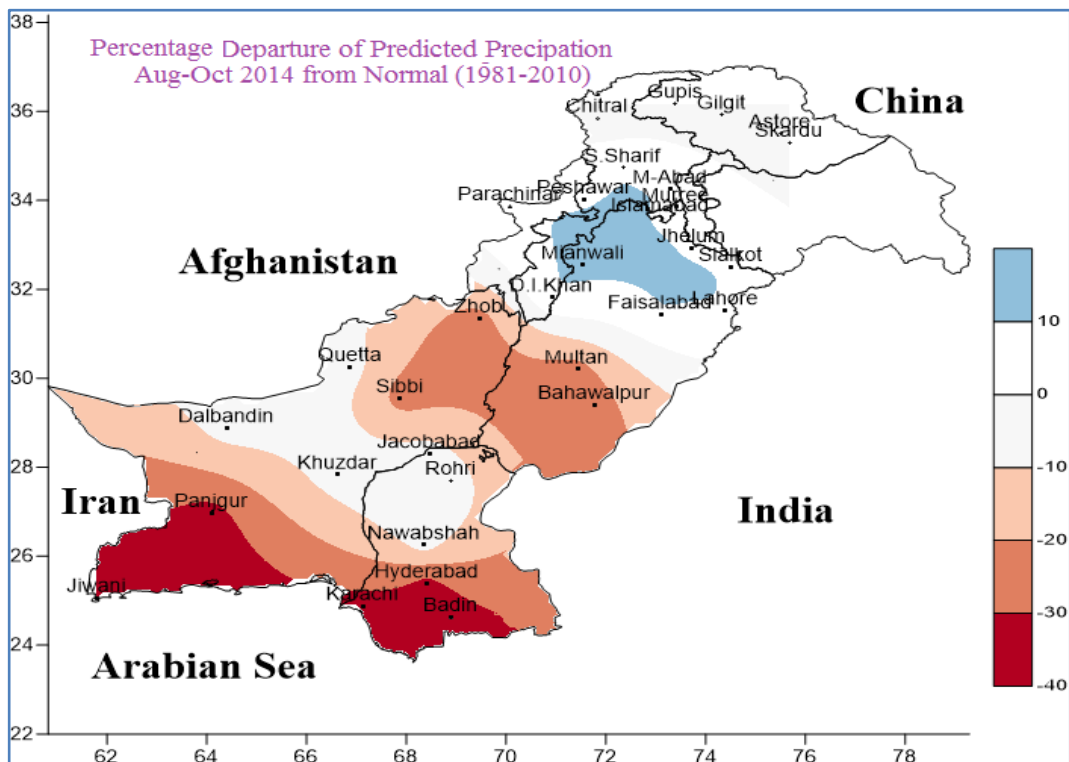
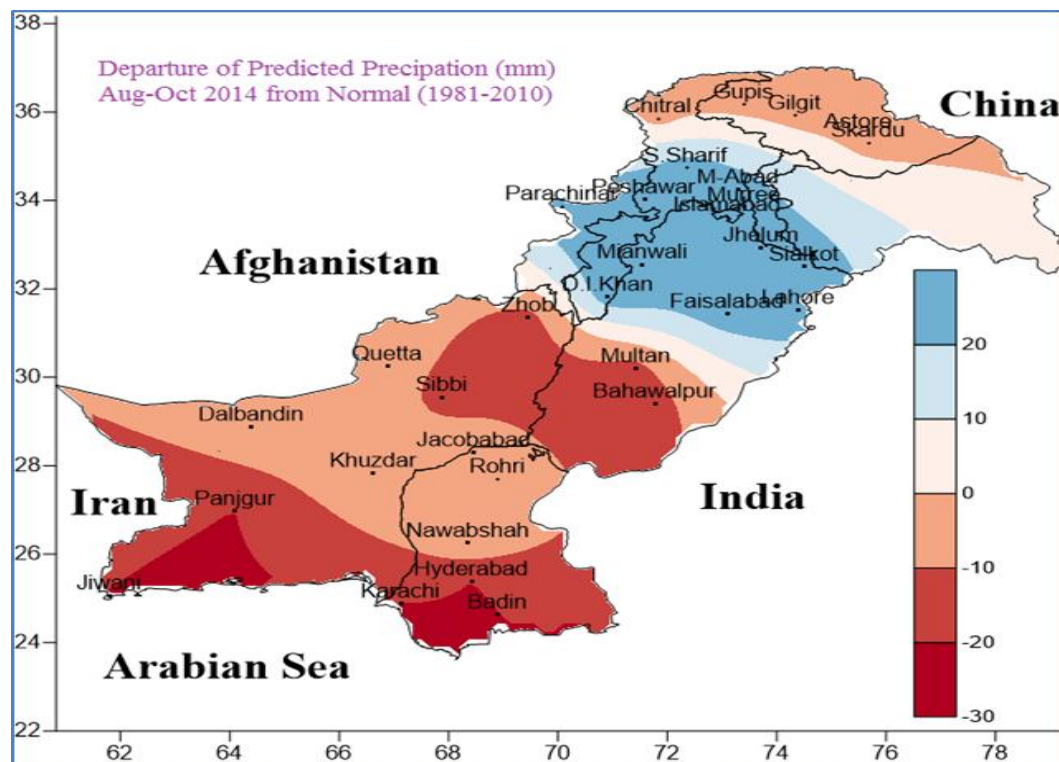
Experimental Precipitation Forecast August-2014

The model output for the month of August 2014 shows different situation from July. It has been observed that normal to below normal rainfall is likely to occur in all parts of the country except in the core monsoon region where slightly above normal rainfall is expected. The maximum negative departure from normal may be observed in coastal parts of the country. The upper parts of the country and central parts of Punjab are expected to receive normal rainfall during the month of August.



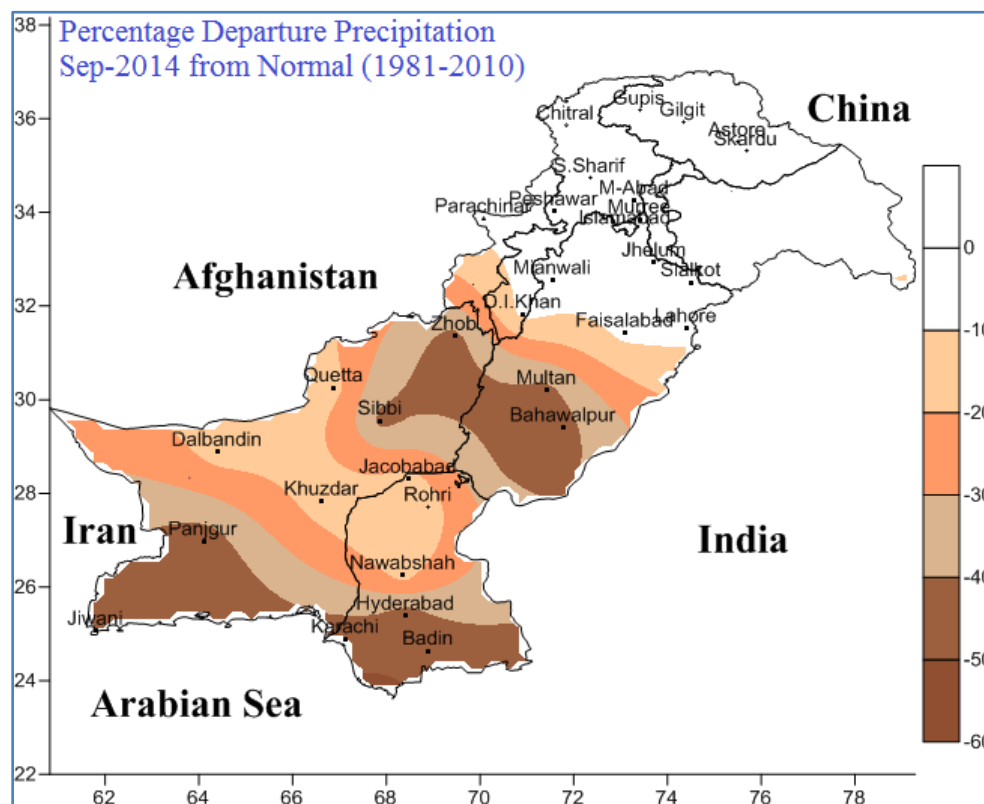
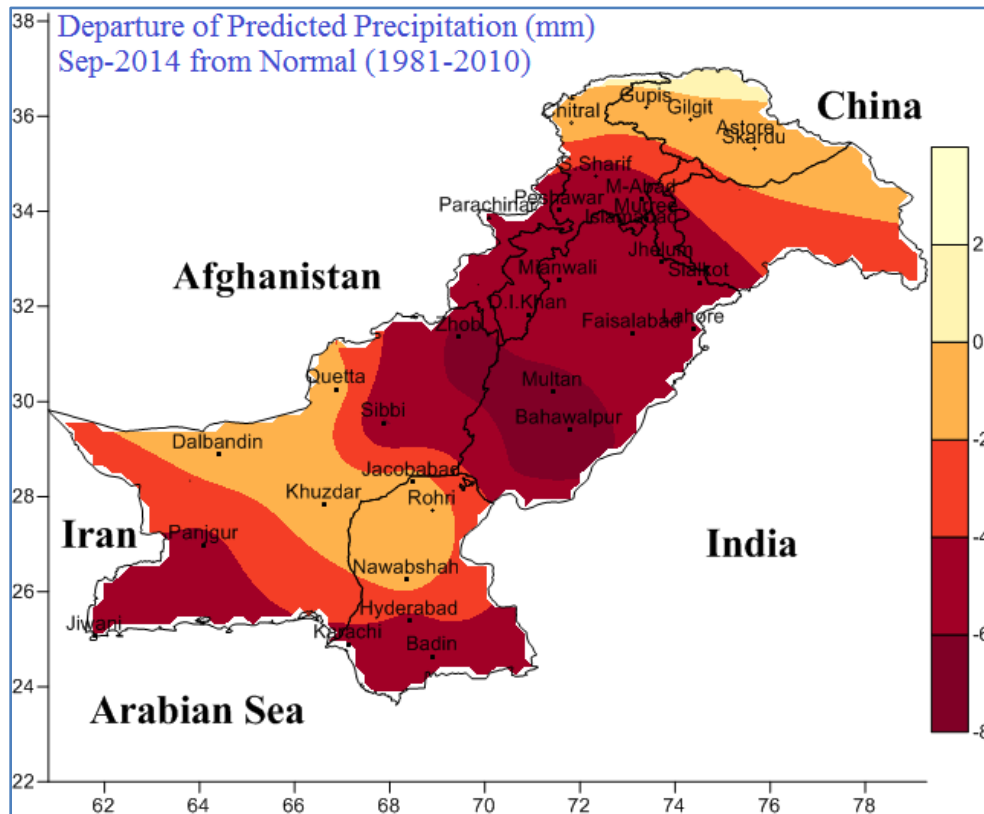
Precipitation Forecast for August- October 2014

The statistical techniques have been used to downscale the output of C.G.C.M (Combined Global Circulation Model) in order to prepare the seasonal precipitation forecast for the season of August to October 2014. The best correlation between the predictor and predictand is incorporated. It has been observed that slightly above normal rainfall is expected in Potohar region of Pakistan during this season. The Normal rainfall is expected in Khyber Pakhtoonkhwa, Azad Jammu Kashmir, Gilgit-Baltistan and central parts of Punjab, Sindh and Balochistan. However lower parts of Sindh and Balochistan may be dry during the season.



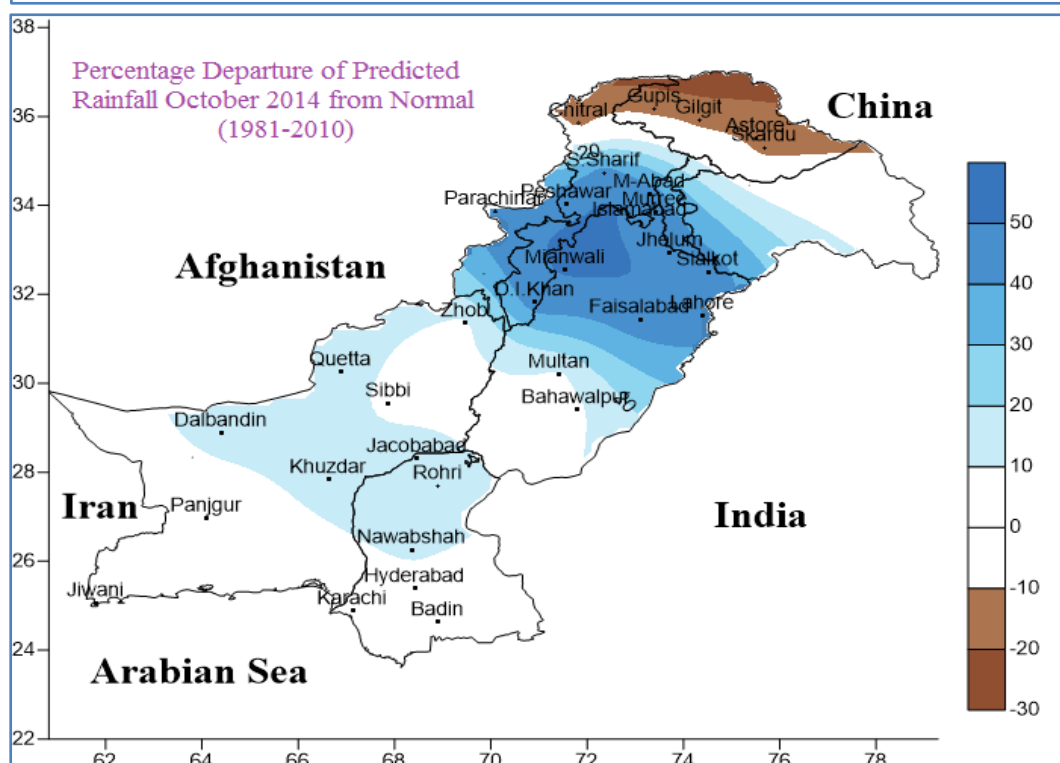
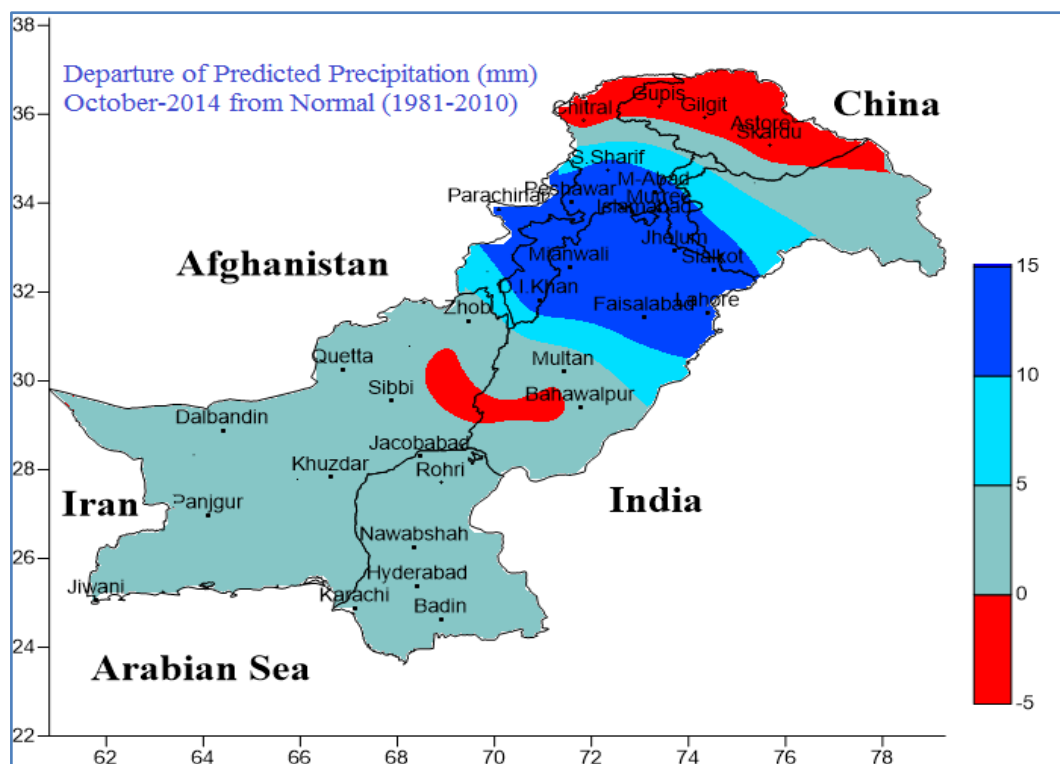
Experimental Precipitation Forecast September-2014

A statistical downscaling technique has been employed to prepare the precipitation forecast for the month of September 2014. The situation in this month is not very much different from the previous two months. It has been observed that normal to below normal rainfall is likely to occur in most parts of the country. Normal rainfall is expected in upper parts comprising of northern Punjab and adjacent areas of Khyber Pakhtoonkhwa and Gilgit Baltistan. The Southern half of the country is most likely to receive below normal rainfall. The maximum negative departure in rainfall may be observed in southern parts of Punjab and coastal areas of Sindh and Baluchistan.



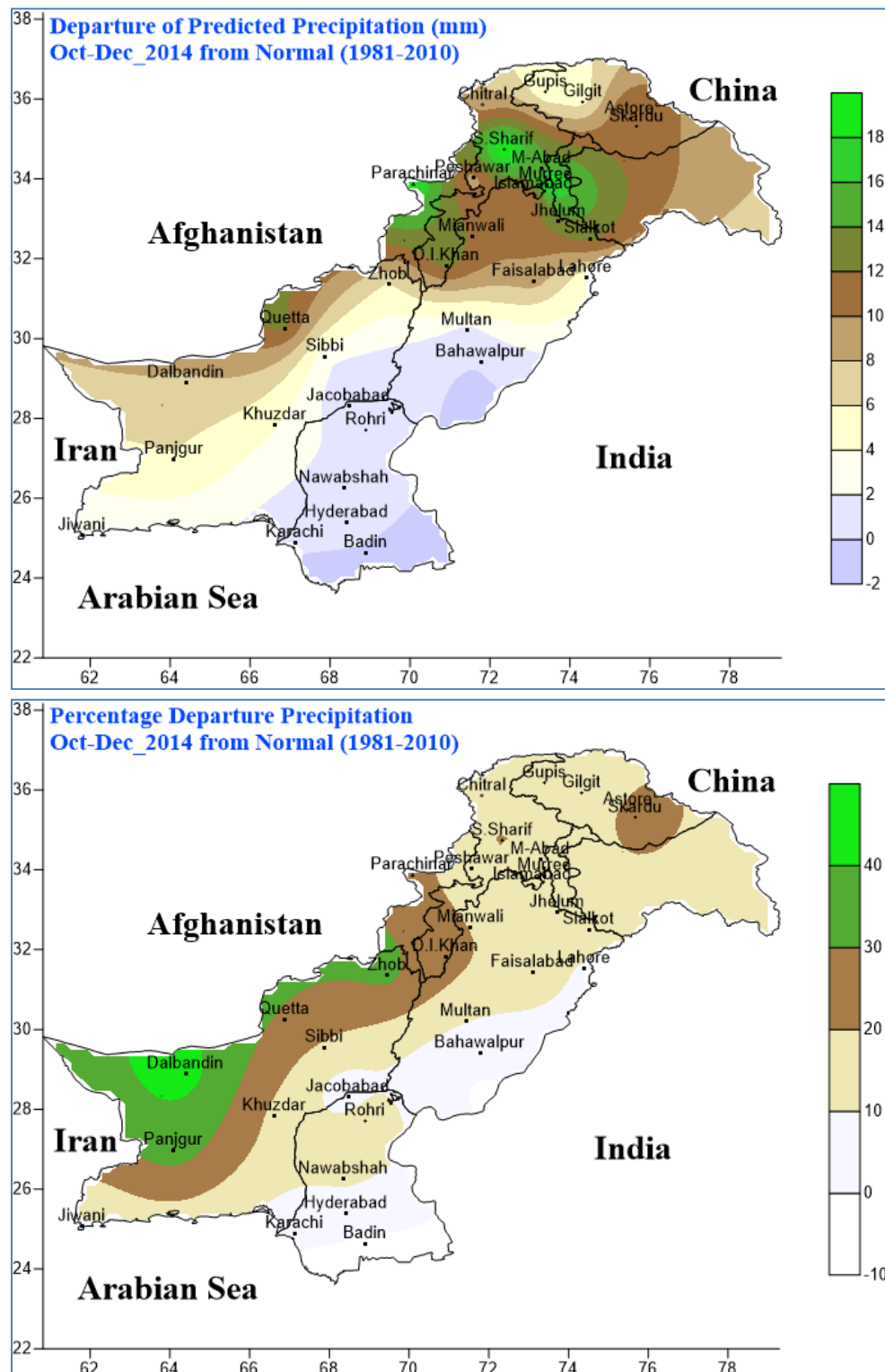
Experimental Precipitation Forecast October-2014

A statistical downscaling technique has been applied to prepare the precipitation forecast for the month of October 2014. It has been observed that normal to above normal rainfall is likely to occur in most parts of the country. Extreme northern tips including Gilgit-Baltistan and northern parts of Khyber Pakhtoonkhwa are likely to receive below normal rainfall. Azad Kashmir, Southern parts of Punjab alongwith adjoining areas of Baluchistan and coastal regions of Sindh and Baluchistan province are expected to be normal rainfall during October 2014. The maximum positive departure in rainfall is observed in the core monsoon region.



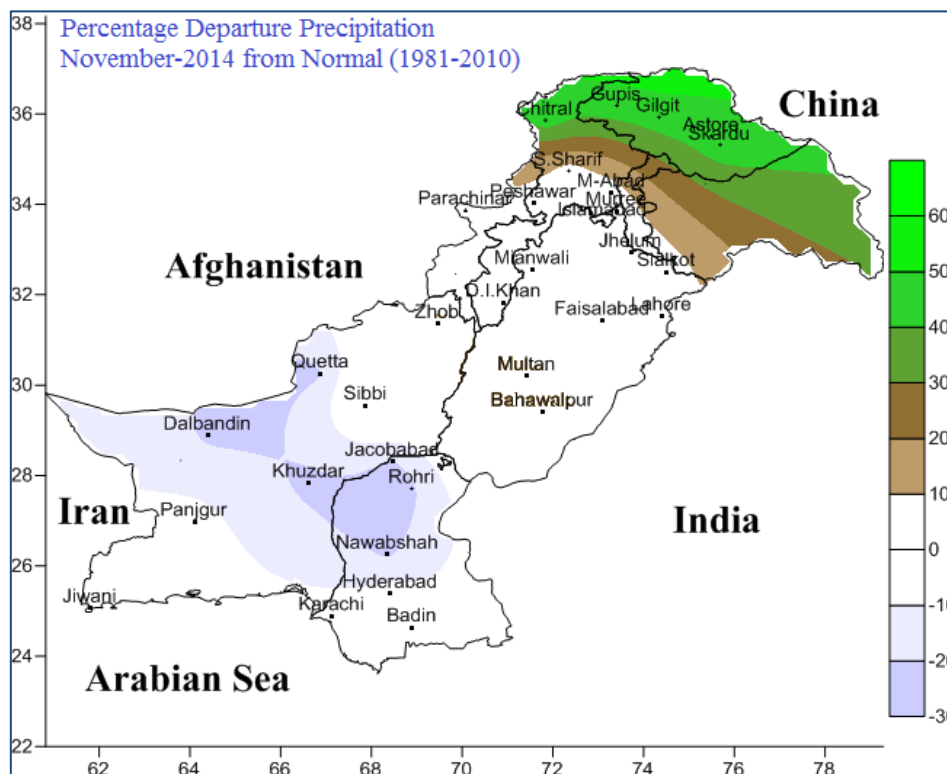
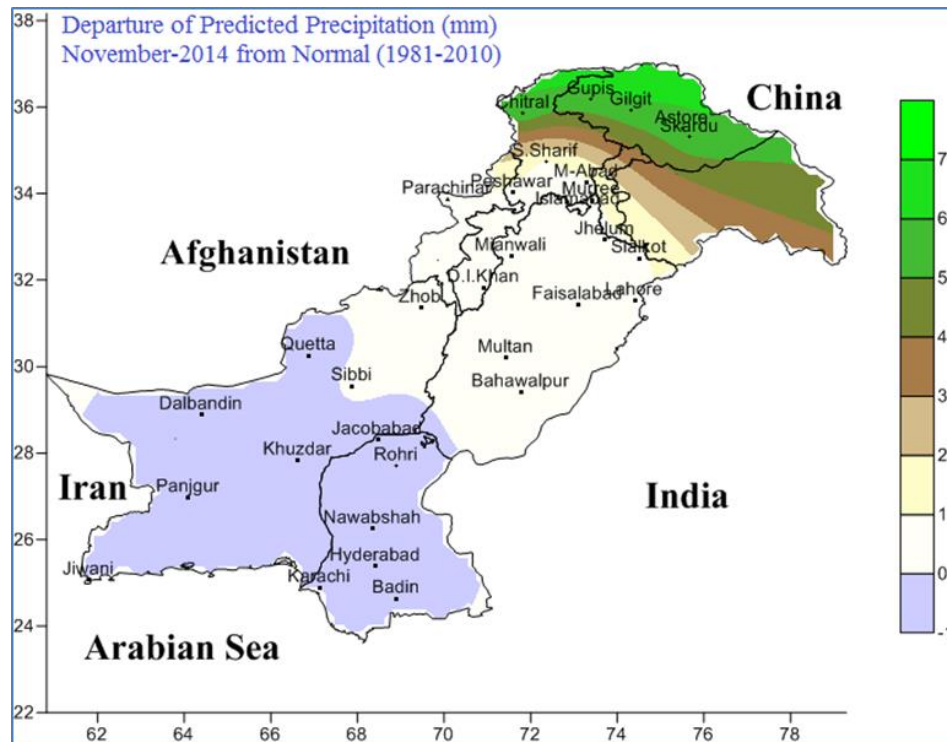
Precipitation Forecast October to December 2014

Seasonal prediction provides information that how the weather condition is expected as compared to the normal atmospheric conditions. Output of the Combined General Circulation Model (CGCM) is downscaled to obtain the seasonal forecast. Normal to above normal(1981-2010) precipitation is expected in most parts of the country during the season October-December 2014. Khyber Pakhtoonkhwa, Azad Jammu and Kashmir, northern parts of Punjab and western parts of Baluchistan are expected to get 10 to 20 per cent above normal precipitation. While Eastern and south-eastern parts comprising of southern Punjab and Sindh provinces are expected to get normal rainfall during the season.



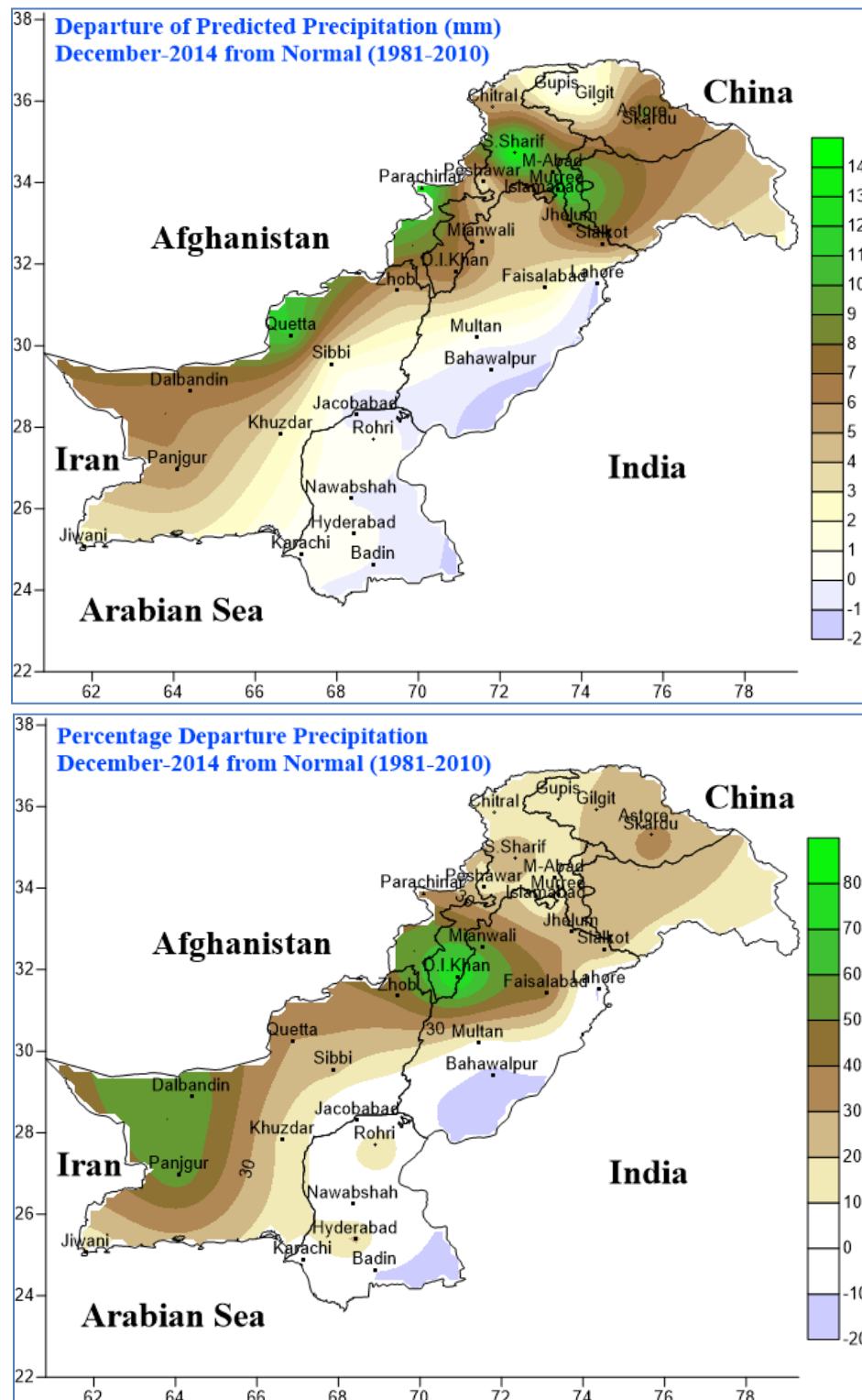
Experimental Precipitation Forecast November 2014

Output of the combined general circulation model (CGCM) is used to predict the precipitation amount over the selected stations of Pakistan on monthly and seasonal time scales. The highlight of the November precipitation forecast is normal to below normal (1981-2010) over large area including central to southern parts of the country. However northern tips of the country comprising of Gilgit Baltistan and some parts of Khyber Pakhtunkhwa and Kashmir are expected to receive slightly above normal precipitation. As a whole below normal precipitation is expected in the country during the month of November 2014.



Experimental Precipitation Forecast December 2014

Output of the combined general circulation model (CGCM) is used to predict the precipitation amount over the selected stations of Pakistan on monthly and seasonal time scales. The highlight of December precipitation forecast shows that westerlies are likely to affect western and northern parts of the country. Khyber Pakhtoonkhwa, Azad Jammu and Kashmir and western parts of Baluchistan may get above normal rainfall during the month of December. While Eastern and south-eastern parts comprising of southern Punjab and Sindh provinces are expected to get normal to below normal rainfall during December 2014.



Precipitation Forecast Dec-2014 to Feb-2015 (DJF)

Seasonal prediction provides information that how the weather condition is expected as compared to the normal atmospheric conditions. Output of the Combined General Circulation Model (CGCM) is downscaled to obtain the seasonal forecast. Normal to above normal (1981-2010) precipitation is expected in most parts of the country during the season DJF. Gilgit Baltistan, Khyber Pakhtoonkhwa, Azad Jammu and Kashmir, northern parts of Punjab and western parts of Baluchistan are expected to get 10 to 20 per cent above normal precipitation. While eastern and south-eastern parts comprising of southern Punjab and Sindh and the adjoining areas of Baluchistan are expected to get normal to below normal rainfall during the season.

