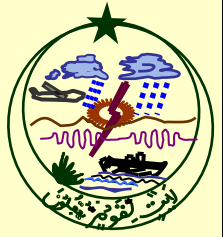


Monthly Agromet Bulletin

National Agromet Centre

Pakistan Meteorological Department

Islamabad



Vol: 3-2013

March 2013

Highlights...

- Light to moderate rainfall with isolated heavy spells were reported from the agricultural plains of the country during the month. Hail was also reported in some areas of Punjab and KP. These heavy rains/ hail damaged/affected crops, livestock and infrastructure in some areas of KP and Punjab.
- Slightly warmer temperature trend was observed in most of the agricultural plains of the country.
- ETo remained normal to below normal and R.H was observed above normal in most of the agricultural plains of the country.
- Agricultural soils observed normal to cooler than normal in most of the agricultural plains except Sindh, where agricultural soils observed slightly warmer than normal.
- Spraying/manual weedicides operations on standing crops and orchards, harvesting/threshing of wheat in lower parts of the country, harvesting/crushing of sugarcane and irrigation as per requirement were the major field activities during the month.
- Keeping the present soil moisture and weather prevailing over most of the agricultural plains, farmers should complete sowing of cotton in areas where land is free to fully utilize the present soil moisture.

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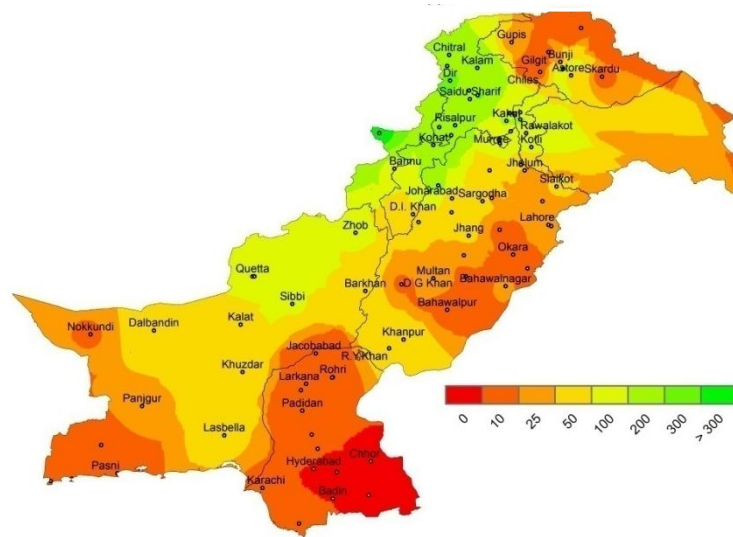
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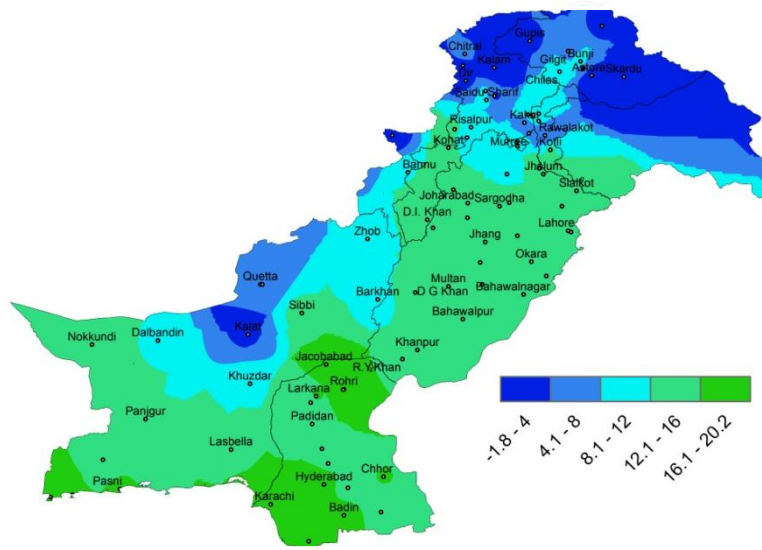
EXPLANATORY NOTE

1. This Agrometeorological bulletin is prepared on the basis of data from 15 stations of Pakistan Meteorological Department (PMD). These stations, selected in consultation with the agricultural authorities, represent major agricultural areas of the country. There are still important agricultural areas which are not represented by the stations included in the bulletin. This may be (a) because there are no PMD stations in these areas and /or (b) the fact that we had to limit the number of stations due to the requirement of speedy data communication and processing (both of which are important for producing and dispatching timely Agrometeorological bulletins).
2. Due to the above, all inferences and conclusions hold true primarily for the above areas and not for Pakistan territory which include areas that may not be very important from the agricultural point of view and the climate of which may not bear directly on agriculture in the major producing areas.
3. The precipitation probability graphs at the end of the bulletin are computed using the long term records of these stations. The precipitations of the current season are plotted in this probability back ground. The use and interpretation of these graphs is clarified by an example. If the precipitation of a month in a station talley to an 80% probability, this means that 80% of the years (or on average 8 out of 10 years or 4 out of 5 years) the precipitation is equal to or less than the amount which was received during this month. One can also conclude that in 20% ($100\% - 80\% = 20\%$) of the years (or on the average 2 out of 10 years or one out of 5 years) the precipitations during this month exceeds the present level.
4. The evapotranspiration graphs at the end of the bulletin are based on computations using long term records of these stations. The evapotranspiration of the current season are plotted against this background. The reference crop evapotranspiration (ET_o) is indicative of the evaporative demand of the prevailing atmospheric condition. It shows the rate of evapotranspiration from an extended surface of 8-15cm tall green grass cover of uniform height, actively growing. Evapotranspiration is, very roughly, 70% to 80% of ET_o. However, it ranges from below 10% for a crop just emerging from the soil to over 100% for well watered densely planted tall crops under windy condition.
5. The normally expected weather of next month is prepared on the basis of premise of normal or near normal weather prevailing during the coming month. As such it should not be confused with synoptic weather of the next month.
6. In the tables, the values in the parentheses are based on 1961 to 1990 normal. Normal values (in parenthesis) of Soil Temperatures are based upon 10 years data. Dotted line (---) means missing data. Solar radiation intensities are computed from sunshine duration using co-efficients developed by **Dr. Qamar-uz-Zaman Chaudhry** of Pakistan Meteorological Department.

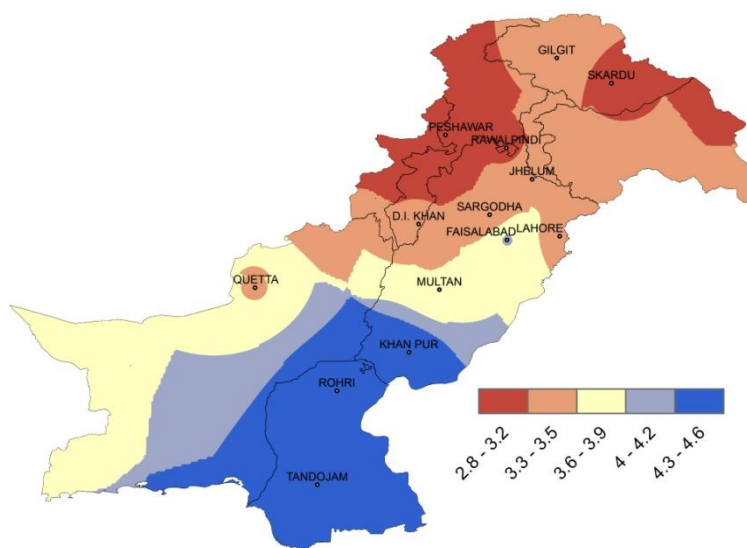
Rainfall distribution (mm) during the month of March, 2013



Minimum Temperature ($^{\circ}\text{C}$) during the month of March, 2013



ETo (mm/day) during the month of March, 2013



CROP REPORT DURING MARCH, 2013

Spraying/manual weedicides operations on wheat and other Rabi crops, harvesting/threshing of wheat in lower parts of the country, harvesting/crushing of sugarcane and irrigation as per requirement were the major field activities during the month. Operations of chemical spraying against pest attacks on fruit orchards during the month were also in progress. Pace of growth and development of the crops both in irrigated and rainfed areas remained satisfactory due to favorable weather conditions.

In Punjab: Growth of wheat crop is reported satisfactory both in rainfed and irrigated areas. However mild rust attack has been reported at Rawalpindi and Gujranwala divisions. The crop is reported at early /full maturity stage in most of the agricultural plains of the province at the end of this month. Harvesting of the crop has started in some areas of the province. Growth of oilseed is reported satisfactory. The crop is at maturity stage and harvesting has started in some areas. No pest attack on the crop has reported. Growth of gram and lentil has also been reported satisfactory and the crops are at grain formation/pod formation stage. Harvesting of the green gram is in progress. No serious pest attack has been reported on these crops. Sowing of summer vegetables has completed and these are growing satisfactory. Sowing of other spring/kharif crops like sugarcane, cotton, sunflower and maize have also been in progress.

In Sindh: Harvesting of wheat crop is almost completed throughout the province. Good yield is expected. Land preparation/sowing of cotton crop has been started. Caster oil is growing satisfactory and its picking is in progress. Safflower is at flowering stage and growth has reported well. Growth of linseed has been reported well and the crop is at maturity stage. Sowing of sunflower is almost completed and the crop is growing at early vegetative stage. Mangoes are at fruit formation stage. The growth and picking of other seasonal fruits like guava, banana, Cheeko is in full swing. Summer vegetables are growing satisfactory and picking of early grown varieties has been started in some areas.

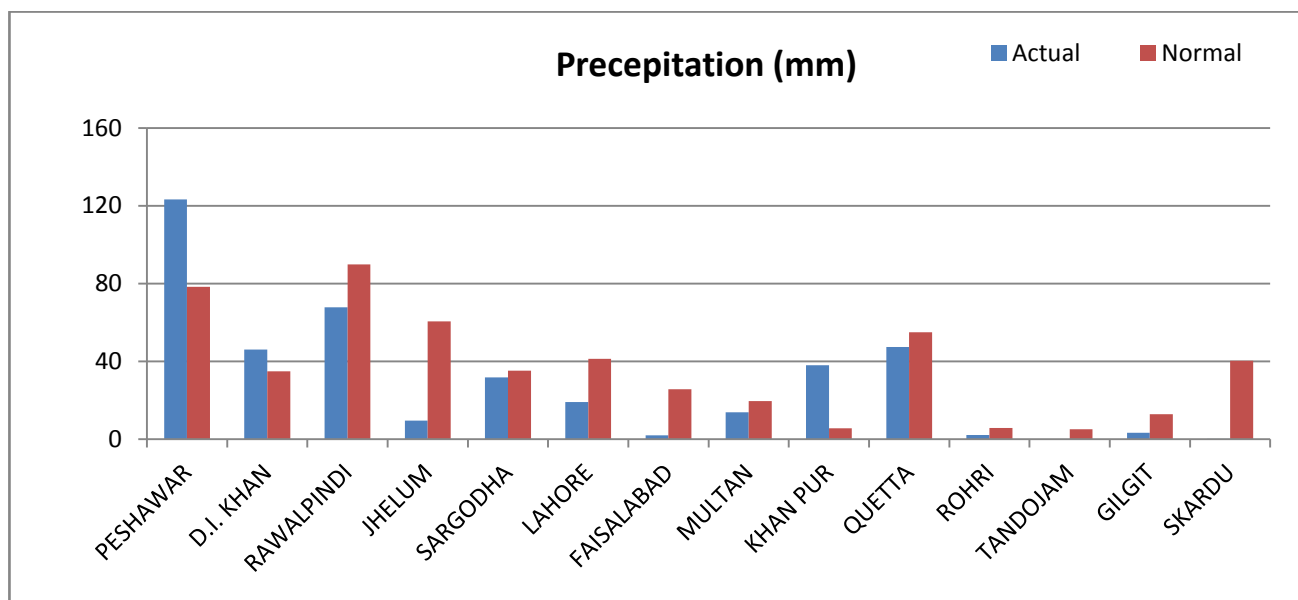
In Khyber Pakhtunkhwa: Overall growth and development of wheat crop in the province is reported satisfactory. The crop is growing at flowering/ early maturity stage. No pest attack has been reported so far on the crop. Harvesting/crushing of sugarcane has been completed and good yield has been reported. Sowing of summer vegetables has been completed. Harvesting/marketing of winter vegetables is also in progress. Growth of orchards is also reported satisfactory. They are at flowering/early fruit formation stage. Chemical spraying on orchards against insects and fungus attacks was in progress.

In Balochistan: Condition of standing crops like wheat, maize and canola has been reported satisfactory. All these crops are at their early growing stage. Growth of fruit orchards and that of seasonal vegetables is satisfactory and picking/harvesting is in progress.

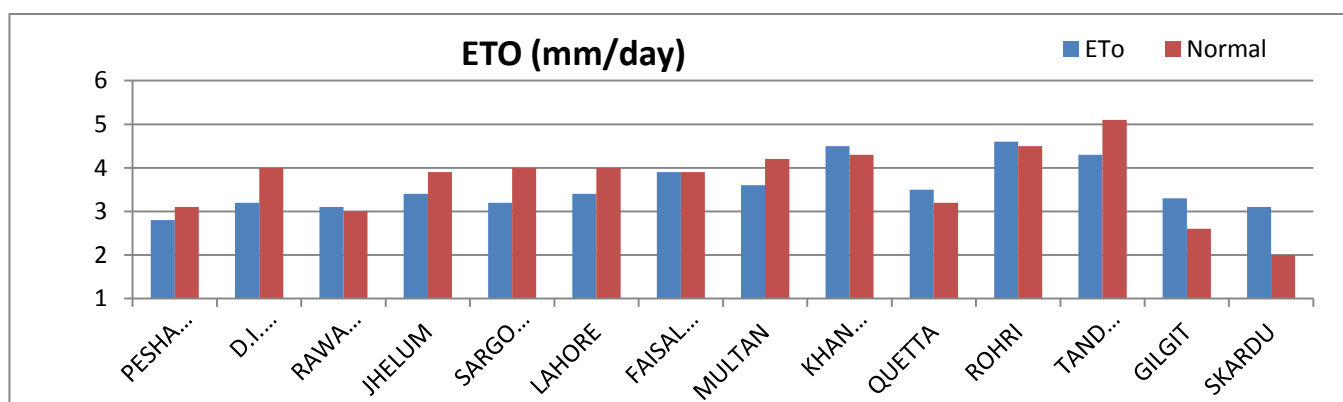
In Gilgit Baltistan: The growth of wheat crop is in progress and is reported satisfactory. The crop is at early growing stage in most of the region. The growth of seasonal orchards and vegetables is also reported satisfactory.

Moisture Regime during March, 2013

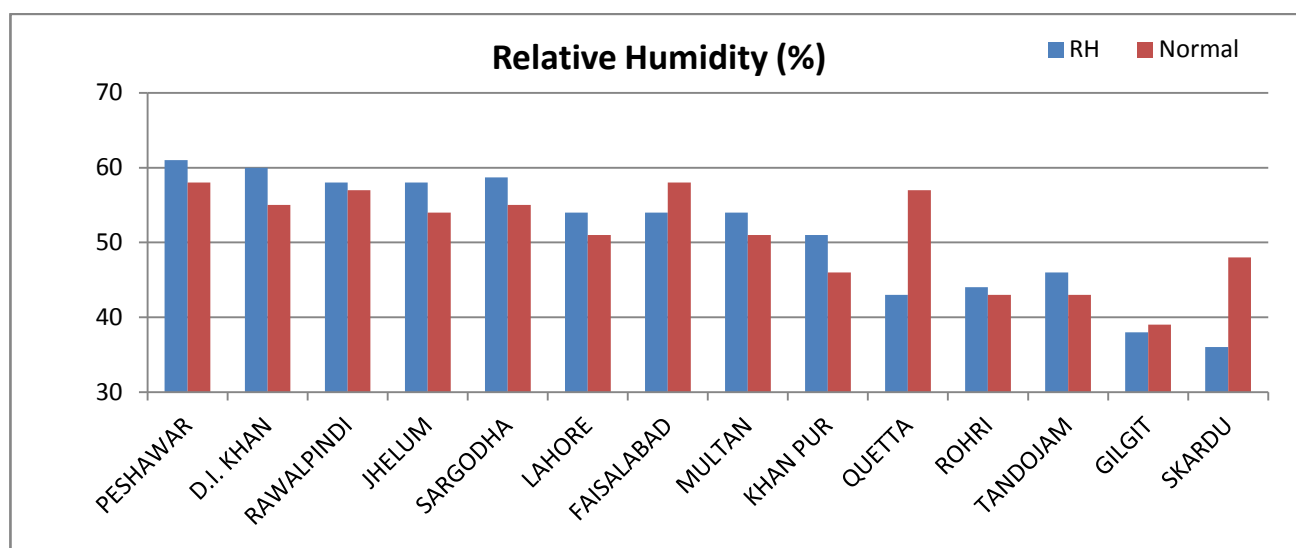
Winter rains generally continue from December to March in Pakistan. March is normally one of the wettest months of winter season. However during this March, above normal rains were reported in KP, parts of Potohar region, central/southern Punjab and Quetta valley. Whereas below normal rains were reported in Sindh, Balochistan and areas of Punjab.



The evaporative demand of the atmosphere represented by reference crop evapotranspiration (ET_o) remained normal to below normal in all agricultural plains of the country except GB, where it remained slightly above normal.



The mean daily Relative Humidity (R.H) was observed above normal in most of the agricultural plains of the country except Faisalabad division in central Punjab, Quetta valley in northwest Balochistan and GB. Maximum value of mean Relative humidity was observed 61% at Peshawar followed by 60% at D.I.Khan and 59% at Sargodha division. The minimum value was observed 36 % at Skardu

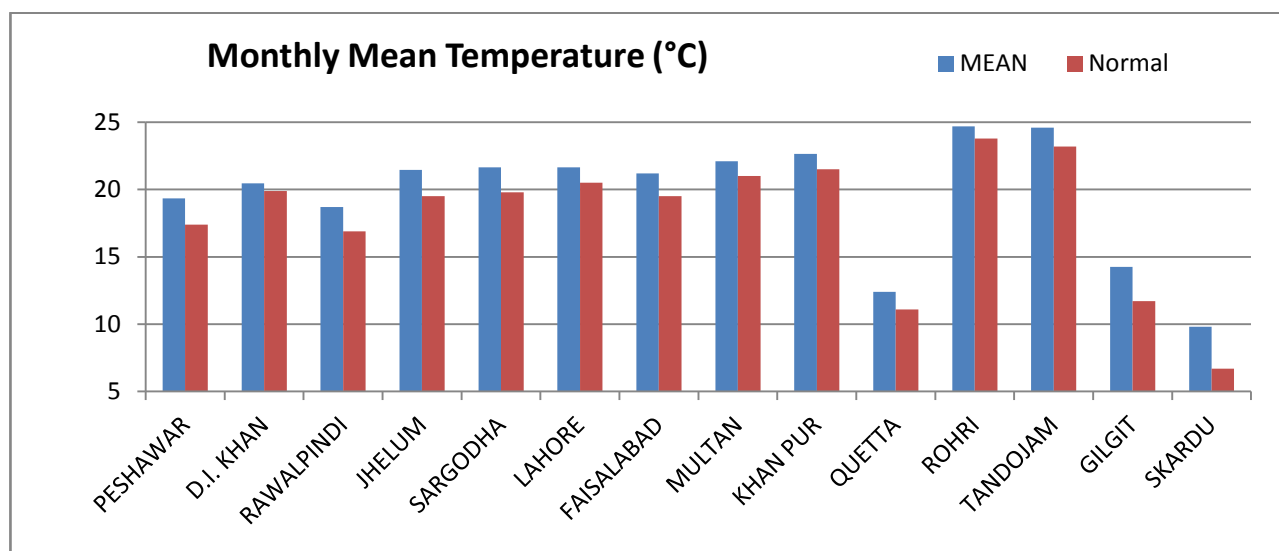


From overall analysis, it is evident that although below normal rains were received however generally weather conditions remained favorable during the month in most of the agricultural plains of the country, producing good impact on the standing crops particularly on wheat crop which is on the maturity stage. Farmers of wet areas, especially northern hilly agricultural plains of the country must be careful about timely and proper use of chemical spraying to avoid/minimize losses caused by pest attacks.

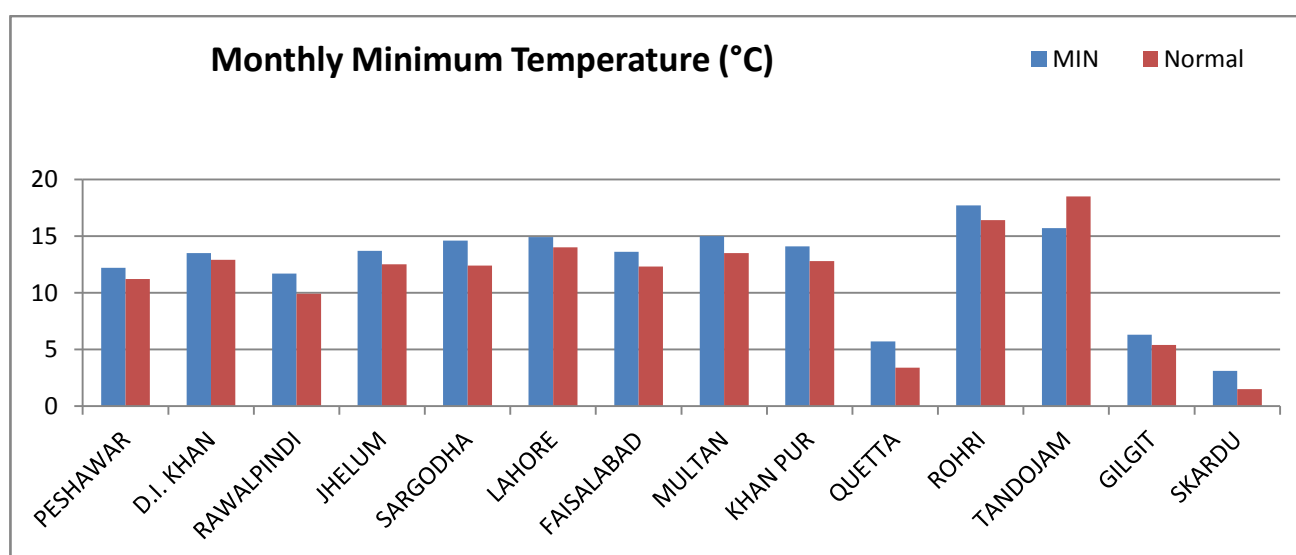
Temperature Regime during March, 2013

Temperature plays vital role in the growth and development of crops. Thermal regime remained slightly warmer than normal in most of the agricultural plains during the month under report, which is useful for on time harvesting of wheat crop at maturity stage.

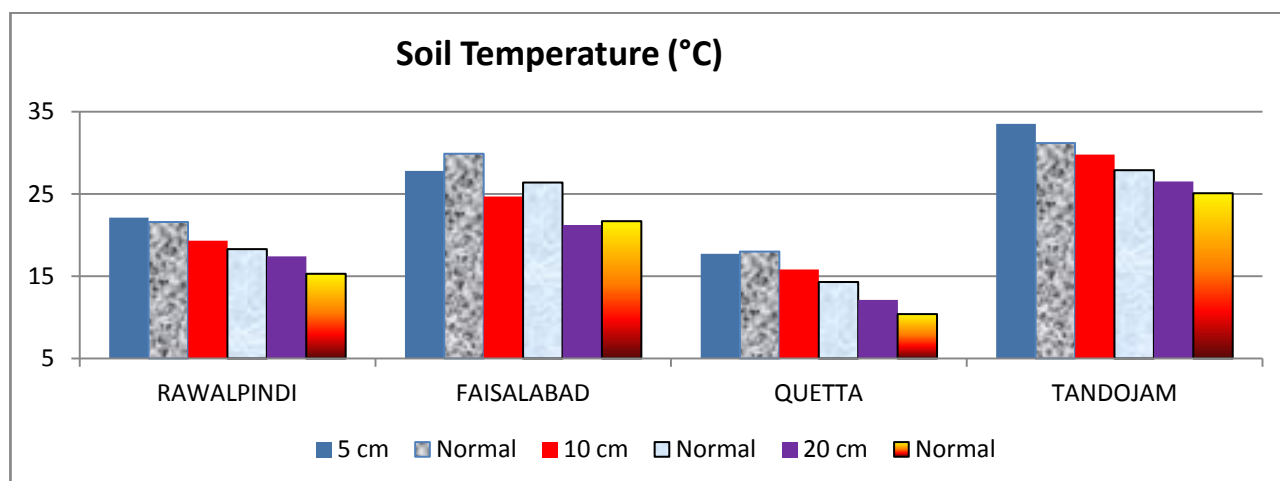
Mean daily temperature remained above normal (by 1-3°C) in most of the agricultural plains of the country. Mean daily temperature ranged 19-20°C in Khyber Pakhtoonkhawa, 19 to 22°C in Potohar plateau, in remaining parts of northern Punjab it ranged 21-23°C, in Sindh it reached to 25°C, in Gilgit Baltistan region it ranged 10 to 14°C and was observed 12°C in Quetta valley.



The night time temperature represented by mean minimum remained normal to above normal by 1 to 2°C in most of the agricultural plains of the country except Tandojam region of lower Sindh, where it remained below normal (by 2°C). The lowest minimum temperature was recorded -9°C at Astore in GB.



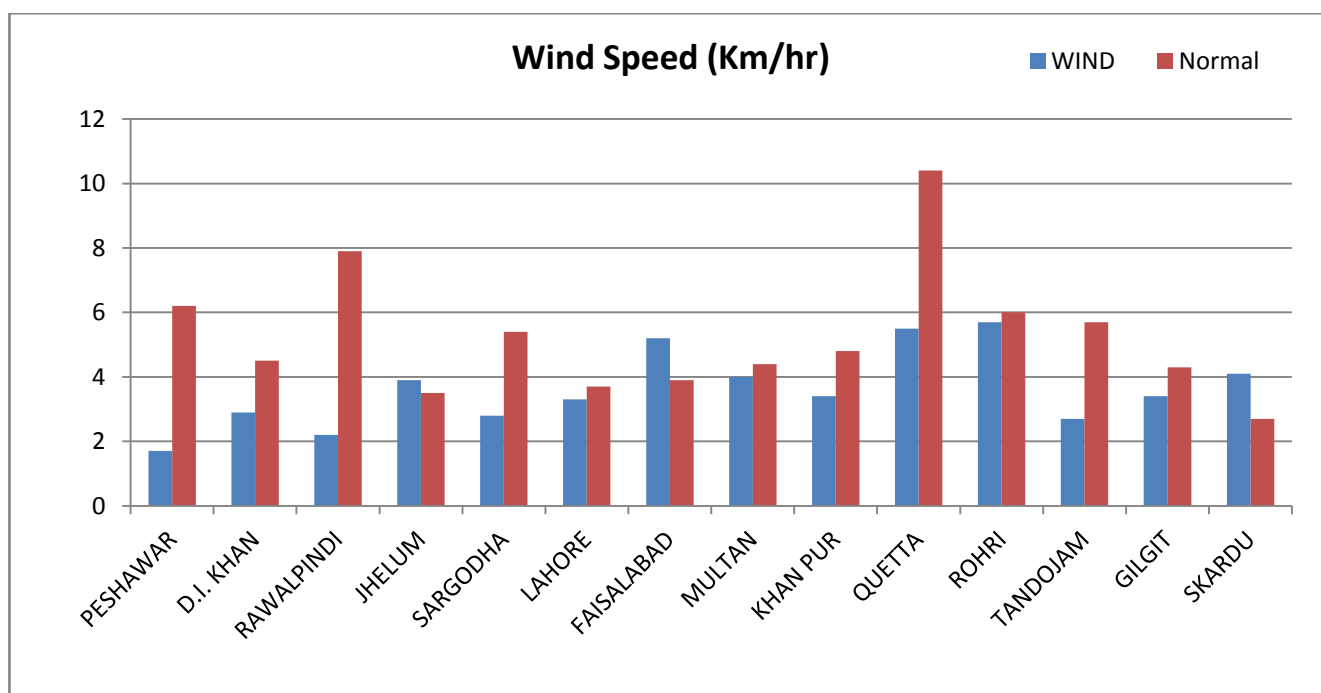
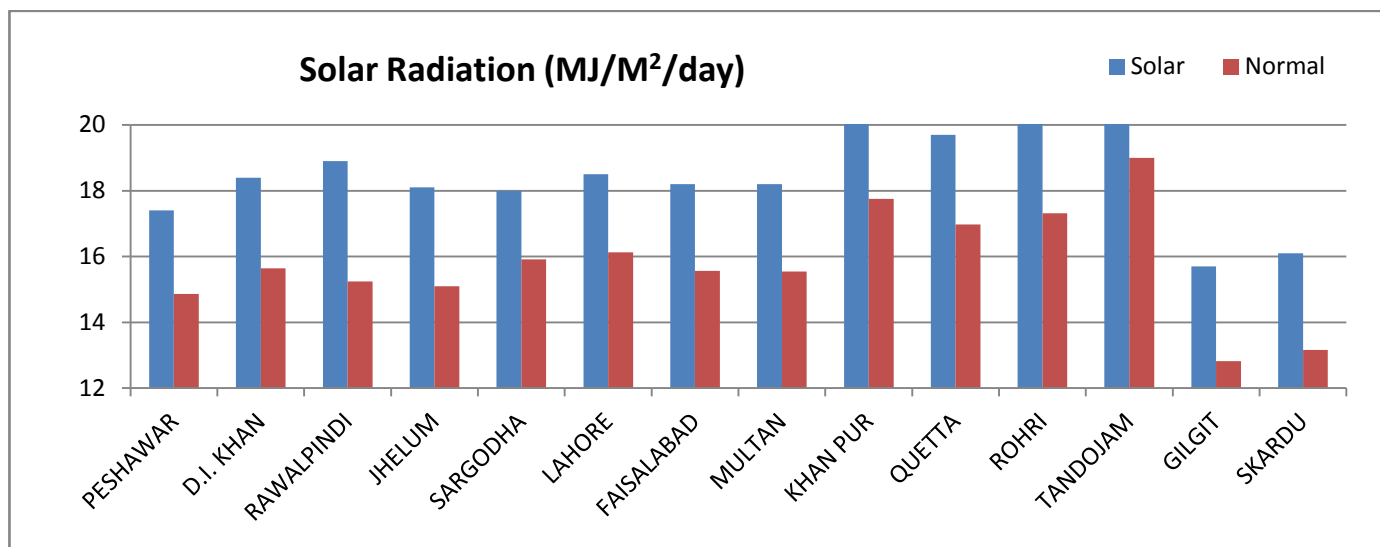
Agricultural soils showed mixed trend in most agricultural areas of the country. In rainfed Potohar region represented by Rawalpindi and in agricultural plains of lower Sindh represented by Tandojam soil temperature was observed slightly above normal at major root zone. Whereas in central Punjab represented by Faisalabad and Quetta valley soil temperature was observed normal to below normal at root zones.



From the general analysis of soil behavior in this month, it is concluded that crop growth and development are free from any significant moisture stress due to above normal rains in February and considerable rains in March

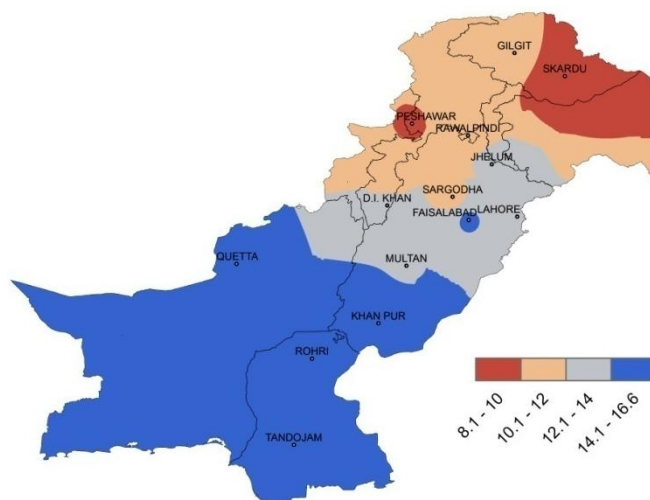
Solar Radiation and Wind Regime during March, 2013

Total bright sunshine hours and solar radiation intensity remained above normal in the agricultural plains of the country. Mean wind speed throughout agricultural plains of the country reached up to 6 km/h with North to North-West trend.

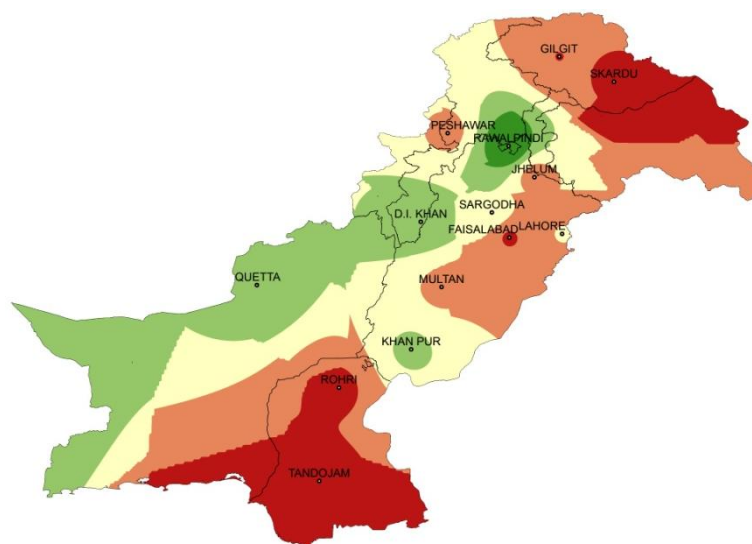


Comulative Rainfall, ETo and water stress for Rabi Season (Oct to April)

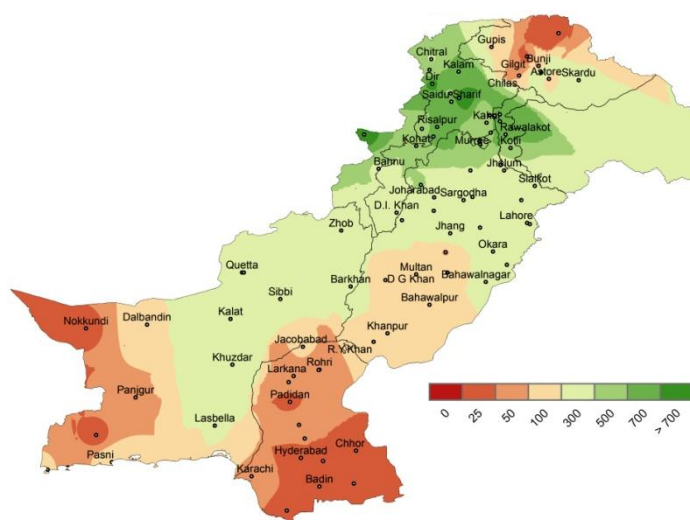
Cumulative ETo (m m) during Rabi Season up to March, 2013



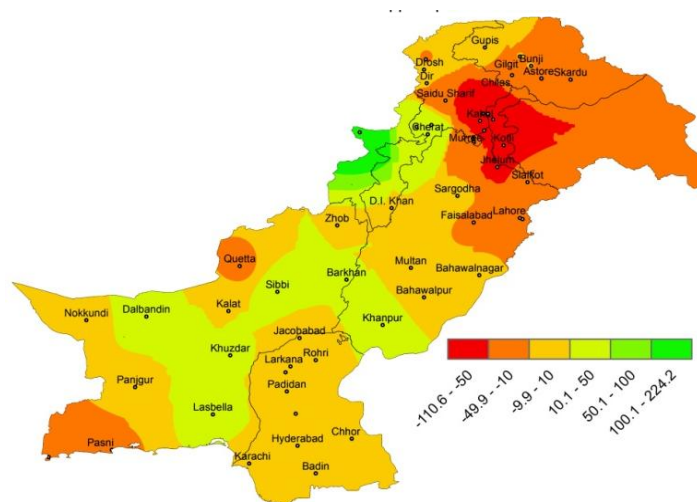
Water Stress (Rain-ETo) during Rabi Season up to March, 2013



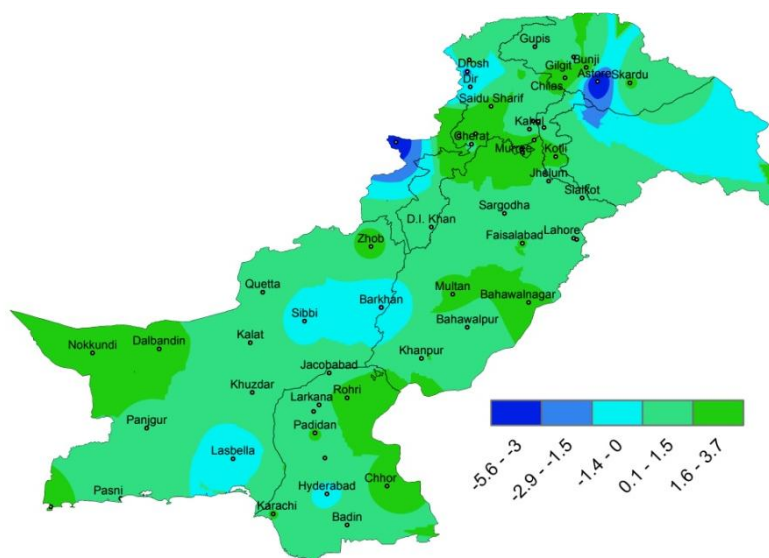
Cumulative rainfall (mm) during Rabi Season up to March, 2013



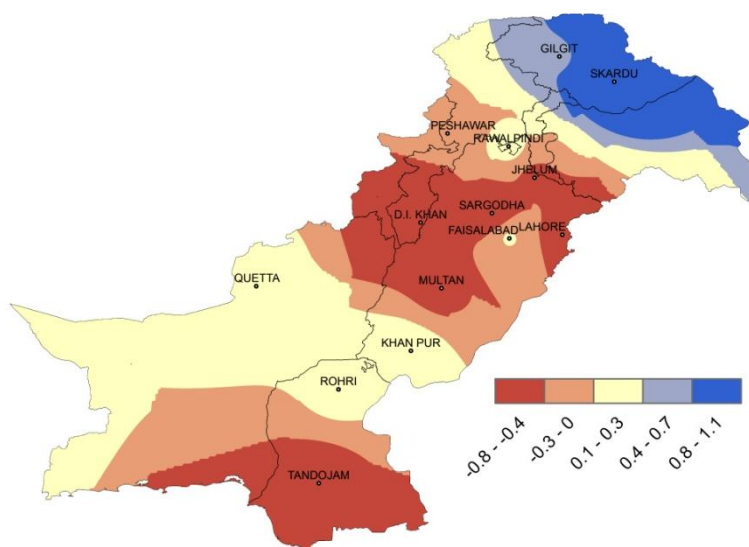
Rainfall Departure from Normal (mm) during the month of March, 2013



Minimum Temperature Departure from Normal (°C) during the month of March, 2013



ETo Departure from Normal (mm/day) during the month of March, 2013



Normally Expected Weather during April, 2013

Westerly rain bearing systems will remain active over Pakistan with the decreasing frequency of occurrence as compared to the peak winter months. The northern parts of the country will be mainly influenced by these weather systems and frequency of precipitation days would be greater in these areas as compared to other parts of the country. Some precipitation associated with thunderstorm/ hailstorm is also expected due to local weather developments in the northern parts. However, due to increased solar heating, mesoscale convective activity dominates over the plains and mountainous areas. As a result, sometimes heavy downpour associated with hailstorm and thunderstorm occurs with localized characteristics. Occasional dust storm or gusty winds are the common features of April. The probability of occurrence of rainfall during April over Potohar plains is given below:

AMOUNTS/ DATES	PERCENTAGE PROBABILITY OF OCCURRENCE OF DIFFERENT AMOUNTS OF RAINFALL IN APRIL					
	1-5	6-10	11-15	16-20	21-25	26-30
10 mm	36	35	21	18	16	30
15 mm	25	23	18	16	06	21
25 mm	10	12	12	12	03	09

The evaporative demand of the atmosphere is expected to increase as compared to March by 1 to 2 mm/day because of increasing heating trend. The ETo values may range between 4.5 and 6.5 mm/day following a uniform increasing trend from North to South. The mean daily relative humidity is likely to range from 40% to 50% in most of the agricultural plains of the country except southern Punjab and upper Sindh where it may be around 35%.

Mean daily air temperatures may range between 23°C and 30°C over most of the low elevation agricultural plains of the country whereas in high agricultural plains of Balochistan, it may be around 17°C. The mean daily maximum temperatures are expected to range from 30 to 39°C following a southward increasing trend except Quetta valley where it may remain around 25°C. The mean minimum temperatures are likely to be in the range of 15 to 23°C except high agricultural plains of Balochistan where it may remain around 8°C. The mean daily duration of bright sunshine is expected to range from 8 to 10 hours over most of the agricultural plains of the country. The intensity of solar radiation may range from 19 to 21 MJ/M²/day. The mean daytime wind speeds are likely to range from 4-8 Km/hour over most of agricultural areas of the country except high agricultural plains of Balochistan where it may average about 11 Km/hour.

The water requirement of full canopied, healthy and normally growing crops is given below for different agroclimates of the country. The Rabi crops in the field may be close to maturity in low elevation agricultural plains, therefore, no irrigation is recommended in such areas. At higher elevations, the crops may be around early reproductive stage, where they would require maximum amounts of water.

S.No	Region	Water Requirement	
		(mm)	Cubic Meter/Hectare
1	Northern KPK, Northern Punjab and high plains of Balochistan	120-150	1200-1500
2	Central Punjab and Southern KPK	150-165	1500-1650
3	Southern Punjab & Sindh	170-190	1700-1900

Seasonal Weather Update

Introduction:

Regional weather (precipitation and temperature) outlook is predicted from different global climate models by using persisted sea surface temperature on 0000 April 01, 2013. That might be somewhat different from actual weather because of time to time variation in Sea Surface Temperature (SST) during the season. Accuracy of Outlook seasonal weather mainly depend upon SST used in global climate models. Even with use of accurate SST, still be uncertainty in the climate forecast due to chaotic internal variability of the atmosphere.

Synoptic situation:

- The convergence area of maximum winds at 200 hPa (Jet stream) is expected to shrink and will be shifted towards eastward from the normal location. Expected speed of jet stream over central parts of the country will be 30 m/sec which is slightly higher than normal (1982-2010) during April.
- Current synoptic situation indicates less than normal chances of the development of low pressure trough at the height of 500 hPa over central parts of the country. Trough over west becomes normal during March.
- Surface temperature pattern is expected on higher side than normal (1982-2010) during April, 2013 over the country, especially well marked over central and southern parts.
- North Atlantic Oscillation (NAO) is in slightly positive phase (nearly zero) and may cause to shift western disturbances towards north during coming months. Horrell pc-based monthly calculation of NAO)
- Most of the set of dynamical and statistical model predictions neutral conditions for the March-April-May. In the most recent week, the SST anomaly in the Nino3.4 regions was -0.3.
- Arabian Sea Surface Temperature is slightly above normal.
- Caspian Sea surface temperature is slightly above normal.
- Mediterranean Sea surface temperature is 0.5-10° higher from normal.

Seasonal Weather Outlook (April-June, 2013)

Synthesis of the latest model forecasts for Apr-to-Jun 2013 (AMJ), current synoptic situation and regional weather expert's judgment indicates that the southern and central parts of the country may receive normal rainfall while northern parts may receive below normal rainfall during early season. However normal rainfall is expected throughout the country during rest of the season. Slightly warmer-than-normal conditions may occur in the southern and central parts of the country. The extreme northern parts of the country may experience normal to below normal conditions in early months and then temperature will shoot up during end of the predicted months. The forecasts also expects the neutral-ENSO condition are expected to persist though the period.

Normal precipitation is expected during next three months (April-June)

Precipitation:

The forecasts for the period April – June 2013 show that normal weather pattern/ track of weather systems will be expected during the period. The southern and central parts may receive more than

normal rainfall while northern parts of the country may receive less than normal rainfall during April. However, extreme northern parts of Punjab, southern parts of Khyber Pakhtunkhawa (KP) and Kashmir may receive less than normal rainfall during late predicted period.

As whole normal rains will occur all over of the country.

- Normal rainfall over Gilgit Baltistan
- Below normal precipitation over KP and Kashmir
- Normal to slightly above normal over, Punjab, Sindh ,FATA and Baluchistan

The coastal regions of the country may receive more than normal rains during early predicted period.

Temperature:

As per persisting synoptic situation, slightly above normal maximum temperature will be expected in all parts of the country. Maximum temperature of central and southern parts will rise abruptly from April and will continue till June. During May, higher than normal maximum temperature is expected over central parts of the country. In June higher than normal maximum temperature is expected over northern parts that will contribute to enhance water reservoirs of the country as well.

Monthly Quantitative Weather Forecast

Precipitation is in mm/month

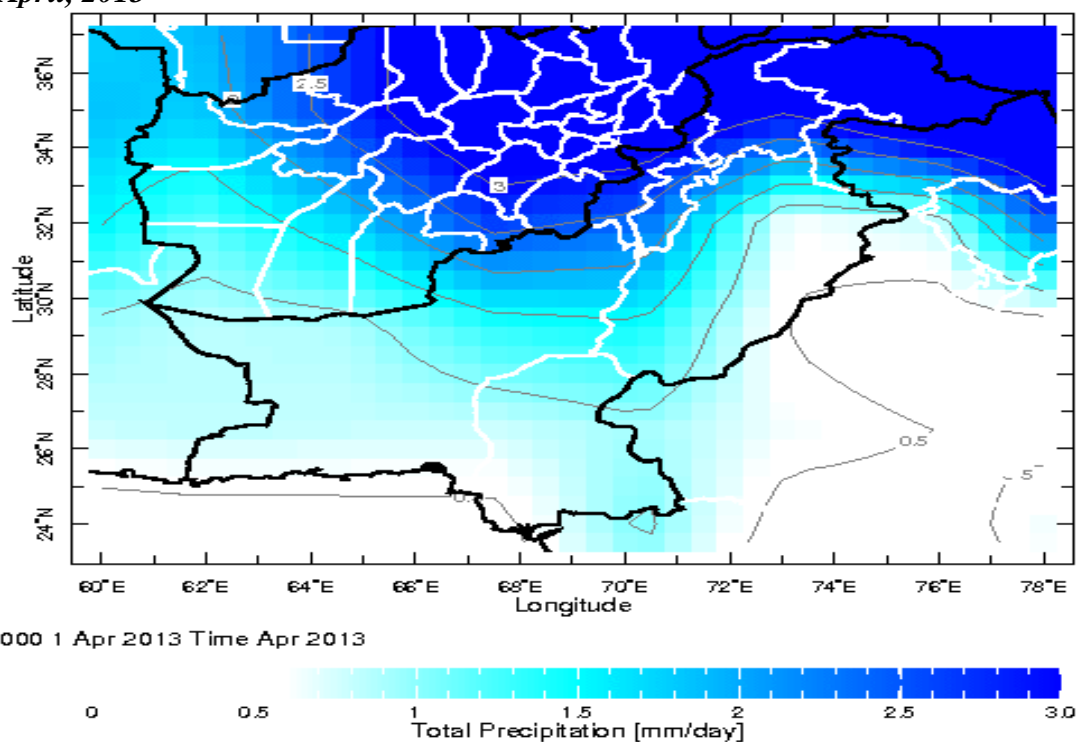
Apr-2013		
Province	Average	Expected
GB	43.5	Below Average
KP	74.7	Average
AJK	94.9	Average
FATA	51.5	Above Average
PUNJAB	22.4	Average
BALUCHISTAN	11.5	Above Average
SINDH	3.6	Average
Pakistan	23	Average

- **Below Average=** $> -10 \%$,
- **Average precipitation range** = -10 to $+10 \%$,
- **Above Average=** $> +10 \%$

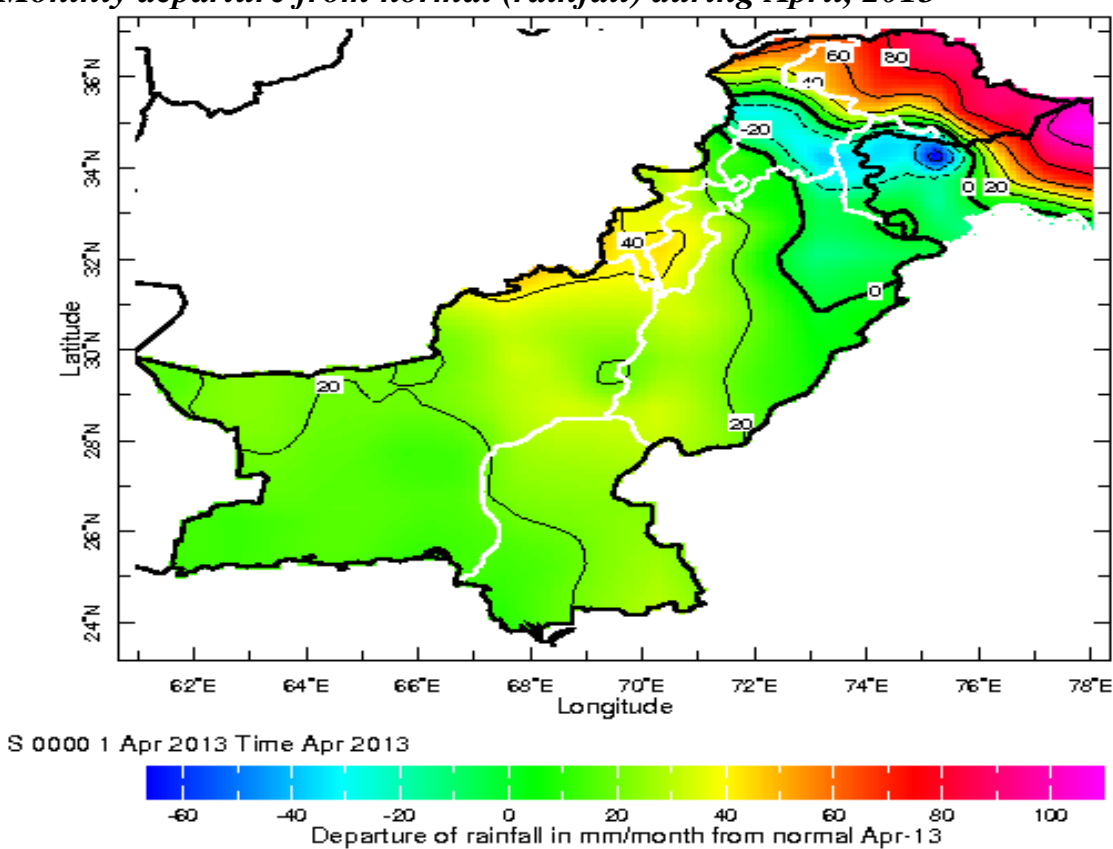
Note: Average precipitation is computed by using Global Precipitation Climatology Centre (GPCC) gridded data by resolution ($0.5^\circ \times 0.5^\circ$) latitude by longitude. Ensembles of different climate models are used for computation of expected precipitation over the region.

1. Spatial distribution of expected rainfall during coming season (GCM-ECHAM)

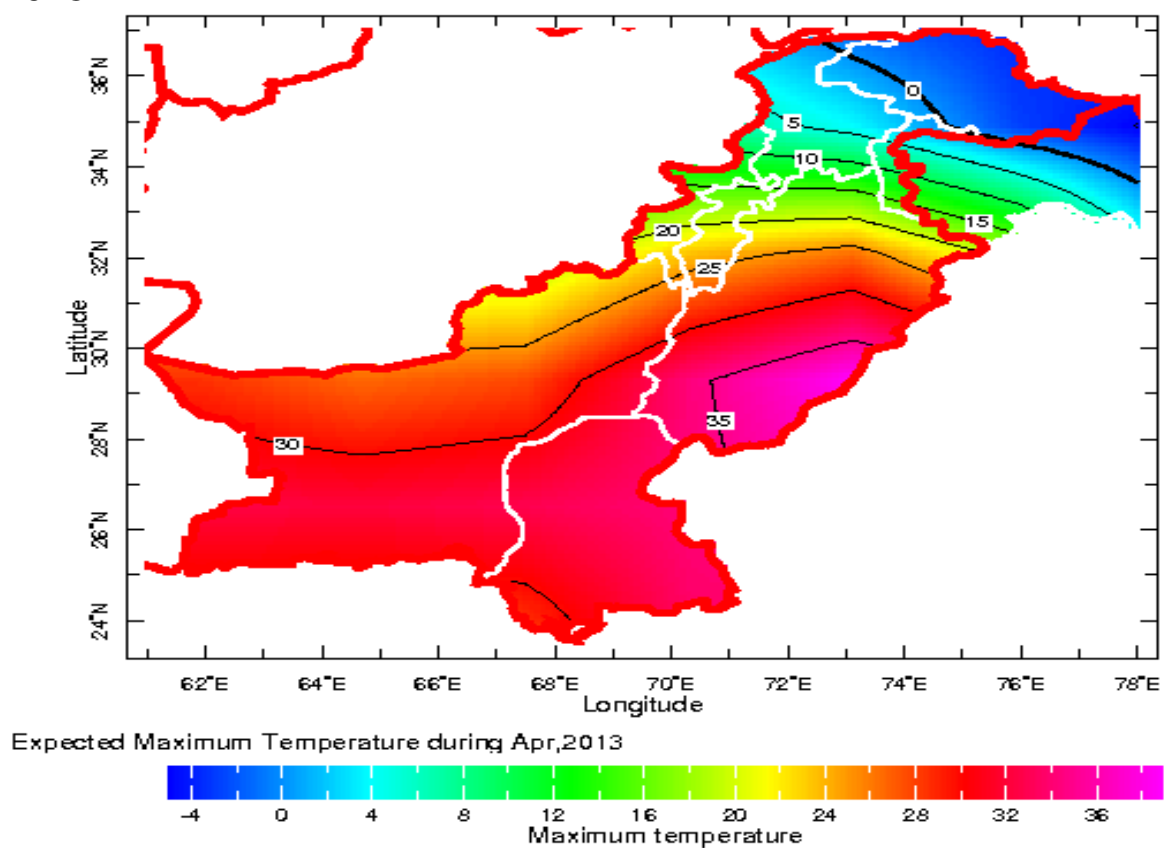
April, 2013



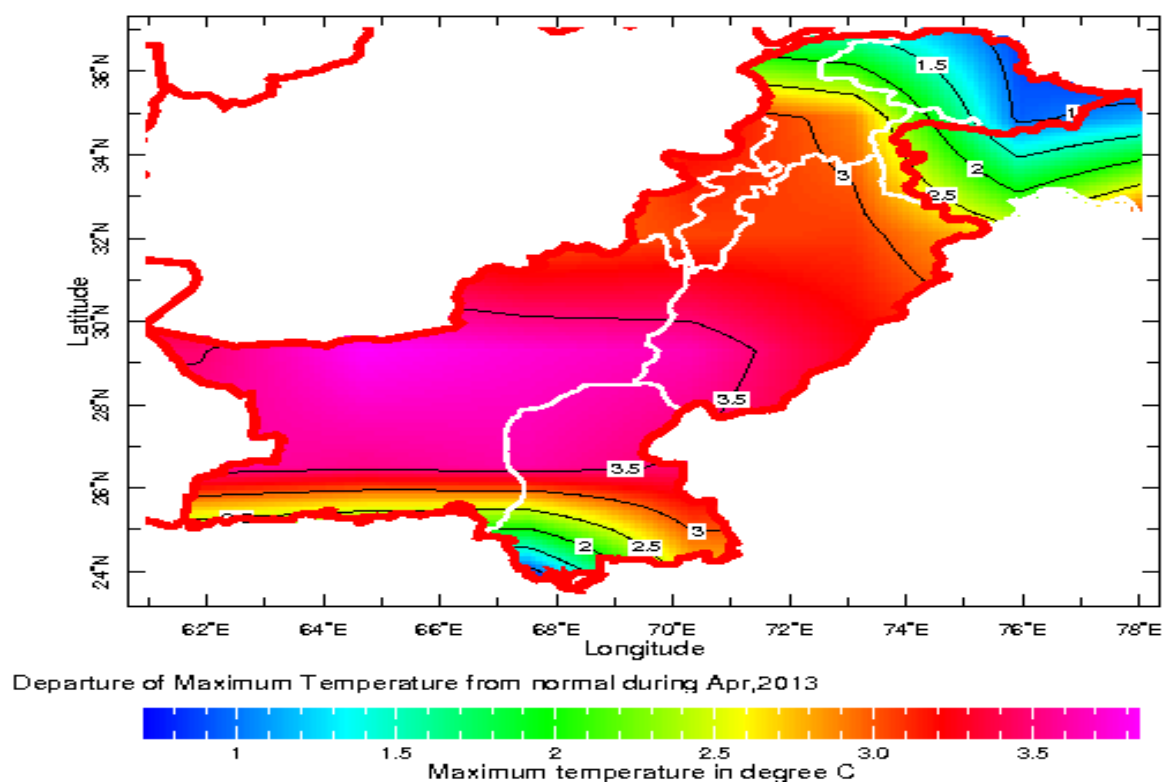
2. Monthly departure from normal (rainfall) during April, 2013



3. Spatial distribution of expected maximum Temperature during April 2013



4. Departure of expected minimum during April 2013



اپریل 2013ء میں کاشتکاروں کے لئے زرعی موسمیاتی مشورے

ماہ مارچ میں ملک کے اکثر زرعی میدانوں میں بارشیں معمول سے زیادہ ریکارڈ ہوئیں ریتج کی اہم فصل گندم جو کہ سٹھ ٹکالنے / پکنے یا کاٹنے کے مراحل میں ہے کو اس سے قابل ذکر نقصان نہیں ہوتا ہم تیز ہواؤں / آندھی اور ڈالہ باری سے کچھ علاقوں میں سبزیوں اور پھلدار درختوں کو نقصان پہنچا ہے اسلئے کہ زیادہ تر پھلدار درخت پھول ٹکالنے کے مراحل سے گزر رہے ہیں۔ اپریل کے متوقع موسمی حالات کو مد نظر رکھتے ہوئے کاشتکار بھائیوں کے لئے مندرجہ ذیل گز ارشات پیش خدمت ہیں۔

۱۔ اپریل میں وقتاً فوقتاً تیز ہواؤں کے ساتھ بارش اور ڈالہ باری کی توقع ہے اس مہینے میں گندم کی فصل صوبہ سندھ اور صوبہ پنجاب کے علاقوں میں پک جائے گی۔ جبکہ دوسرے علاقوں میں بھی وہ نشوونما کے آخری مراحل میں ہوگی۔ اس لئے تیز بارش اور ڈالہ باری نقصان کا باعث ہو سکتی ہے۔ ایسے علاقوں میں جہاں فصل پک جائے وہاں کاشتکاروں کو چاہیے کہ موسمی پیش گوئی کے مطابق اگر آئندہ کچھ دنوں تک موسم خشک رہنے کی توقع ہے تو مشینوں کی مدد سے فصل کی کٹائی اور گہائی مکمل کر کے مارج اور بھوسہ سنبھال لیں۔ یاد رہے کہ خراب موسم سے ہونے والا نقصان مشینوں پر آنے والی لاگت سے کہیں زیادہ ہوتا ہے۔

۲۔ فصل سے جڑی بوٹیوں کی تلفی پر ہمیشہ زور دیا جاتا رہا ہے۔ وہ فصل کے حصے کا پانی اور خوراک استعمال کر کے فصل کی پیداوار کو متاثر کر دیتی ہے۔ لہذا اگر آپ اپنے کھیتوں میں سے اور ان کے کناروں پر آگے جڑی بوٹیوں کو ختم نہیں کرتے تو ان کا بیج زمین پر گرے گا اور آئندہ موسم میں کاشت ہونے والی فصل کے پھر مد مقابل آجائے گا۔ اس کے علاوہ ان کے بیج آپ کے مارج میں ملیں گے اور اس کی کوالٹی کو بہت متاثر کریں گے اور منڈیوں میں فروخت کے وقت آپ کو اس کی قیمت بھی کم ملے گی۔ اس کے ساتھ ساتھ آئندہ فصل کے لئے رکھے گئے بیج میں ان جڑی بوٹیوں کے بیج کی ملاوٹ کی وجہ سے فصل کی پیداوار کو نقصان ہوتا ہے اور پیداوار بہت حد تک کم ہو جاتی ہے۔

۳۔ کسان بھائیوں سے گزارش ہے کہ موسمی حالات کو دیکھ کر جلد از جلد گندم کی کٹائی کر کے کھیتوں کو کپاس کیلئے تیار کیا جائے۔ ہمارے ملک میں کپاس کی فی ایکڑ کم پیداوار کی ایک بڑی وجہ فصل کو دیر سے کاشت کرنا بھی ہے جس کی وجہ سے فصل کو موافق موسمی حالات نہیں مل پاتے۔

۴۔ اپریل اور مئی کا موسم غیر یقینی ہوتا ہے اس لئے آپ سے گزارش ہے کہ محکمہ موسمیات کی پیش گوئی کو ملحوظ خاطر رکھ کر محکمہ زراعت کے ماہرین کی مشاورت سے اپنے معمولات طے کریں۔ اس سلسلے میں ریڈیو، ٹیلی ویژن اور اخبارات میں نشر اور شائع ہونے والی پیش گوئی کے علاوہ محکمہ موسمیات کے قریبی دفتر سے بھی رجوع کیا جاسکتا ہے۔ اگر کوئی زرعی موسمیاتی مسئلہ درپیش ہو تو ہمارے مندرجہ ذیل دفاتر آپ کی بخوبی مدد کر سکتے ہیں۔

۱۔ محکمہ موسمیات، نیشنل ایگرو میٹ سنٹر، پی۔ او۔ بکس نمبر 1214، بیکٹر ایچ ایٹ ٹو، اسلام آباد فون نمبر: 051-9250592, 051-9250299

۲۔ محکمہ موسمیات، نیشنل فور کاسٹنگ سنٹر برائے زراعت، پی۔ او۔ بکس، 1214، بیکٹر ایچ ایٹ ٹو، اسلام آباد فون نمبر: 051-9250364

۳۔ محکمہ موسمیات، رینجیل ایگرو میٹ سنٹر، نزد دارانی یونیورسٹی، مری روڈ، براولپنڈی۔ فون نمبر: 051-9290635

۴۔ محکمہ موسمیات، رینجیل ایگرو میٹ سنٹر، ایوب ریسرچ انسٹیٹیوٹ، جھنگ روڈ، فیصل آباد۔ فون نمبر: 041-2657047

۵۔ محکمہ موسمیات، رینجیل ایگرو میٹ سنٹر، ایگرنیکلچر ریسرچ انسٹیٹیوٹ، ننڈو جام۔ فون نمبر: 0222-766583

۶۔ محکمہ موسمیات، رینجیل ایگرو میٹ سنٹر، ایگرنیکلچر ریسرچ انسٹیٹیوٹ، سریاب روڈ، کوئٹہ۔ فون نمبر: 081-9211211

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کپاس کی کاشت پر موسمی اثرات

پاکستان ایک زری ملک ہے اور ملکی ترقی کا انحصار زرعی پیداوار پر ہے ملکی آبادی کا اکثریتی حصہ زراعت اور اس سے متعلقہ صنعتوں سے منسلک ہے۔ کپاس پاکستان کی اہم نقدآور فصل ہے۔ جس کی پنجاب اور سندھ کے نہری علاقوں میں کاشت ہوتی ہے۔ کل پیداوار کے لحاظ سے پاکستان کپاس پیدا کرنے والے ممالک میں چوتھے نمبر پر ہے جبکہ فی ایکڑ پیداوار کے لحاظ سے پاکستان کا شمار عام طور پر آخر میں ہوتا ہے۔ پاکستان کے زیادہ تر برآمدات اور صنعت سے متعلق لیبر کی ایک بڑی تعداد کے روزگار اور گزر بسر کا انحصار کپاس کے اچھی پیداوار پر ہے۔ کپاس کی مجموعی پیداوار میں پنجاب کا حصہ تقریباً 80 فیصد اور سندھ کا تقریباً 15 فیصد ہے جبکہ بلوچستان کے کچھ نہری علاقوں اور خیبر پختونخواہ کے جنوبی علاقوں میں بھی کپاس کی کچھ کاشت ہوتی ہے۔ پاکستان میں کپاس کی نشوونما اور پیداوار میں ردوبدل کا انحصار بنیادی طور پر اچھے بیج کی بروقت فراہمی، بروقت کاشت، بروقت کھادوں کی فراہمی، مضر کیڑوں کے تدارک کیلئے بروقت اسپرے، مناسب مقدار میں پانی کی فراہمی اور برسات کے دوران بارشوں پر ہے۔ سندھ اور پنجاب کے کسانوں کیلئے جو کپاس کاشت کرتے ہیں درجہ ذیل موسمی مشورے پیش نظر ہیں

- 1- یہ موسم گرما (ربیع) کا اہم فصل ہے جس کی کاشت پنجاب میں اپریل / مئی / جون اور سندھ میں اپریل / مئی میں ہوتی ہے۔ پاکستان میں کپاس کے فصل کیلئے پانی کی ضرورت تقریباً 550 سے 700 ملی میٹر تک ہے۔ درجہ حرارت اور ہوا میں نمی کے فرق کیوجہ سے سندھ میں پانی کی ضرورت مون سون سے پہلے پنجاب کے مقابلے میں نسبتاً زیادہ ہوتی ہے۔ جبکہ مون سون کے دوران جنوبی پنجاب میں کپاس کے فصل کیلئے پانی کی ضرورت سندھ سے بڑھ جاتی ہے۔ سندھ کے بالائی علاقوں میں پانی کی طلب زیریں سندھ سے زیادہ ہے اس طرح وسطی پنجاب کے زری میدانوں کے مقابلے میں گرم اور نسبتاً خشک جنوبی علاقوں میں پانی کی طلب زیادہ ہوتی ہے۔
- 2- کسان عام طور پر ربیع کے فصلوں کی دیر سے کٹائی کیوجہ سے زمین کی تیاری میں تاخیر کرتے ہیں جس کی وجہ سے کپاس کی کاشت میں بھی تاخیر ہو جاتی ہے۔ جس کیوجہ سے کپاس کا پودا ابتدائی نشوونما کے دوران جب پودا انتہائی کمزور اور ناک ہو جاتا ہے۔ سورج کے تیز شعاعوں اور انتہائی زیادہ درجہ حرارت کا سامنا کرتا ہے پودے کیلئے پانی کی ضرورت بڑھ جاتی ہے جس کیوجہ سے فصل کی ابتدائی نشوونما متاثر ہو جاتی ہے۔ فصل کیلئے پانی کی ضرورت کو سامنے رکھ کر کپاس کی کاشت سندھ میں 15 اپریل سے 15 مئی اور پنجاب میں مئی کے مہینے میں مکمل ہونی چاہئے۔ وقت پر کاشت نہ ہونے والی فصل پر مضر کیڑوں خصوصاً جڑوں پر ففائی کا حملہ بھی زیادہ ہوتا ہے۔ کپاس کے پودے کی بہترین نشوونما کے لئے ضروری ہے کہ شروع کے اگاؤ (Germination) کے دوران درجہ حرارت 18°C سے 30°C ، غیر جنسی نشوونما (Vegative growth) کے دوران 20 سے 40 دن کے وقت جبکہ رات کو 12°C - 27°C ہو جبکہ شروع کے پھول بننے سے لیکر ٹینڈے بننے تک درجہ حرارت 27 سے 32 ڈگری سینٹی گریڈ ہونا چاہئے اور یہ تب تک ممکن ہے جب فصل کی کاشت بروقت ہو۔

- 3- فصل کی کاشت کیائی کھادوں، آبپاشی اور ہر قسم کیائی اسپرے سے مثبت نتائج حاصل کرنے کیلئے موسمی معلومات انتہائی ضروری ہے ورنہ فصل کی کاشت، کیائی کھادوں کے استعمال، آبپاشی اور اسپرے وغیرہ کے فوراً بعد بارش نقصان کا باعث بنتی ہے۔ اس لئے کسان بھائیوں سے گزارش ہے کہ بروقت موسم سے باخبر رہے۔ مندرجہ ذیل فون نمبر پر آپ کو مفت موسمی مشورے مل سکتے ہیں۔

1- محکمہ موسمیات، نیشنل ایگرو میٹ سیٹرن پی۔ او۔ بکس نمبر 1214، بیکراج ایٹ ٹو، اسلام آباد۔ فون نمبر: 051-9250299

2- محکمہ موسمیات، نیشنل فور کاسٹنگ سینٹر برائے زراعت پی۔ او۔ بکس نمبر 1214، بیکراج ایٹ ٹو، اسلام آباد۔ فون نمبر: 051-9250363-4

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تحریر: محمد ایاز

کمپیوٹر کمپوزنگ: علی مان شاہ

مضمون کے ماخذ:-

- 1-Technical Report "An Analysis of Weather and Cotton Crop Development in Lower Sindh (2007-2012)" by Muhammad Ayaz, Meteorologist, NAMC, Pakistan Meteorological Department, Islamabad.
- 2-Onset of Pest Attack on Cotton Crop of Punjab in Terms of Meteorological Parameters (2006-2010), MS-Dissertation by Muhammad Zeshan, Assistan Meteorologist, NAMC, Pakistan Meteorological Department, Islamabad.
- 3-Online Literature of PARC/NARC (www.parc.gov.pk/).
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