



بِسْمِ اللّٰهِ الرَّحْمٰنِ الرَّحِیْمِ

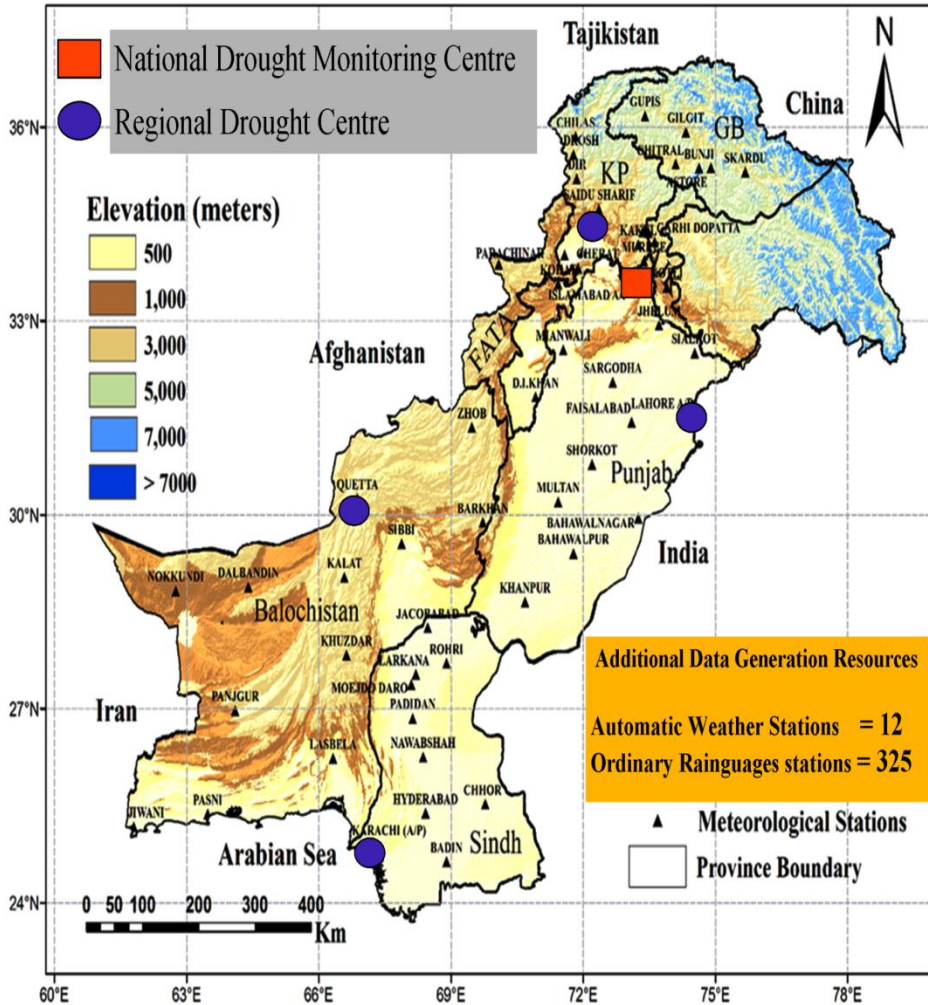
Brief on NDMC Products

Mr. NASIR YASEEN
Meteorologist / PhD Scholar

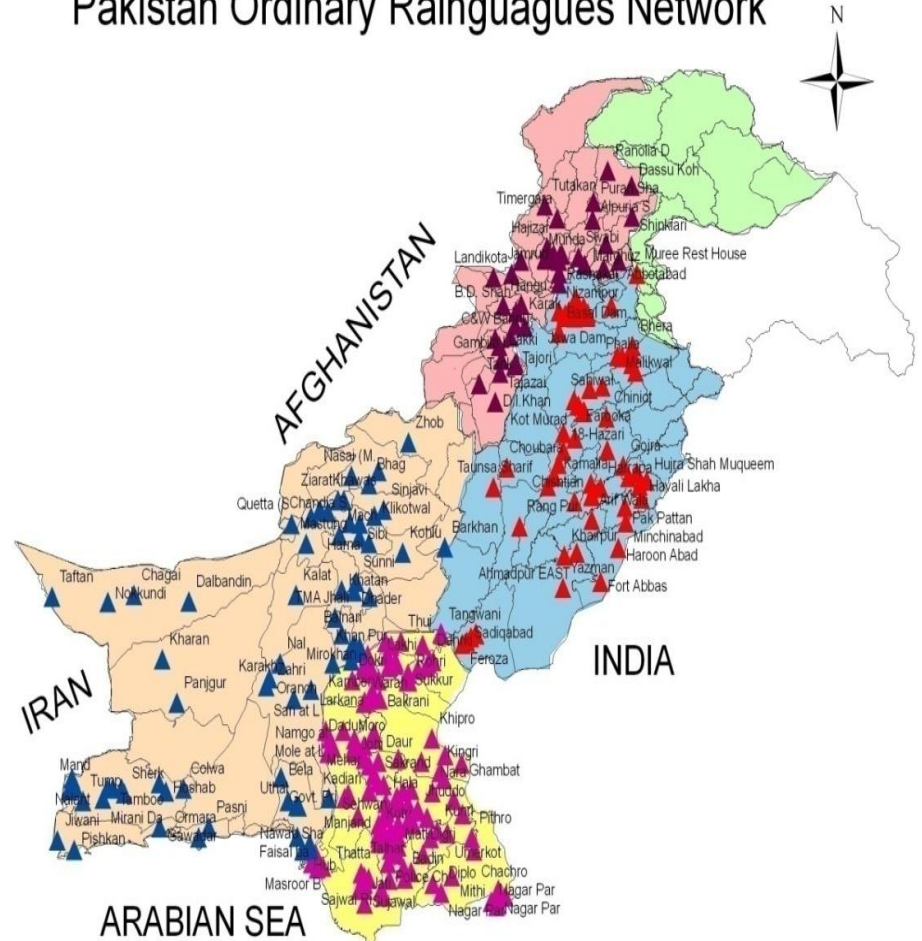
National Drought Monitoring & Early Warning Centre (NDMC)
Pakistan Meteorological Department
Islamabad

NDMC Network in Pakistan

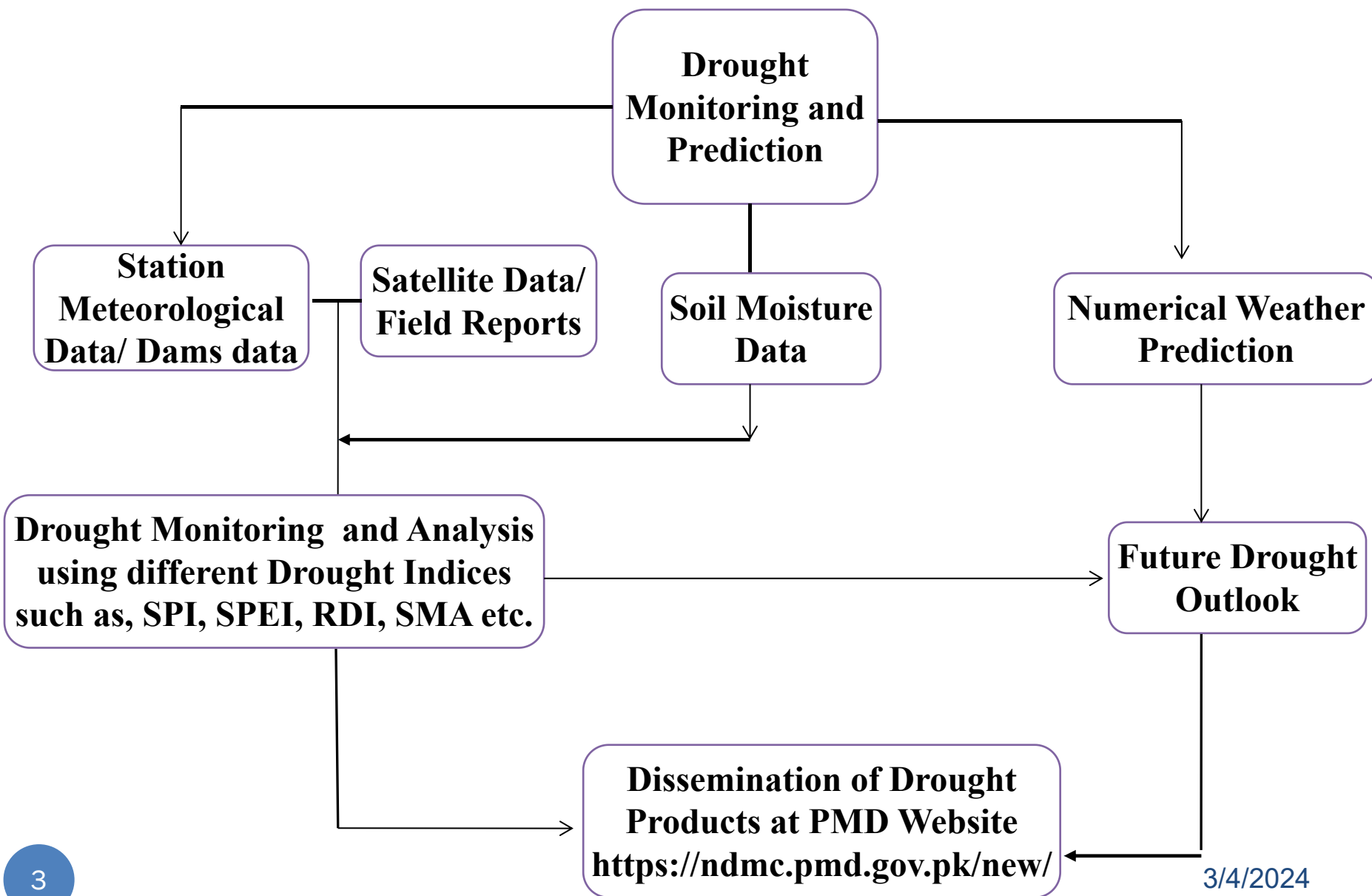
National Drought Monitoring and Early Warning Centre



Pakistan Ordinary Raingages Network



NDMC Drought Monitoring/Prediction Model



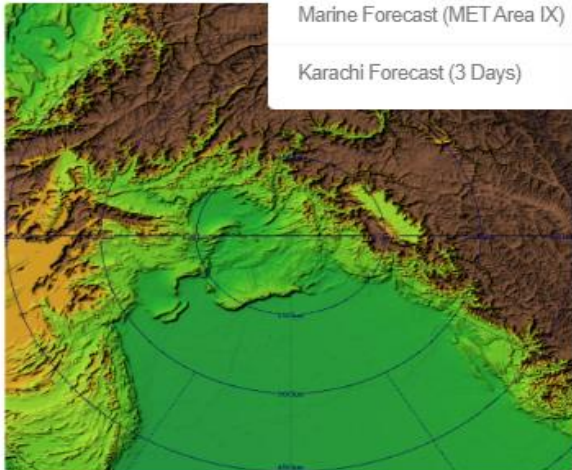
Brief on NDMC Products



Current Weather

ISLAMABAD	LAHORE	PESHAWAR	QUETTA	GILGIT
13°C	15°C	10°C	12°C	9°C

Radar Updates



- Weather Forecasting Centre
- SMRFC
- National Agromet Centre
- Drought Monitoring Centre
- Seismic Monitoring Centre
- Flood Forecasting Division
- Research & Development
- Climate Data Processing Center
- Nullah Lai Updates
- Aviation Products
- Marine Forecast (MET Area IX)
- Karachi Forecast (3 Days)
- What is Drought?
- Advisories/Alerts
- Bulletins
- Outlook Maps
- Satellite Derived Indices
- Dam Reservoir(s)
- Media Links
- Team
- Contact

Latest Updates

- Seasonal forecast (February - April 2024)
- Monthly Outlook (February 2024)
- Latest Jobs
- International Workshop on "Droughts over Pakistan in the Changing Climate" (Feb 21-22 2024, IUB Bahawalpur)

Latest Satellite Image



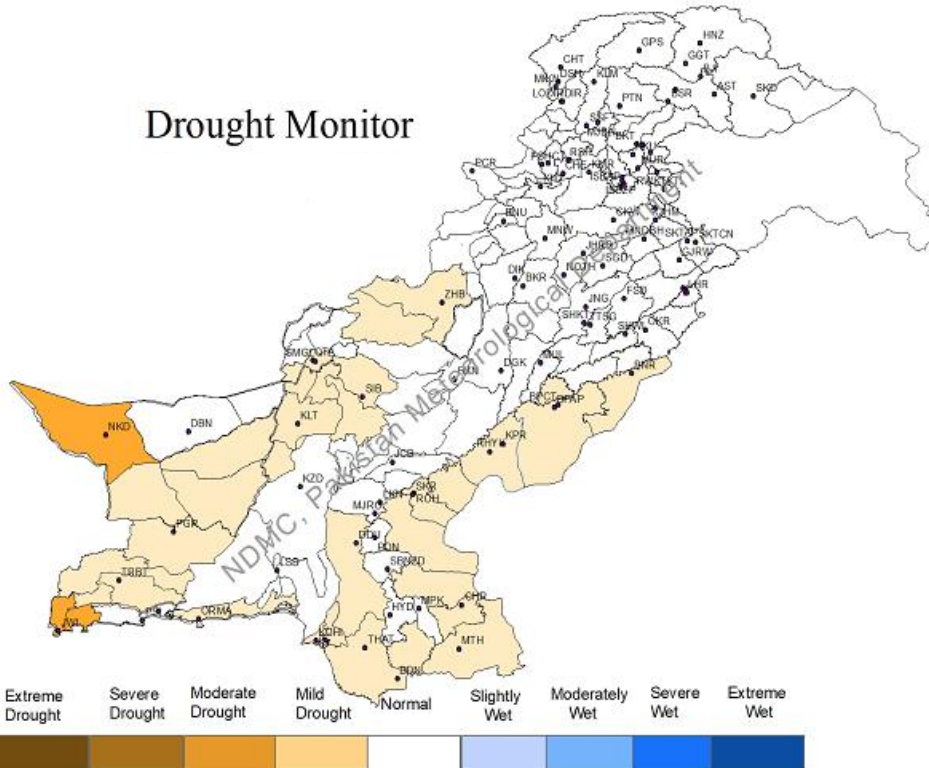
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- HOME
- ABOUT NDMC ▾
- PRODUCTS ▾
- DROUGHT ▾
- DAM RESERVOIRS ▾
- MEDIA LINKS
- WORKSHOP
- USEFUL LINKS ▾
- CONTACT

(Drought Monitor)

Drought Monitor



DROUGHT MONITOR

PRECIPITATION

STANDARDIZED PRECIPITATION INDEX

SOIL MOISTURE OUTLOOK

RAIN PERCENTAGE ANOMALY CHANGE

PERCENTAGE DEPARTURE OF RAINFALL

CUMULATIVE PRECIPITATION ANOMALY

SOIL MOISTURE ANOMALY

WATER AVAILABILITY FORECAST

RAINFALL ANALYSIS

LENGTH OF DRY PERIOD

DROUGHT HAZARD MAP

DROUGHT FREQUENCY MAP

Last Updated: 9 January, 2024 03:38 PM

Video Weather Forecast

Weather for Tourists



18th February, 2024

Daily Weather Forecast



18th February, 2024

Farmer's Weather Forecast



16th February, 2024

Sindhi Weather



16th February, 2024

Punjab Weather



16th February, 2024

Services



Flood Forecasting Division



Research & Development



National Agromet Centre

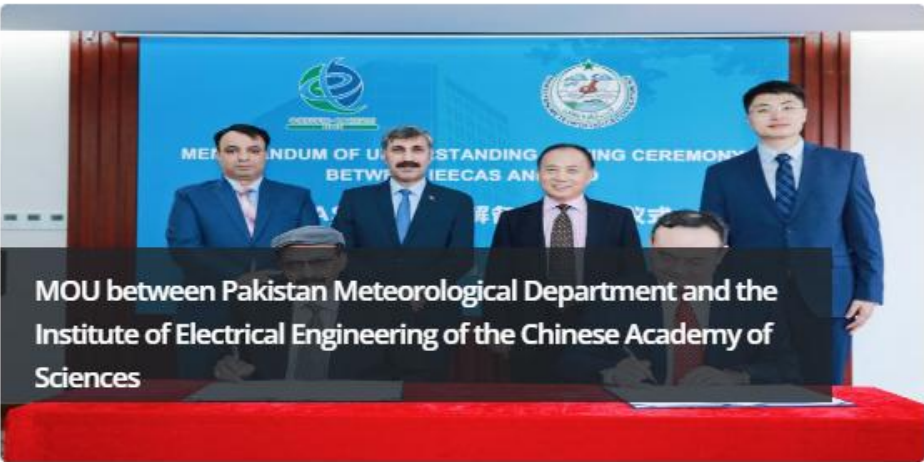


National Seismic Centre



Drought Monitoring Centre

Events/Projects



MOU between Pakistan Meteorological Department and the Institute of Electrical Engineering of the Chinese Academy of Sciences



Tropical Cyclone Warning Centre



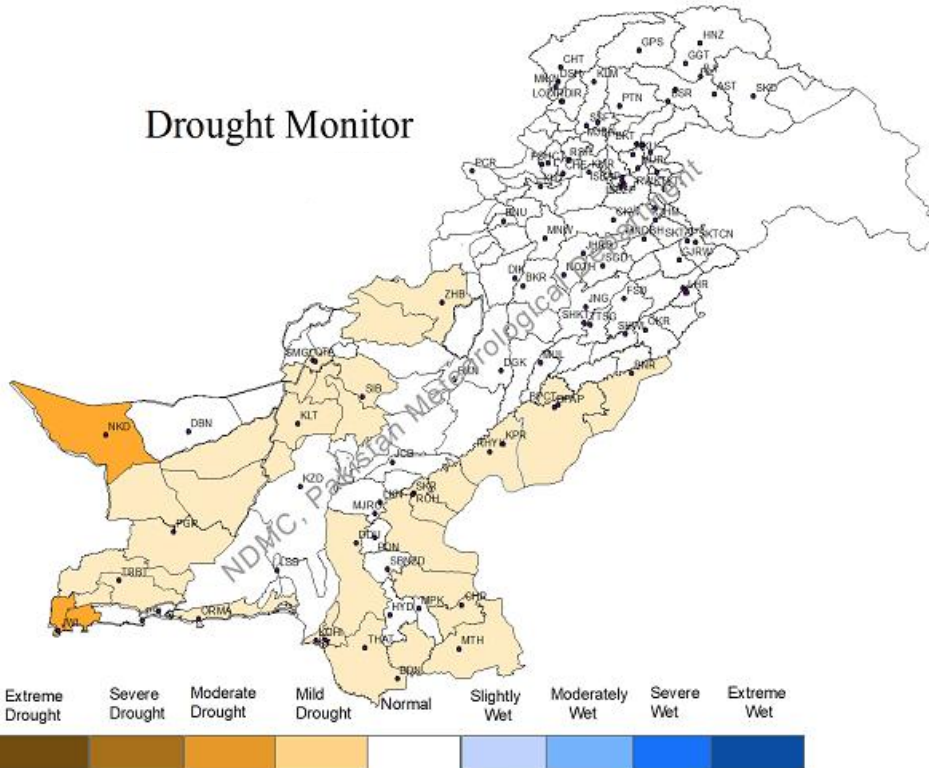
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Pakistan Meteorological Department

- HOME
- ABOUT NDMC ▾
- PRODUCTS ▾
- DROUGHT ▾
- DAM RESERVOIRS ▾
- MEDIA LINKS
- WORKSHOP
- USEFUL LINKS ▾
- CONTACT

(Drought Monitor)

Drought Monitor



Last Updated: 9 January, 2024 03:38 PM

DROUGHT MONITOR

PRECIPITATION

STANDARDIZED PRECIPITATION INDEX

SOIL MOISTURE OUTLOOK

RAIN PERCENTAGE ANOMALY CHANGE

PERCENTAGE DEPARTURE OF RAINFALL

CUMULATIVE PRECIPITATION ANOMALY

SOIL MOISTURE ANOMALY

WATER AVAILABILITY FORECAST

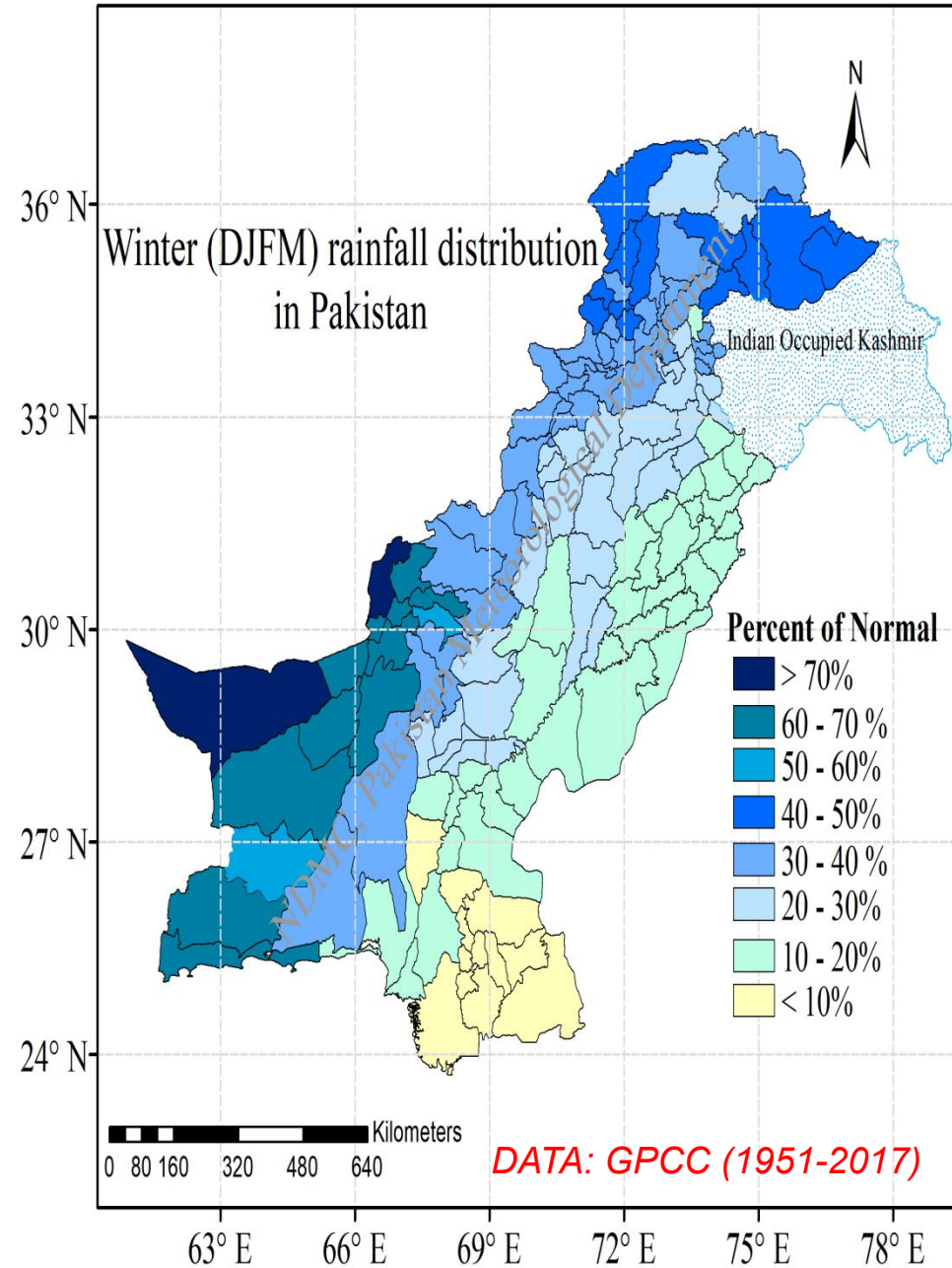
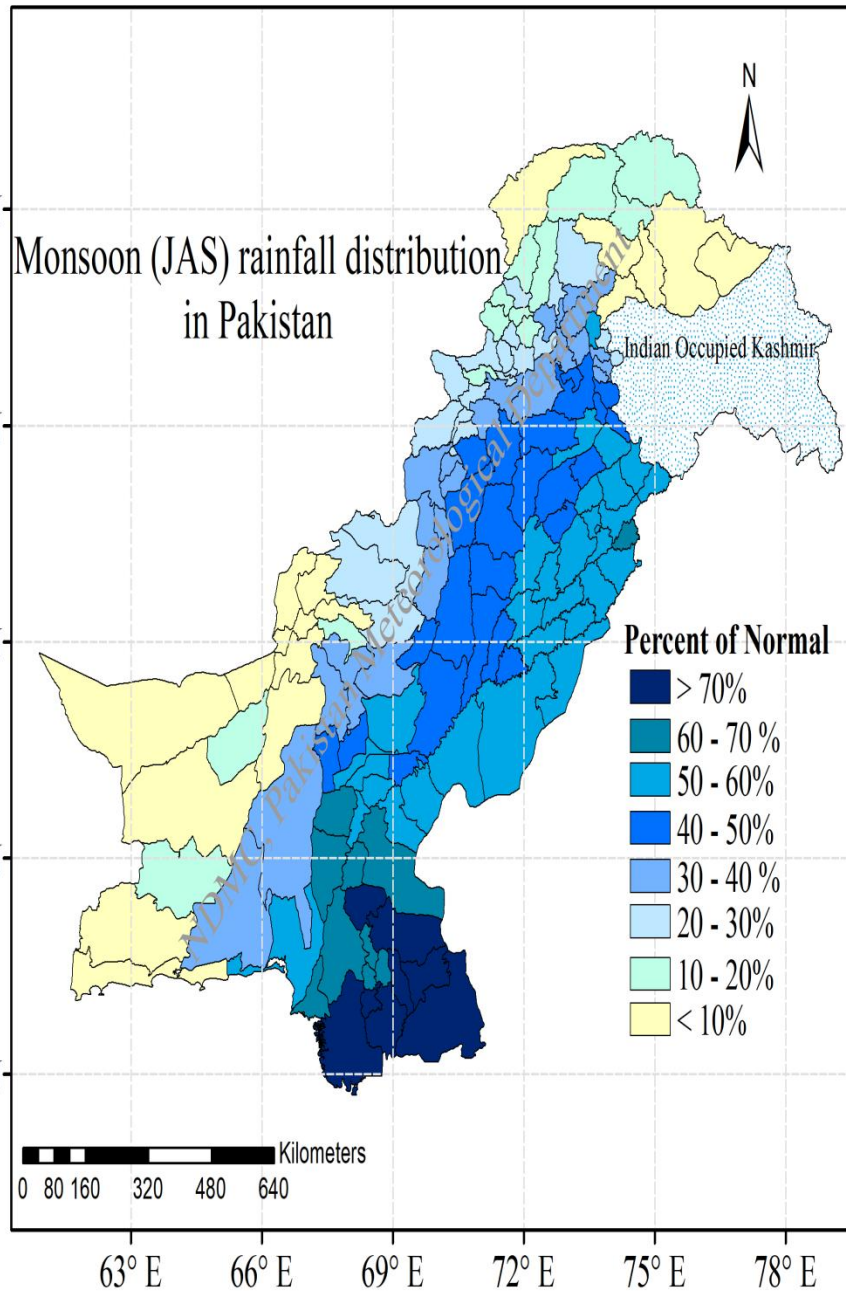
RAINFALL ANALYSIS

LENGTH OF DRY PERIOD

DROUGHT HAZARD MAP

DROUGHT FREQUENCY MAP

Rainfall distribution over Pakistan





National Drought Monitoring & Early Warning Centre, Islamabad

Pakistan Meteorological Department

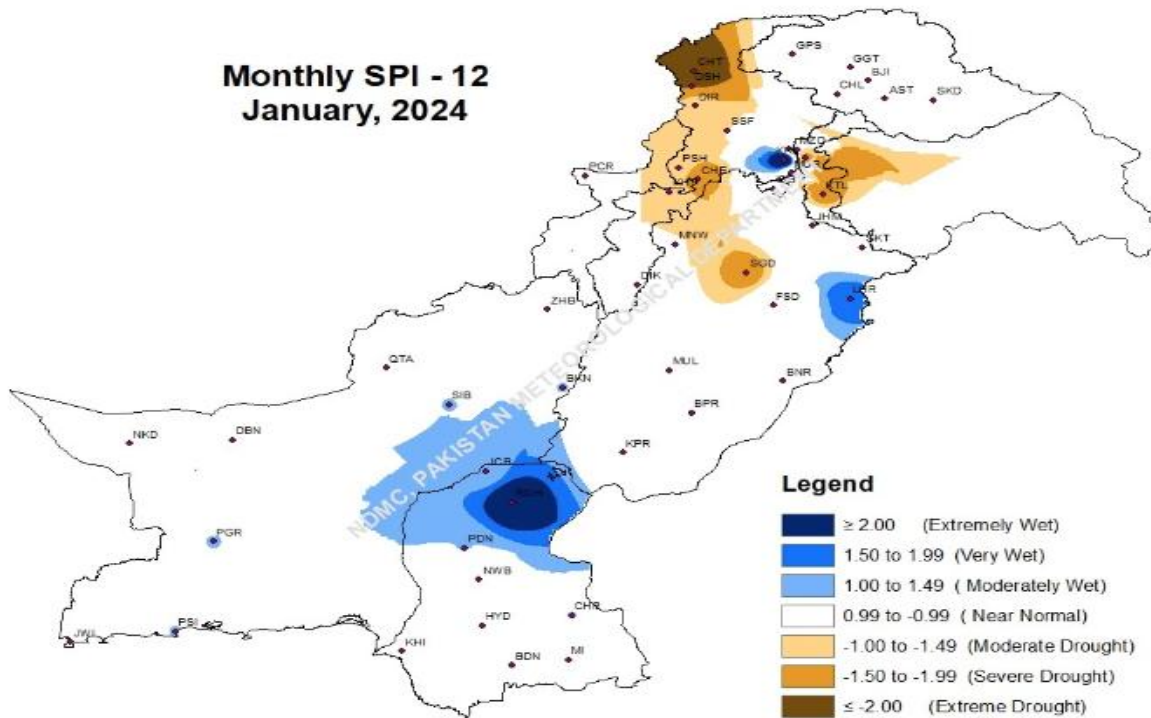
- [HOME](#)
- [ABOUT NDMC](#)
- [PRODUCTS](#)
- [DROUGHT](#)
- [DAM RESERVOIRS](#)
- [MEDIA LINKS](#)
- [WORKSHOP](#)
- [USEFUL LINKS](#)
- [CONTACT](#)

(Standardized Precipitation Index)

Weekly

Monthly

Monthly SPI - 12 January, 2024



Last Updated: 12 February, 2024 02:10 PM

[DROUGHT MONITOR](#)

[PRECIPITATION](#)

[STANDARDIZED PRECIPITATION INDEX](#)

[SOIL MOISTURE OUTLOOK](#)

[RAIN PERCENTAGE ANOMALY CHANGE](#)

[PERCENTAGE DEPARTURE OF RAINFALL](#)

[CUMULATIVE PRECIPITATION ANOMALY](#)

[SOIL MOISTURE ANOMALY](#)

[WATER AVAILABILITY FORECAST](#)

[RAINFALL ANALYSIS](#)

[LENGTH OF DRY PERIOD](#)

[DROUGHT HAZARD MAP](#)

[DROUGHT FREQUENCY MAP](#)



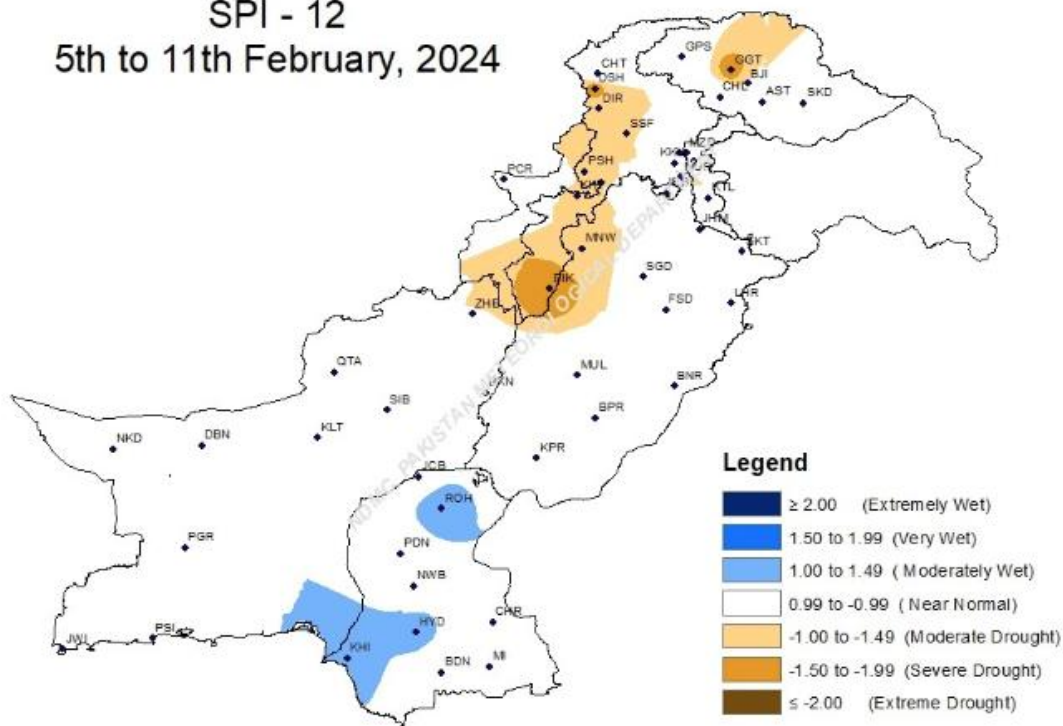
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- [HOME](#)
- [ABOUT NDMC](#)
- [PRODUCTS](#)
- [DROUGHT](#)
- [DAM RESERVOIRS](#)
- [MEDIA LINKS](#)
- [WORKSHOP](#)
- [USEFUL LINKS](#)
- [CONTACT](#)

Standardized Precipitation Index

SPI - 12
5th to 11th February, 2024



WEEKLY

SPI-12(5TH -11TH) FEB, 2024

SPI-9(5TH -11TH) FEB, 2024

SPI-6(5TH -11TH) FEB, 2024

SPI-3(5TH -11TH) FEB, 2024

SPI-1(5TH -11TH) FEB, 2024

SPI-12(29 JAN-04 FEB, 2024)

SPI-9(29 JAN-04 FEB, 2024)

SPI-6(29 JAN-04 FEB, 2024)

SPI-3(29 JAN-04 FEB, 2024)

SPI-1(29 JAN-04 FEB, 2024)

SPI-12(22-28 JAN, 2024)

SPI-09(22-28 JAN, 2024)

Standardized Precipitation Index (SPI) in Drought Monitoring

- The Standardized Precipitation Index (SPI) is a tool which was developed primarily for defining and monitoring drought (McKee et al 1993). It allows an analyst to determine the rarity of a drought at a given time scale (temporal resolution) of interest for any region with historic data. It can also be used to determine periods of anomalously wet events.
- In 2009, the participants at the Inter-Regional Workshop on Indices and Early Warning Systems for Drought held at the University of Nebraska-Lincoln issued “The Lincoln Declaration on Drought Indices” ([Hayes et al., 2011](#)). There were fifty-four experts from all regions agreed on the use of a universal meteorological drought index for more effective drought monitoring and climate risk and gave recommendation to WMO
- The World Meteorological Organization (WMO) recommends, that all national meteorological and hydrological services should use the SPI for monitoring of dry spells ([Press report December 2009, WMO No. 872](#)).
- The World Meteorological Organization (WMO) releases “[Standardized Precipitation Index User Guide](#)”, WMO-No. 1090 in 2012 giving details and some key points: about using SPI. It is desirable one should go through this before applying SPI.

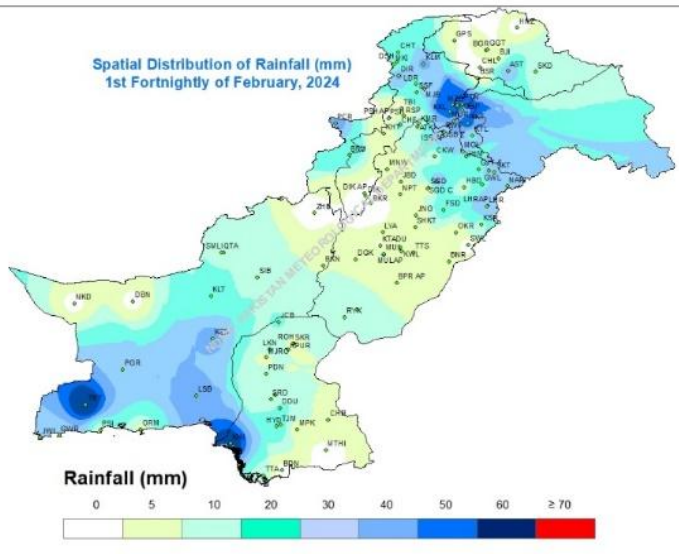
- For each time step, precipitation of the preceding t months is accumulated, where t is referred to as the time scale. The time series is first fitted with a model distribution to the data (for precipitation series, the Gamma distribution is typically used) Subsequently it is transformed to values of the standard normal distribution for each calendar month separately.
- The resulting time series has no seasonality and takes values of the standard normal distribution, where negative values indicate below average water availability. Positive values indicate greater than median rainfall; negative values indicate less than median rainfall.
- The interpretation of SPI is strictly probabilistic. As SPI has units of the standard normal distribution, its values can be directly related to probability of occurrence. The standardization implies also that SPI is independent of the mean conditions, it do not differs in magnitude between different regions and is thus suitable to analyse the synchronicity of drought events. This enables an easy and direct comparison between locations with different climate. The possibility to compute SPI for different time scales (t) allows for an adaptation of the index to slowly or fast evolving environmental or societal systems.
- The understanding that a deficit of precipitation has different impacts on groundwater, reservoir storage, soil moisture, snowpack and stream flow led scientists McKee, Doesken and Kleist to develop the Standardized Precipitation Index (SPI) in 1993.

- **Positive SPI values indicate greater than median precipitation and negative values indicate less than median precipitation. Because the SPI is normalized, wetter and drier climates can be represented in the same way; thus, wet periods can also be monitored using the SPI.**
- **A drought event occurs any time when the SPI is continuously negative and reaches an intensity of -1.0 or less. The event ends when the SPI becomes positive. Each drought event, therefore, has a duration defined by its beginning and end, and an intensity for each month that the event continues.**

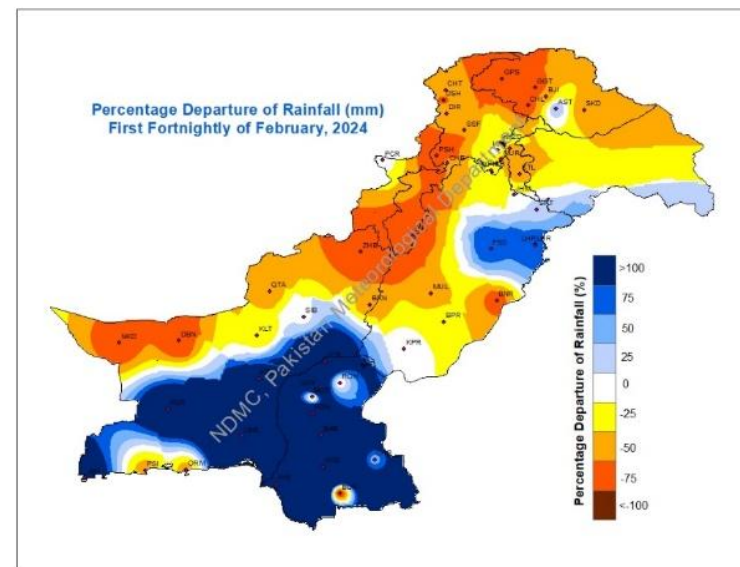
Category number	Categories	SPI range
8	Extremely wet	2.00 or more
7	Severely wet	1.50 to 1.99
6	Moderately wet	1.00 to 1.49
5	Mildly wet	0 to 0.99
4	Mildly dry	0 to -0.99
3	Moderately dry	-1.00 to -1.49
2	Severely dry	-1.50 to -1.99
1	Extremely dry	-2.00 or less

Rainfall Based drought Indices

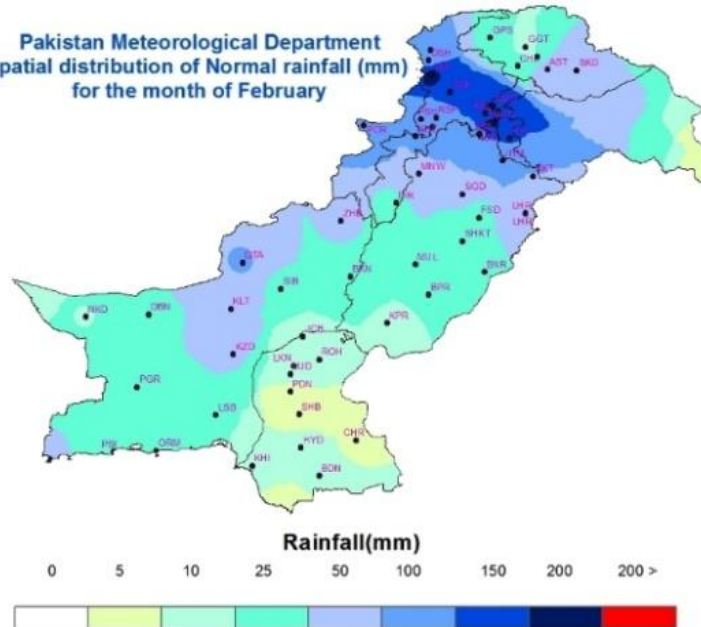
Spatial Distribution of Rainfall (mm)
1st Fortnightly of February, 2024



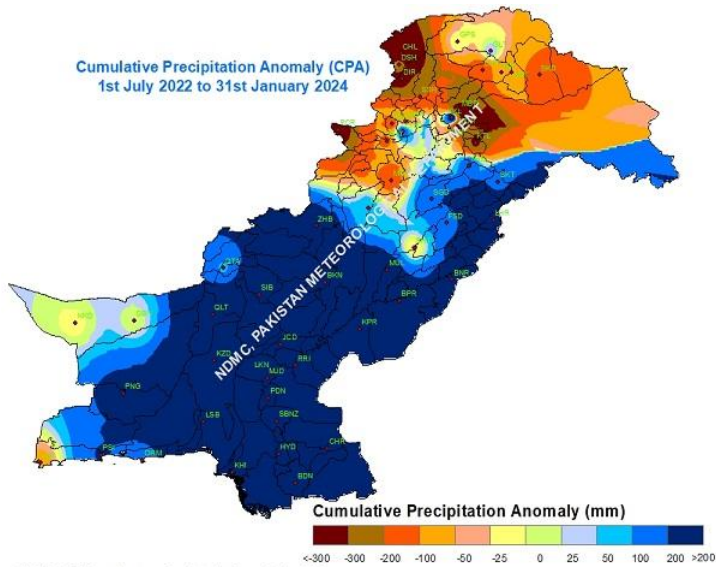
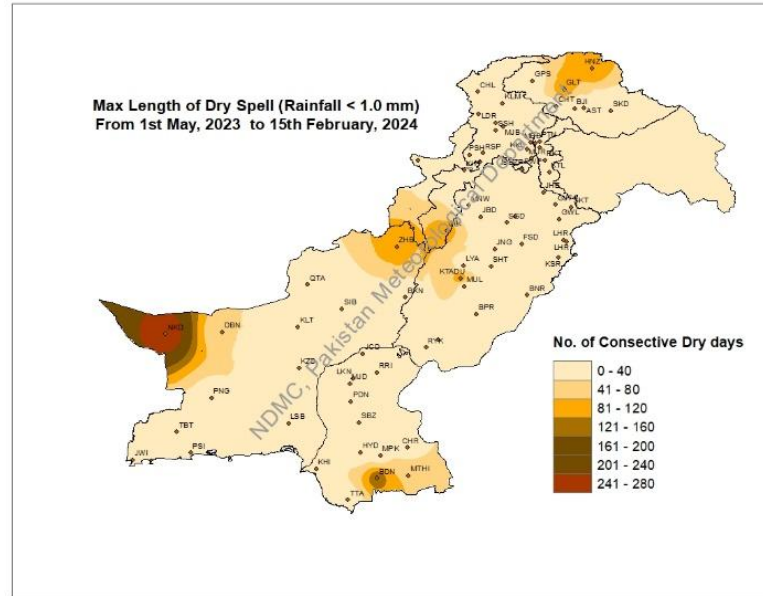
Percentage Departure of Rainfall (mm)
First Fortnightly of February, 2024



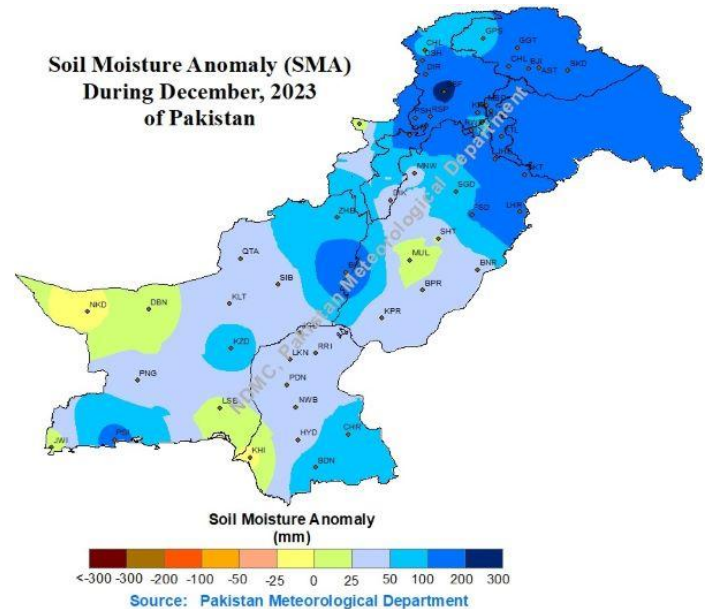
Pakistan Meteorological Department
Spatial distribution of Normal rainfall (mm)
for the month of February



Rainfall Based drought Indices



NOTE: CPA has been calculated since July, 2022



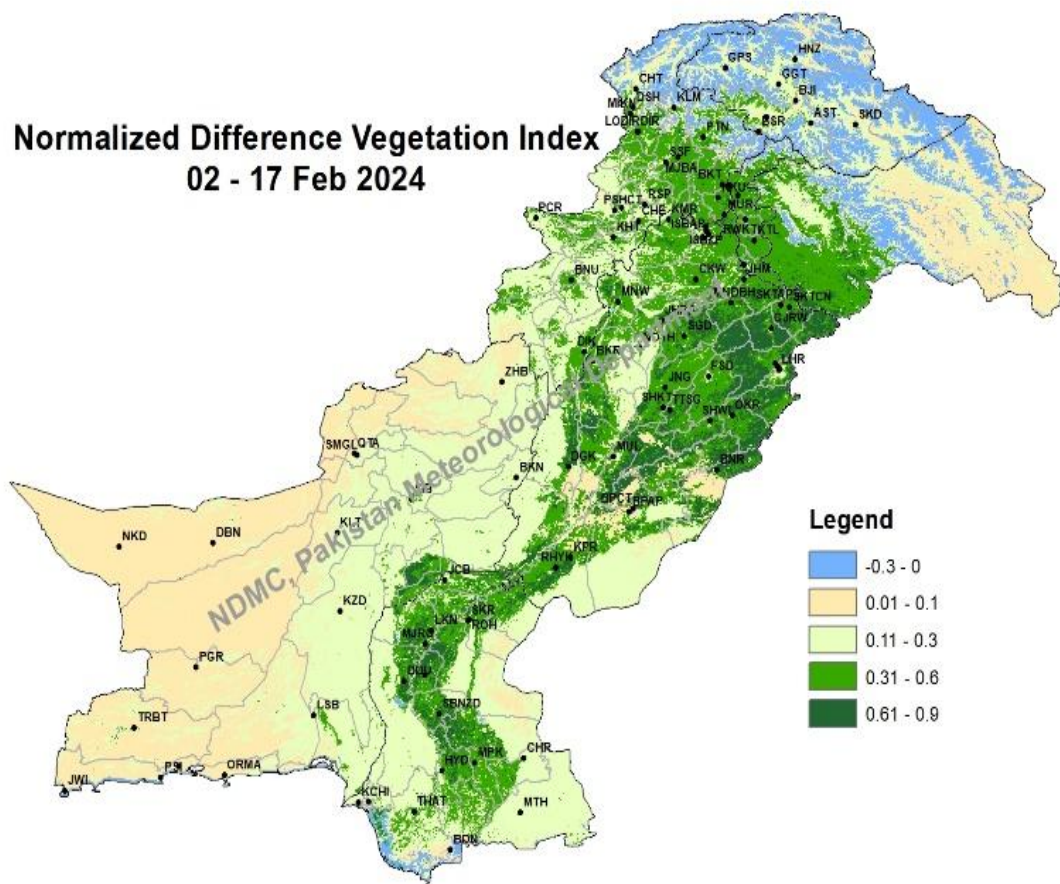


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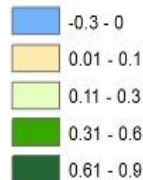
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[HOME](#) [ABOUT NDMC](#) [PRODUCTS](#) [DROUGHT](#) [DAM RESERVOIRS](#) [MEDIA LINKS](#) [WORKSHOP](#) [USEFUL LINKS](#) [CONTACT](#)

Normalized Difference Vegetation Index 02 - 17 Feb 2024



Legend



SATELLITE INDICES

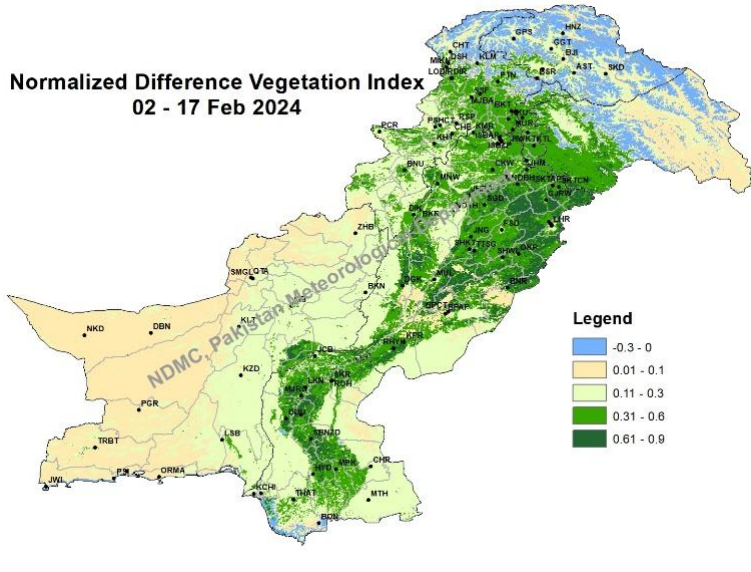
[LAND SURFACE TEMPERATURE](#)

[NORMLIZED DIFFERENCE VEGETATION INDEX](#)

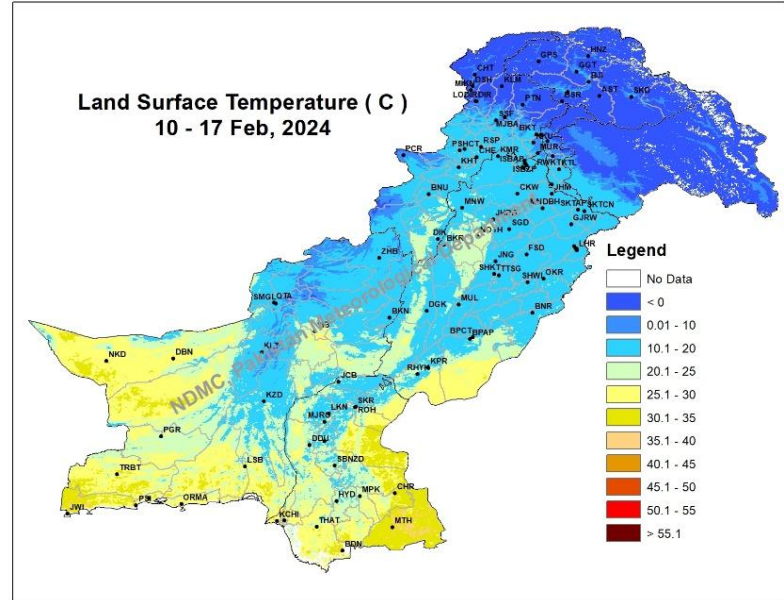
[TEMPERATURE VEGETATION DRYNESS INDEX](#)

Satellite data Based drought Indices

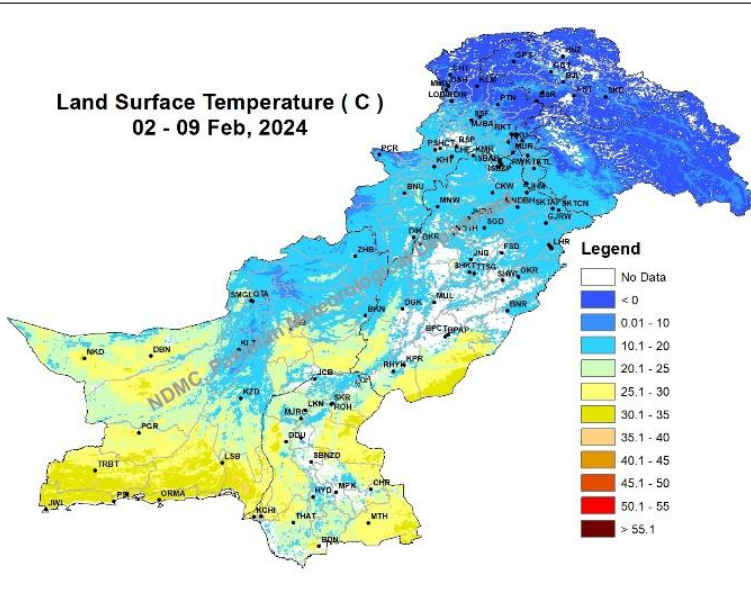
Normalized Difference Vegetation Index
02 - 17 Feb 2024



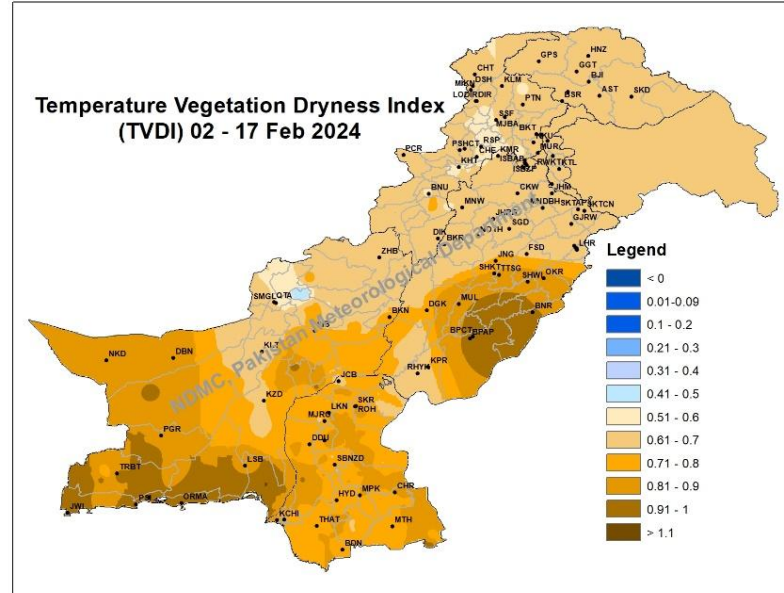
Land Surface Temperature (C)
10 - 17 Feb, 2024



Land Surface Temperature (C)
02 - 09 Feb, 2024



Temperature Vegetation Dryness Index
(TVDI) 02 - 17 Feb 2024



Agricultural Stress Index System is based on the Vegetation Health Index (VHI) (Kogan et al. 1995)

Vegetation condition index (VCI)

$$VCI_i = \frac{NDVI_i - NDVI_{min}}{NDVI_{max} - NDVI_{min}}$$

Temperature condition index (TCI)

$$TCI_i = \frac{BT_{max} - BT_i}{BT_{max} - BT_{min}}$$

Vegetation Health Index (VHI)

$$VHI = a * VCI + (1-a) * TCI$$

low VHI



high VHI



Crops are highly sensitive to climatic conditions. When the temperature and / or precipitation regime are not normal, crops adjust their photosynthetic activity. Photosynthesis is the main phenomenon that drives crop development. The continuous observation of the photosynthesis level and biomass production helps monitor crop evolution throughout the whole season.

The Vegetation Health Index, also called the Vegetation-Temperature Index, is based on a combination of Vegetation Condition Index (VCI) and Temperature Condition Index (TCI). It is effective enough to be used as proxy data for monitoring vegetation health, drought, moisture, thermal condition, etc.

Source:

http://www.star.nesdis.noaa.gov/smcd/emb/vci/VH/vh_4km.php



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Pakistan Meteorological Department

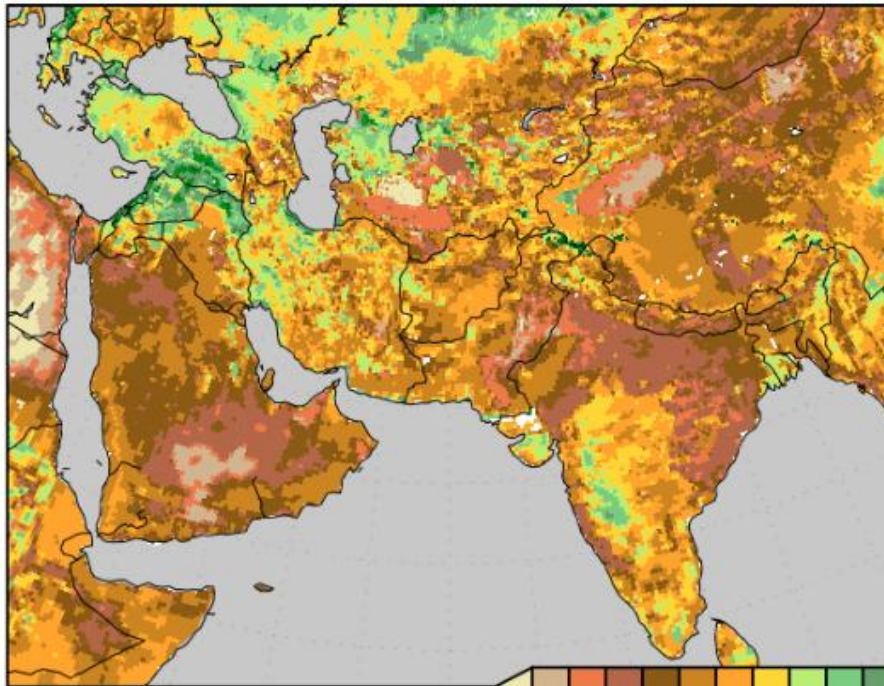
[HOME](#) [ABOUT NDMC](#) [PRODUCTS](#) [DROUGHT](#) [DAM RESERVOIRS](#) [MEDIA LINKS](#) [WORKSHOP](#) [USEFUL LINKS](#) [CONTACT](#)

(Soil Moisture Outlook)

Initial Soil Moisture

Liquid Water in top 2 meters of soil

Valid time: Fri, 16 FEB 2024 at 00Z



[DROUGHT MONITOR](#)

[PRECIPITATION](#)

[STANDARDIZED PRECIPITATION INDEX](#)

[SOIL MOISTURE OUTLOOK](#)

[RAIN PERCENTAGE ANOMALY CHANGE](#)

[PERCENTAGE DEPARTURE OF RAINFALL](#)

[CUMULATIVE PRECIPITATION ANOMALY](#)

[SOIL MOISTURE ANOMALY](#)

[WATER AVAILABILITY FORECAST](#)

[RAINFALL ANALYSIS](#)

[LENGTH OF DRY PERIOD](#)

[DROUGHT HAZARD MAP](#)



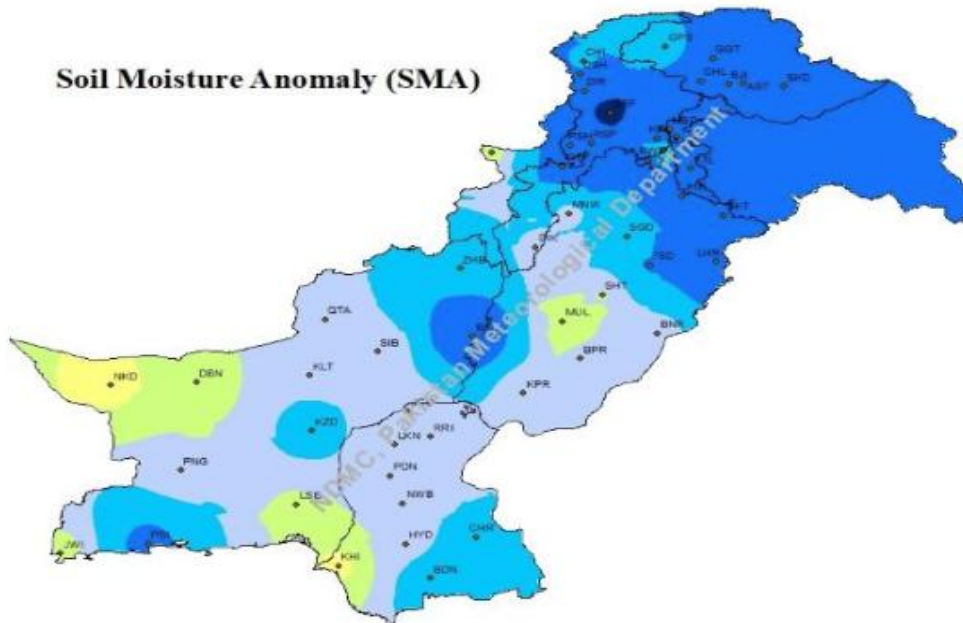
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Pakistan Meteorological Department

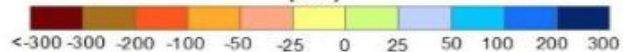
[HOME](#) [ABOUT NDMC](#) [PRODUCTS](#) [DROUGHT](#) [DAM RESERVOIRS](#) [MEDIA LINKS](#) [WORKSHOP](#) [USEFUL LINKS](#) [CONTACT](#)

(Soil Moisture Anomaly)

Soil Moisture Anomaly (SMA)



Soil Moisture Anomaly (mm)



Source: Pakistan Meteorological Department

Last Updated: 5 January, 2024 10:07 AM

[DROUGHT MONITOR](#)

[PRECIPITATION](#)

[STANDARDIZED PRECIPITATION INDEX](#)

[SOIL MOISTURE OUTLOOK](#)

[RAIN PERCENTAGE ANOMALY CHANGE](#)

[PERCENTAGE DEPARTURE OF RAINFALL](#)

[CUMULATIVE PRECIPITATION ANOMALY](#)

[SOIL MOISTURE ANOMALY](#)

[WATER AVAILABILITY FORECAST](#)

[RAINFALL ANALYSIS](#)

[LENGTH OF DRY PERIOD](#)

[DROUGHT HAZARD MAP](#)

[DROUGHT FREQUENCY MAP](#)

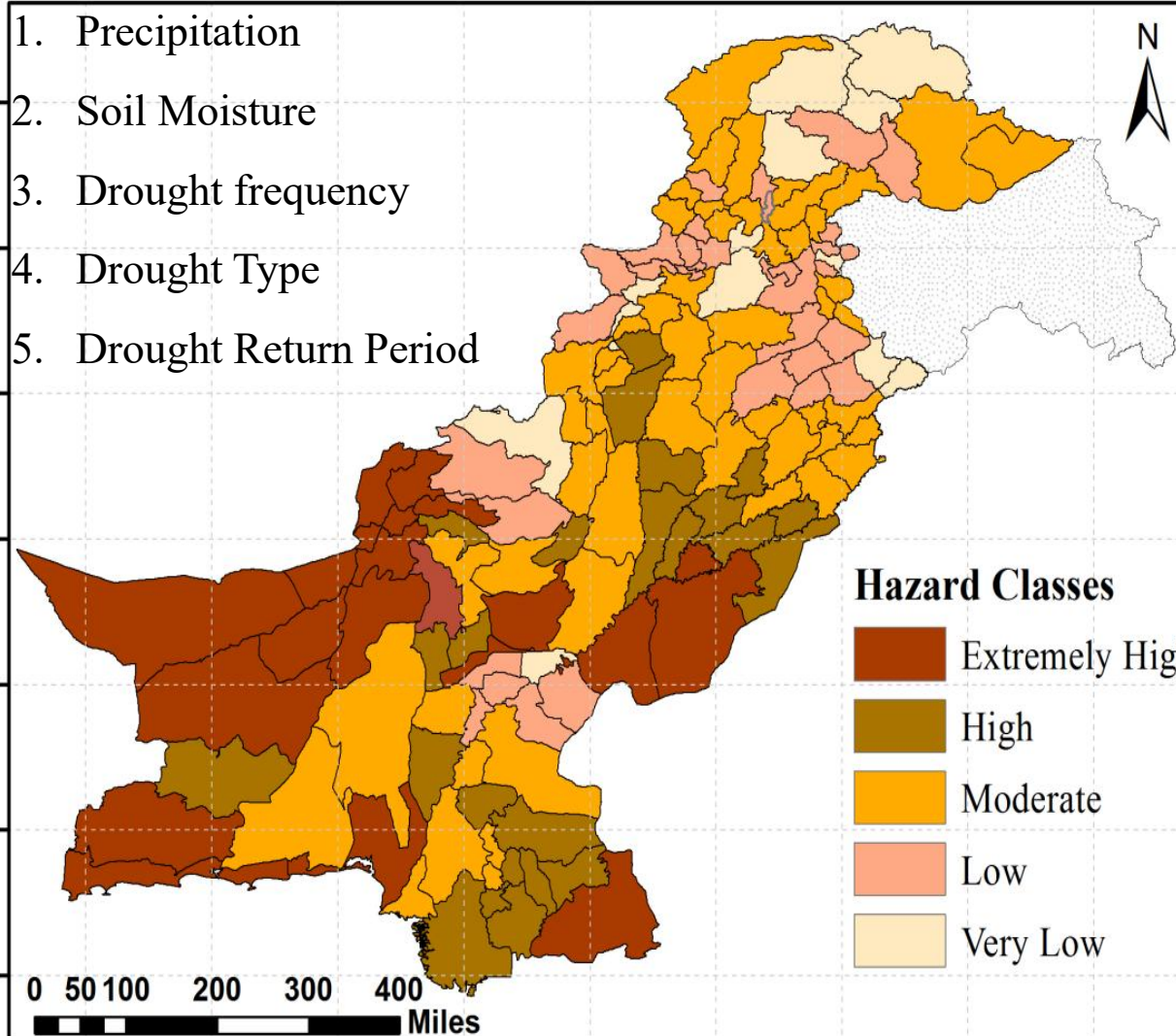


District Drought Hazard Map of Pakistan

Extremely high
vulnerable

Name	Total Districts	Extremly High	High	Moderate	Low	Very Low
Balochistan	30	15	5	7	1	1

Parameters Used	1	2	3	4	5
1. Precipitation	1	1	1	1	1
2. Soil Moisture	1	1	1	1	1
3. Drought frequency	1	1	1	1	1
4. Drought Type	1	1	1	1	1
5. Drought Return Period	1	1	1	1	1



Hazard Classes

- Extremely High
- High
- Moderate
- Low
- Very Low

S.No.	District
1	Barkhan
2	Chagi
3	Dera B
4	Gawadar
5	Harnai
6	Jaffarat
7	Jhal Ma
8	Kech
9	Kharan
10	Lasbell

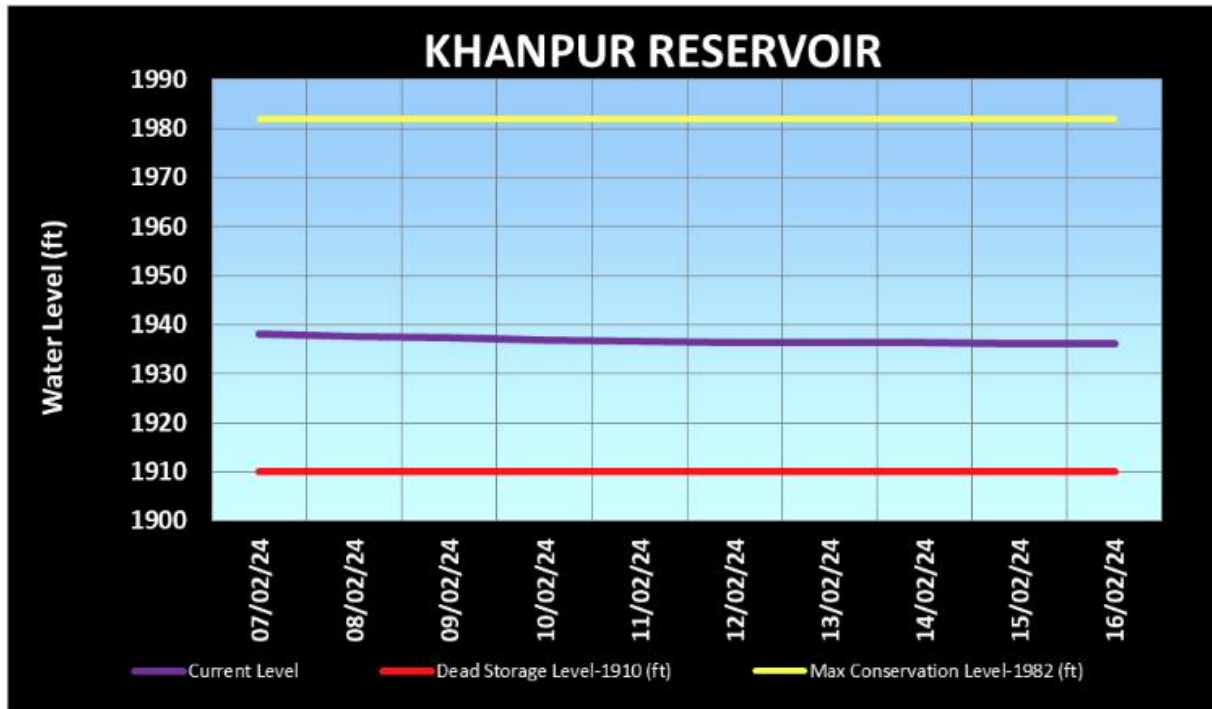
No.	District Name
1	Sindh
2	Tharparkar
3	Balochistan
4	Chagf
5	Dera Bugti
6	Gawadar
7	Jaffarabad
8	Kech
9	Khyber
10	Pakhtunkhwa
11	Mastung
12	Dikhan
13	Mushkan
14	Pakki Marwat
15	Pishin
16	Qalat
17	Qilla Abdullah
18	Quetta
19	Washuk
20	Ziarat
21	Punjab
22	Bahawalpur
23	Lodharn
24	RYKhan



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Pakistan Meteorological Department

- HOME
- ABOUT NDMC ▾
- PRODUCTS ▾
- DROUGHT ▾
- DAM RESERVOIRS ▾
- MEDIA LINKS
- WORKSHOP
- USEFUL LINKS ▾
- CONTACT



RESERVOIRS

KHANPUR

SIMLY

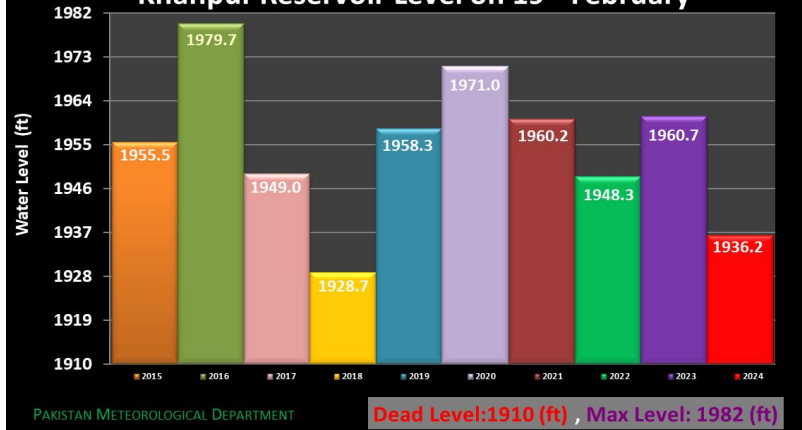
RAWAL

TARBELA

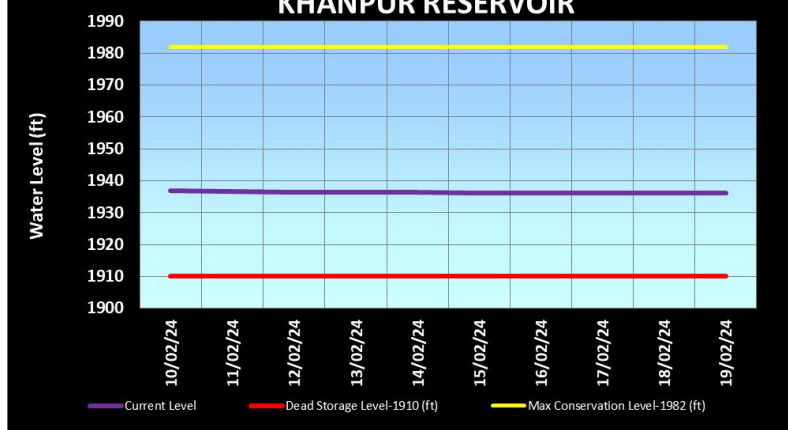
MANGLA

Last Updated: 16 February, 2024 09:07 AM

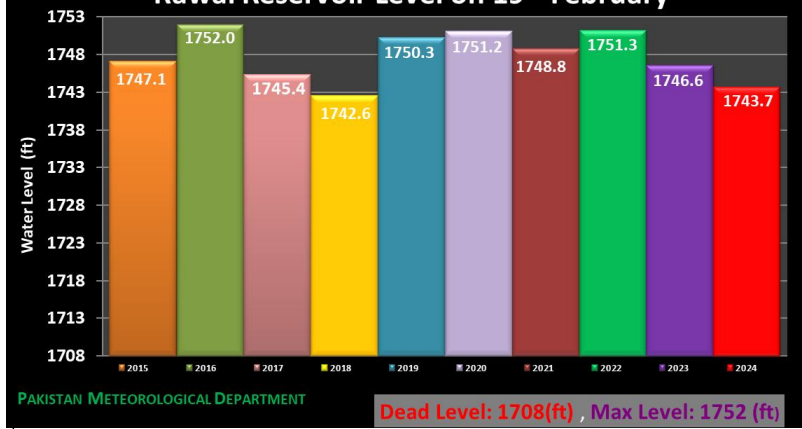
Khanpur Reservoir Level on 19th February



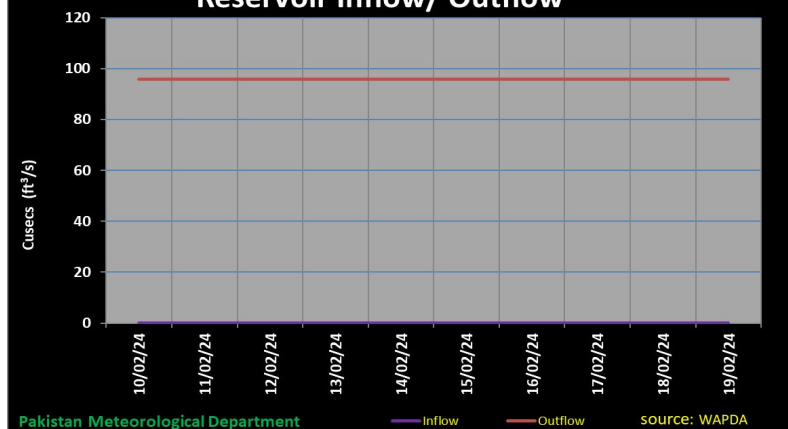
KHANPUR RESERVOIR



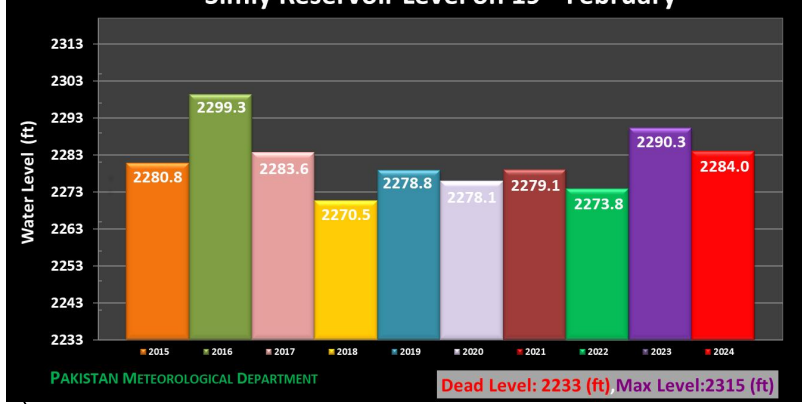
Rawal Reservoir Level on 19th February



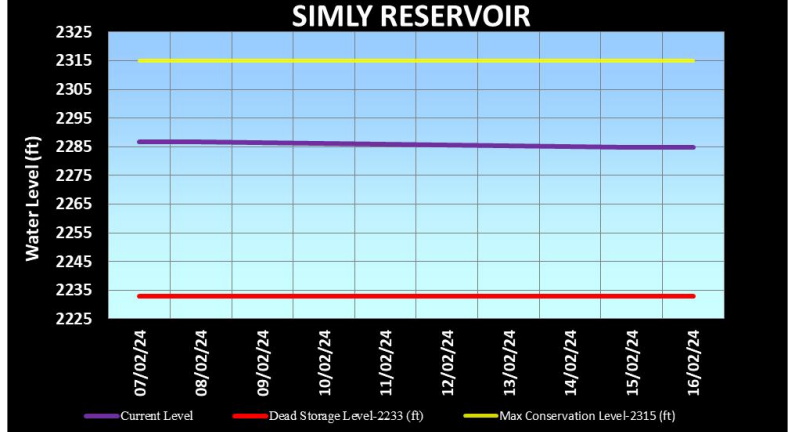
Reservoir Inflow/ Outflow



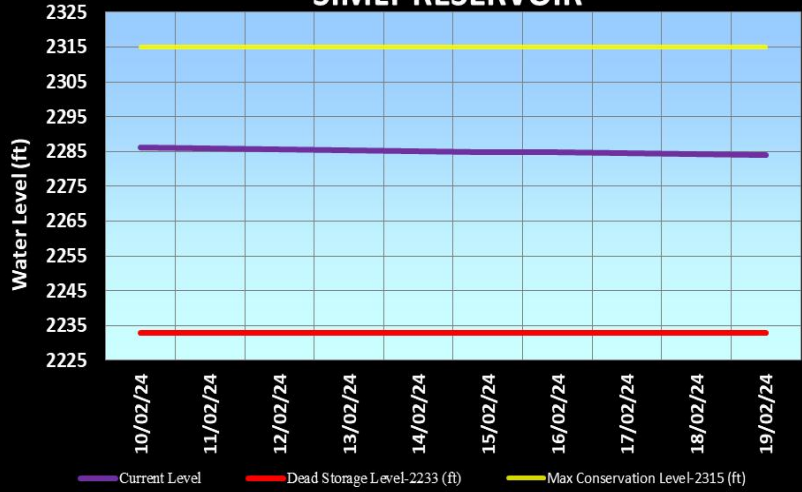
Simly Reservoir Level on 19th February



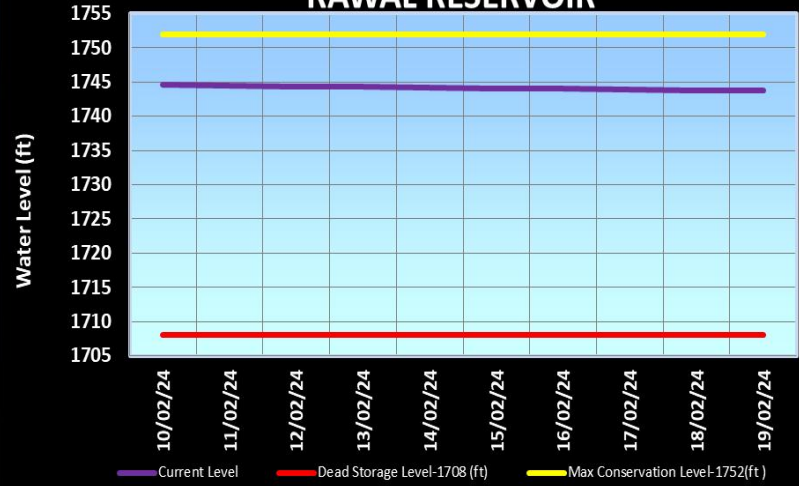
SIMLY RESERVOIR



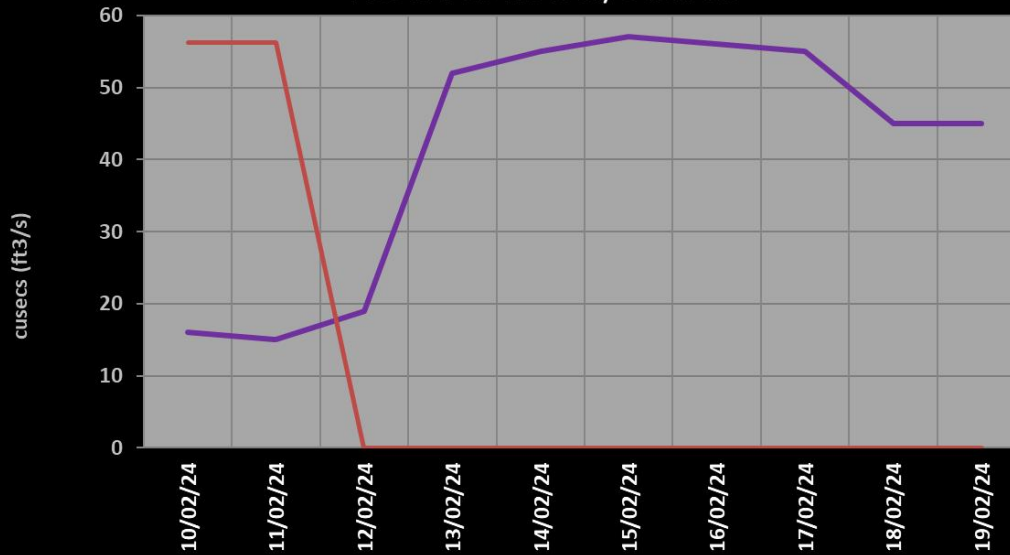
SIMLY RESERVOIR



RAWAL RESERVOIR

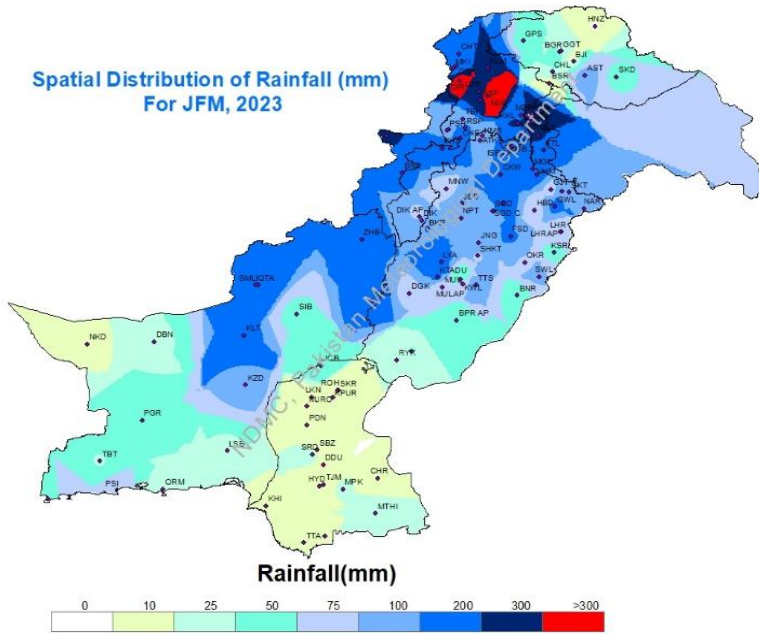


Reservoir Inflow/Outflow

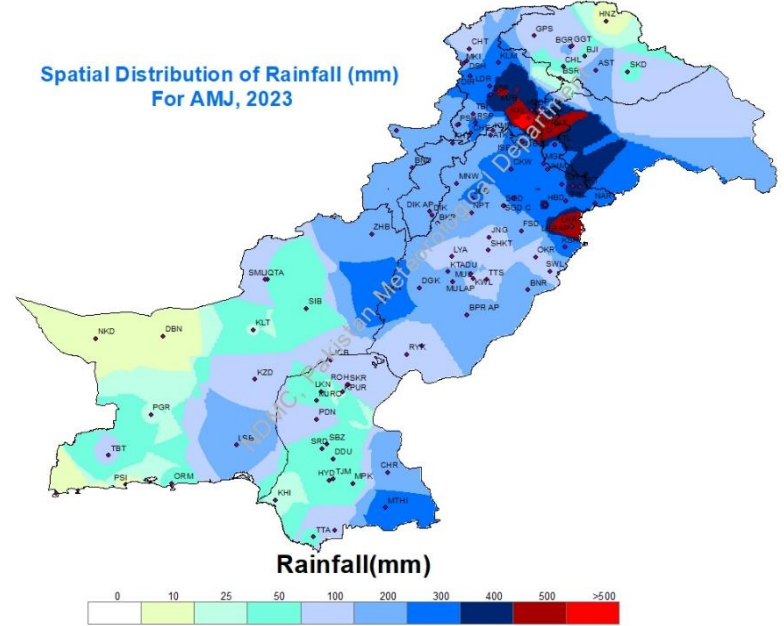


Seasonal Analysis Products

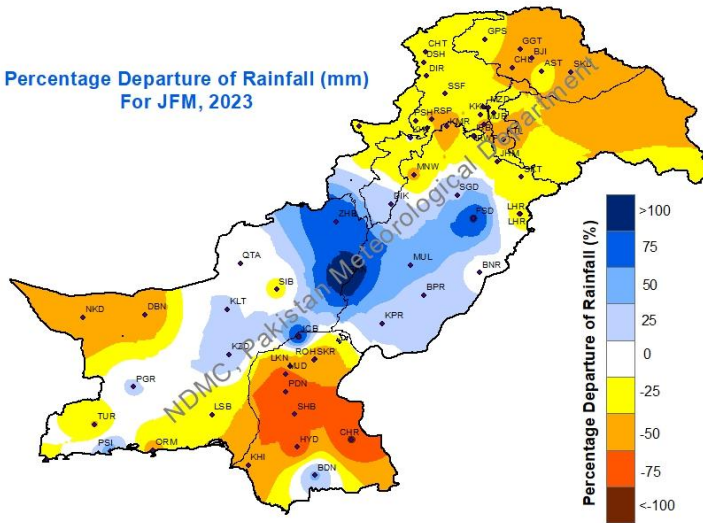
**Spatial Distribution of Rainfall (mm)
For JFM, 2023**



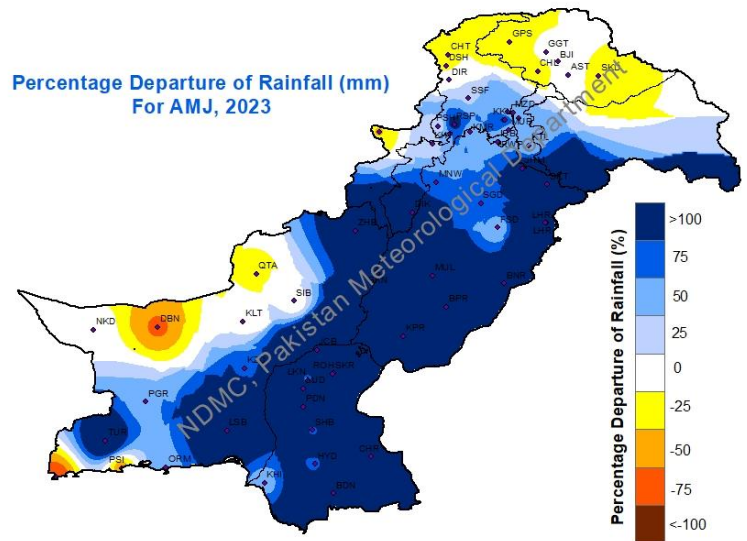
**Spatial Distribution of Rainfall (mm)
For AMJ, 2023**



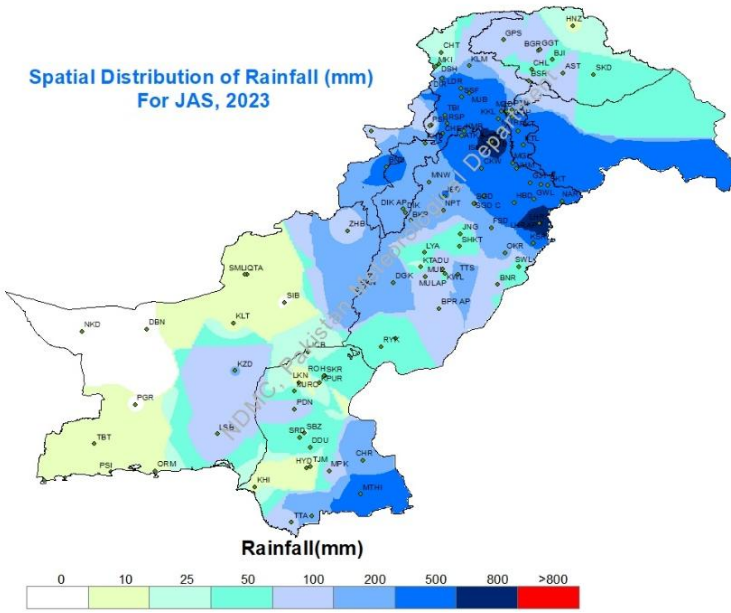
**Percentage Departure of Rainfall (mm)
For JFM, 2023**



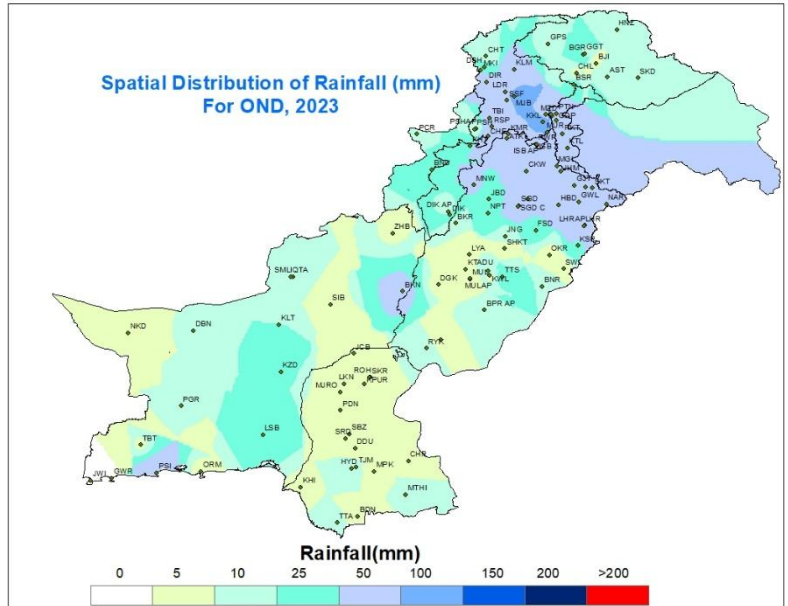
**Percentage Departure of Rainfall (mm)
For AMJ, 2023**



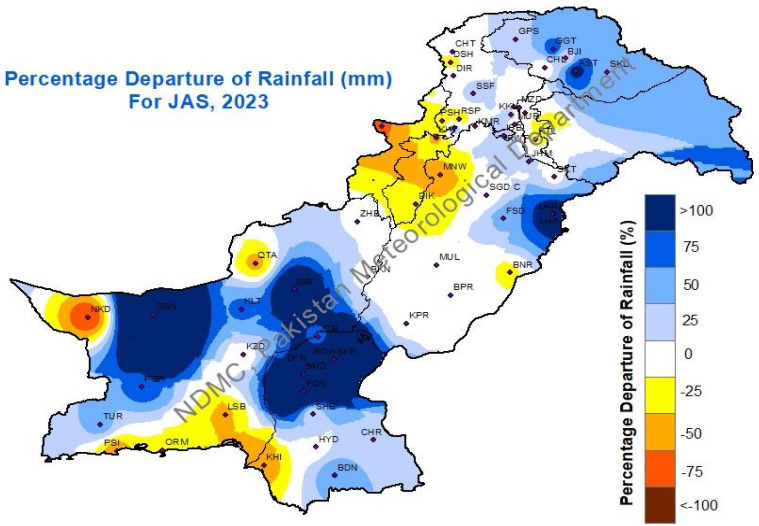
Spatial Distribution of Rainfall (mm)
For JAS, 2023



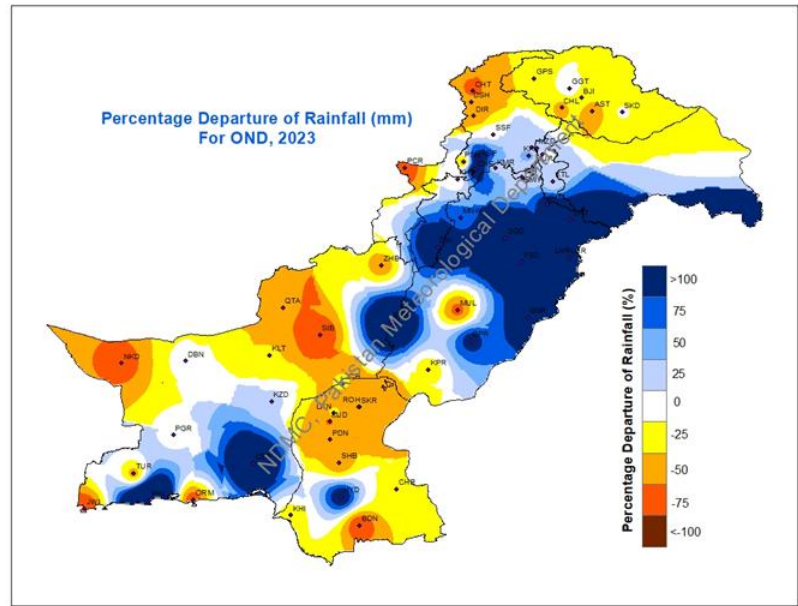
Spatial Distribution of Rainfall (mm)
For OND, 2023



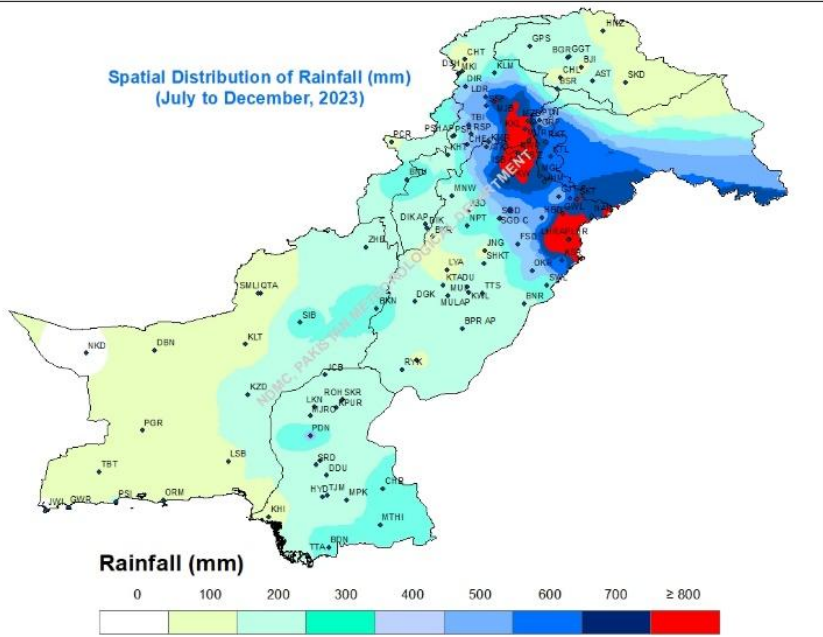
Percentage Departure of Rainfall (mm)
For JAS, 2023



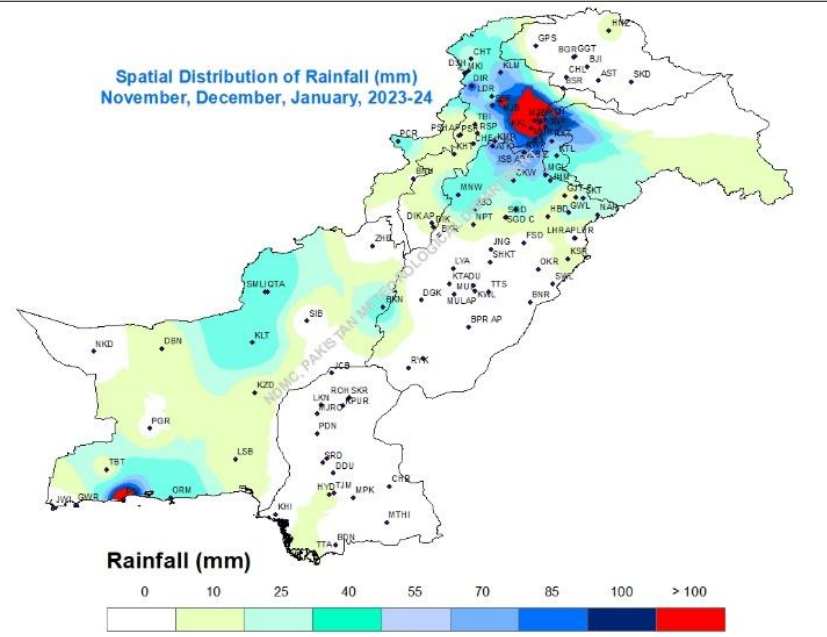
Percentage Departure of Rainfall (mm)
For OND, 2023



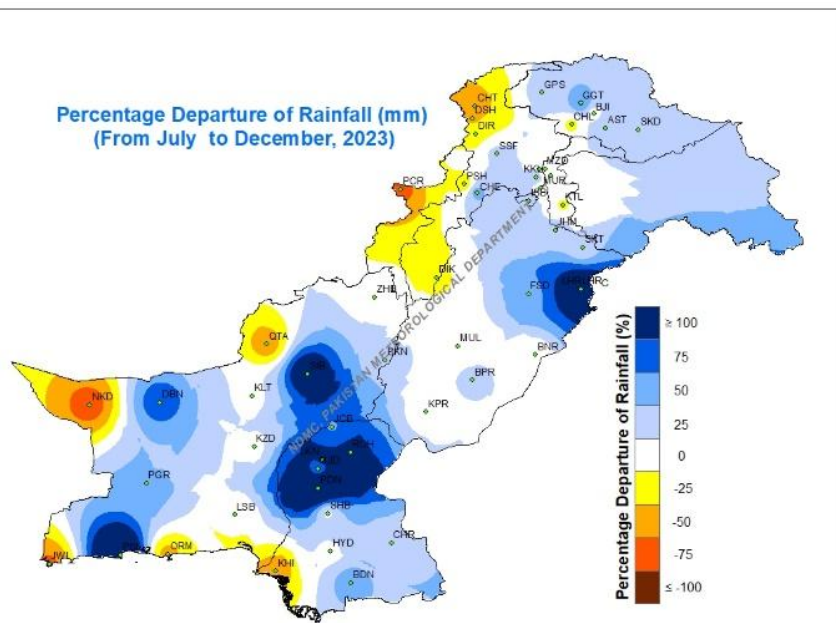
Spatial Distribution of Rainfall (mm)
(July to December, 2023)



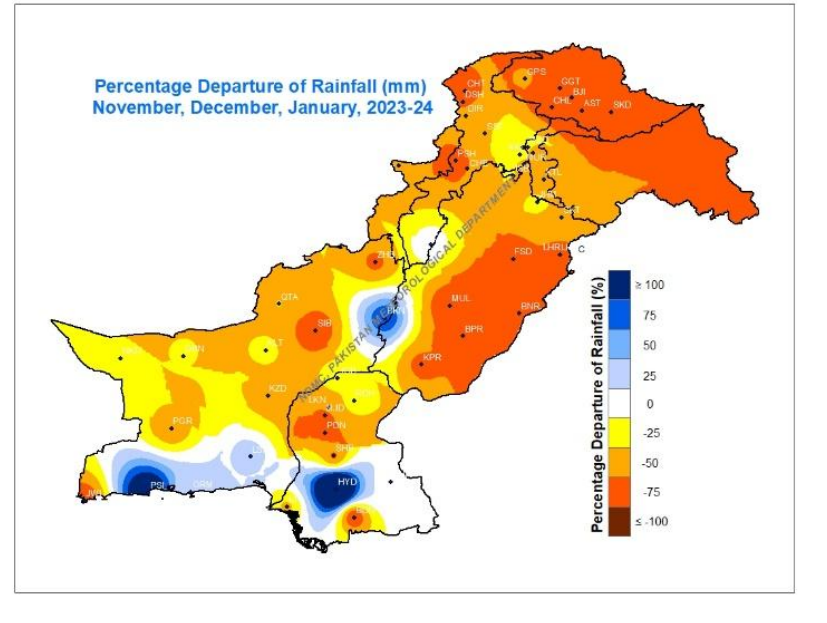
Spatial Distribution of Rainfall (mm)
November, December, January, 2023-24



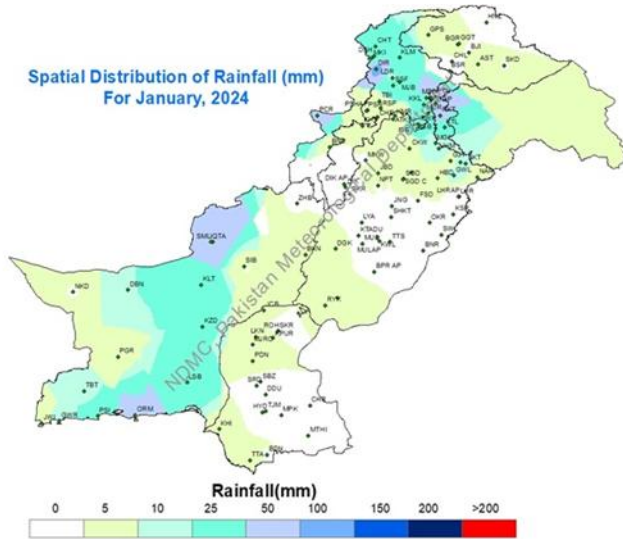
Percentage Departure of Rainfall (mm)
(From July to December, 2023)



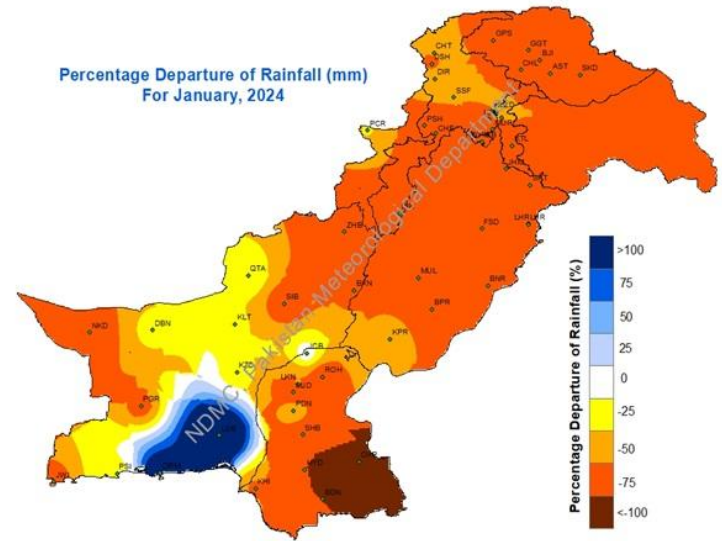
Percentage Departure of Rainfall (mm)
November, December, January, 2023-24



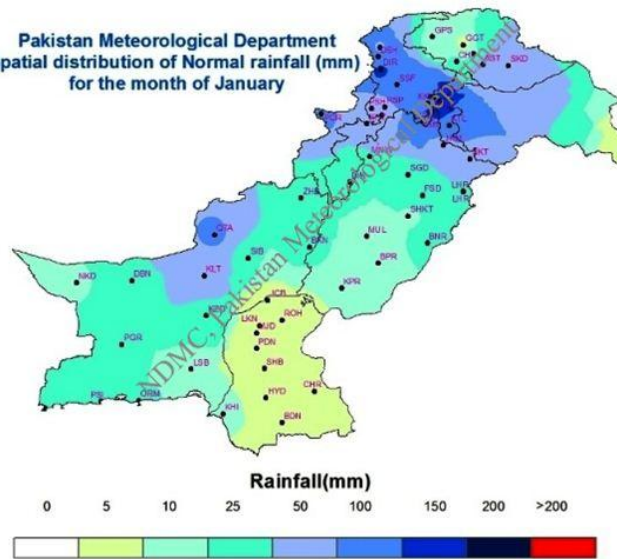
Spatial Distribution of Rainfall (mm)
For January, 2024



Percentage Departure of Rainfall (mm)
For January, 2024

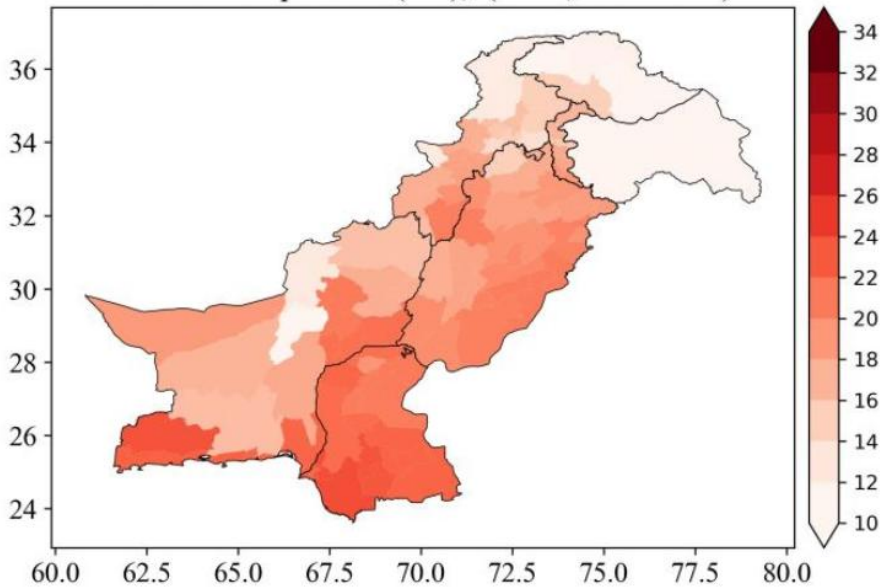


Pakistan Meteorological Department
Spatial distribution of Normal rainfall (mm)
for the month of January



Multi Model Ensemble Monthly/Seasonal Temperature Forecast (Oct Nov Dec) 2023

Normal Temperature (° C), (OND, 1991-2020)



Temperature (° C) Anomaly Outlook OND-2023

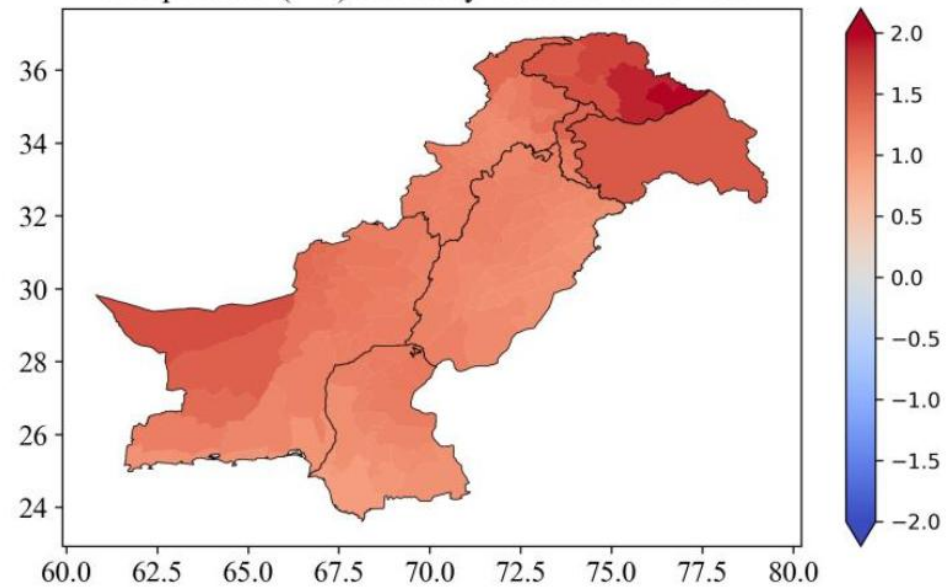


Figure 2: Normal (1991-2020) temperature and monthly anomaly outlook for OND 2023

Multi Model Ensemble Monthly/Seasonal Temperature Forecast (Feb mar Apr) 2024

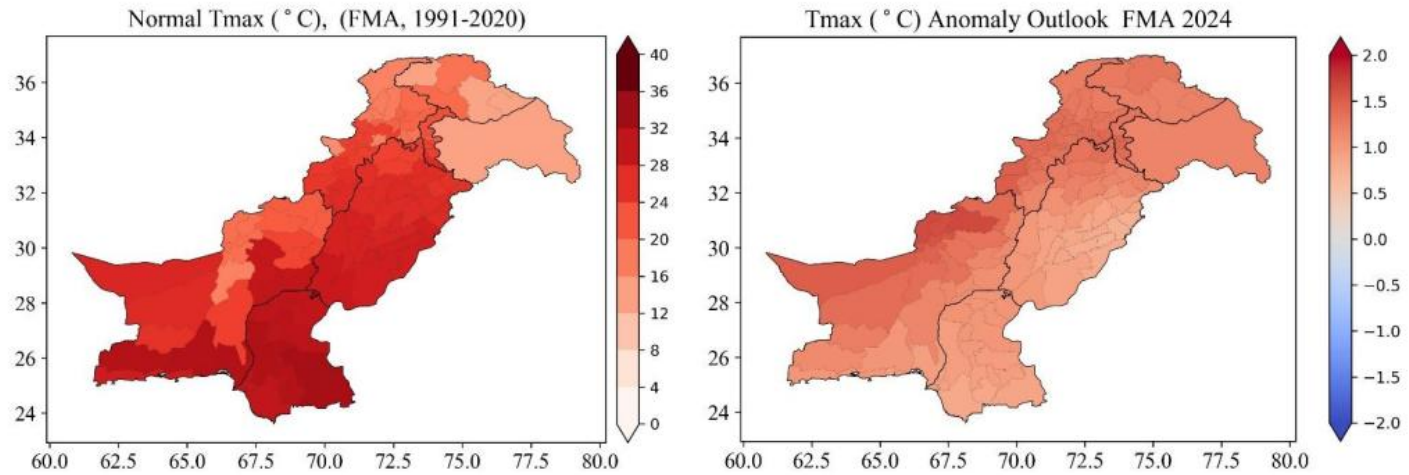


Figure 2: Normal (1991-2020) maximum temperature and monthly anomaly outlook for FMA 2024

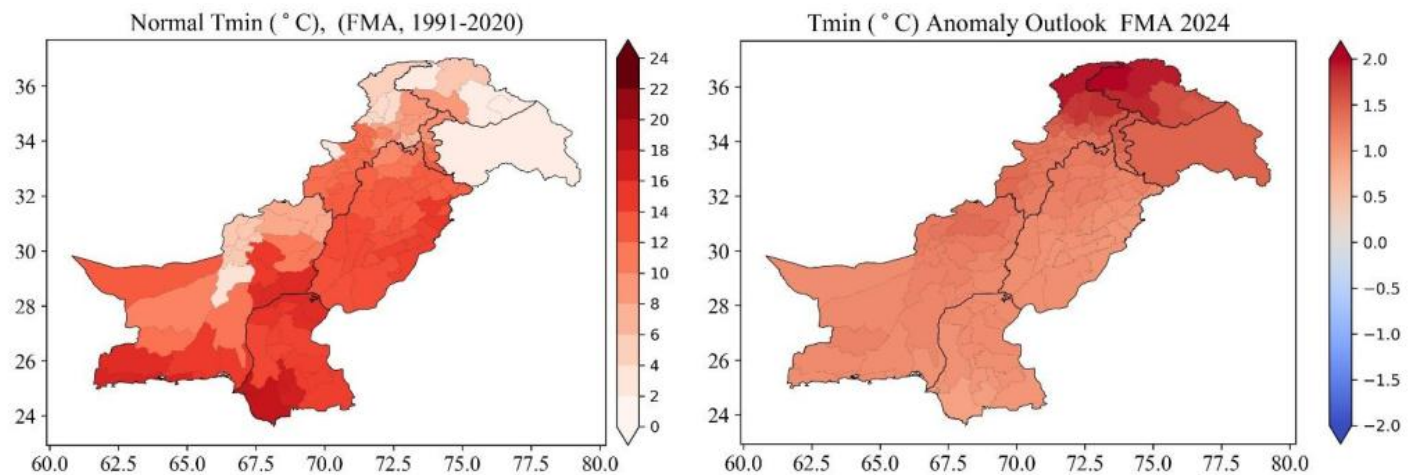


Figure 3: Normal (1991-2020) minimum temperature and monthly anomaly outlook for FMA 2024

Multi Model Ensemble Monthly/Seasonal Precipitation Forecast (Oct Nov Dec) 2023

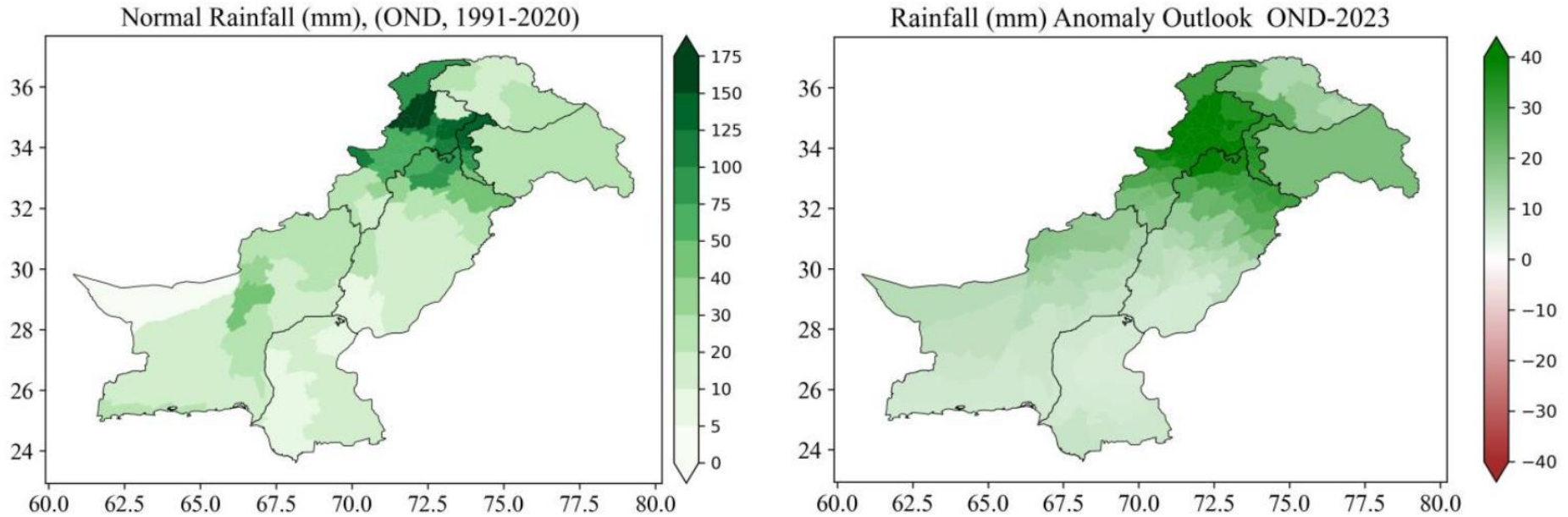
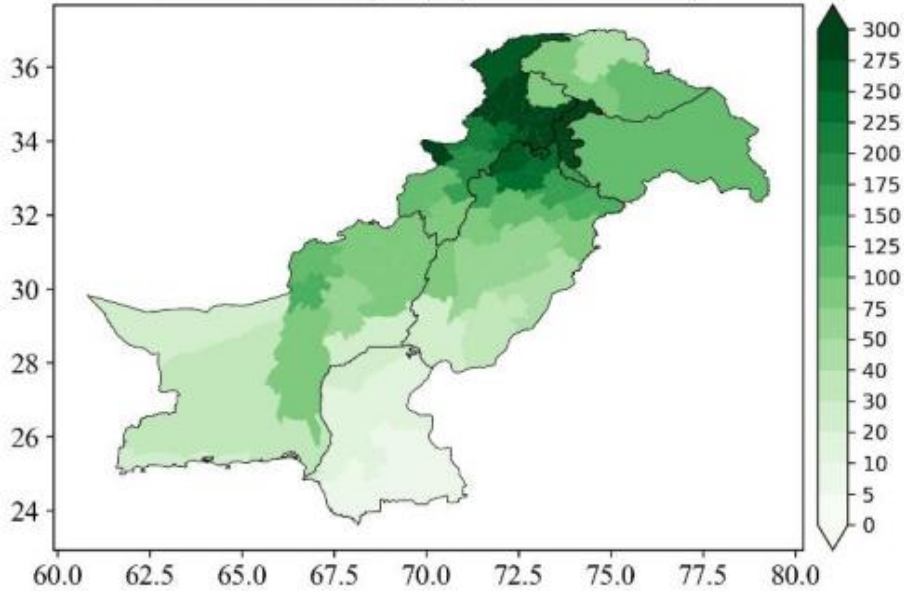


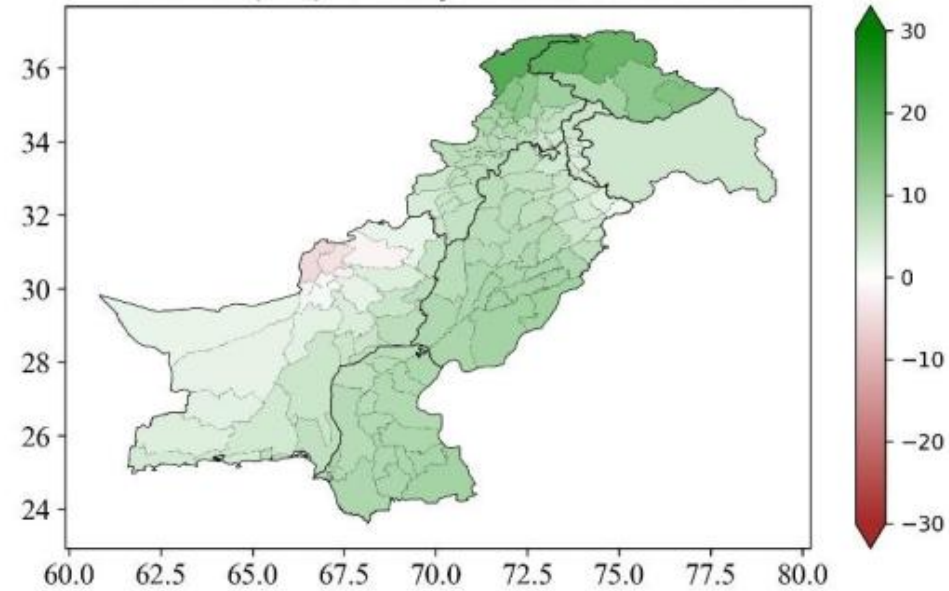
Figure 1: Normal (1991-2020) rainfall and monthly anomaly outlook for OND 2023

Multi Model Ensemble Monthly/Seasonal Precipitation Forecast (Feb Mar Apr) 2024

Normal Rainfall (mm), (FMA, 1991-2020)



Rainfall (mm) Anomaly Outlook FMA-2024



Seasonal Outlook (Feb, Mar, Apr), 2024

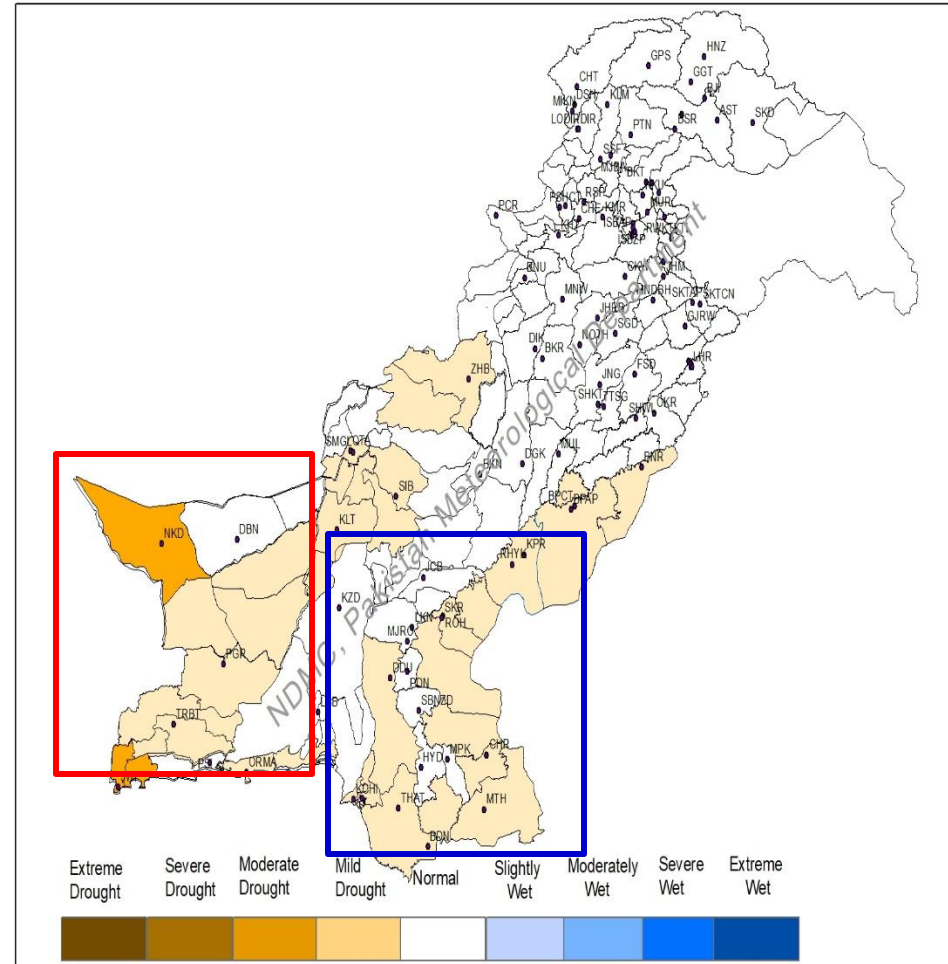
- Most parts of the country are likely to receive normal rainfall, with northern areas possibly receiving slightly more than normal rainfall.
- Seasonal average temperatures are expected to remain in the typical to higher-than-typical seasonal range across most of the country.
- Towards the end of the season, there is a possibility of an increase in temperature in Sindh, Balochistan and also in upper Khyber Pakhtunkhwa, Gilgit-Baltistan, Kashmir.

Drought Situation outlook(Feb Mar Apr,2024)

- Due to normal rainfall and above normal temperature

Impact

- Keeping in view the seasonal Temperature and Climate Outlook, A Flash drought conditions may emerged at some isolated placed of Pakistan especially Sindh (Tharparkar, Umerkot, Sanghar etc), South Balochistan (Nokundi, Jiwani, Turbat and in South Punjab (Cholistan) region.
- Conditions may get more dry in SW Balochistan .



NDMC is continuously monitoring the drought situation. Updates are being issued regularly

3/4/2024

Drought Information for stakeholders

FORTNIGHTLY DROUGHT WATCH BULLETIN

(1-15 February, 2024)

1. Weather Summary for the 1st fortnight of Feb 2024

During the first fortnight of February 2024, Light to moderate rainfall reported from isolated stations across Pakistan. Spatial distribution of the rainfall is shown in Figure No.1. The chief amounts of rainfall recorded across Pakistan during the period 1-15 February, 2024 are shown in Table-1 below;

Sr.No.	Station	Rainfall(mm)	Sr.No.	Station	Rainfall(mm)
1	TURBAT	69.11	6	PATTAN	47
2	KARACHI A/P	60.62	7	KAKUL	46
3	MUZAFFARABAD AIRPORT	54.3	8	MUZAFFARABAD CITY	38.4
4	BALAKOT	51	9	LASBELA	38
5	RAWALAKOT	47.01	10	ISLAMABAD ZEROPOINT	37.6

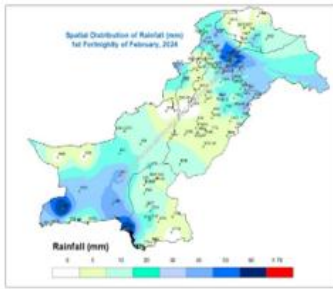


Figure 1: Rainfall distribution of Pakistan during First fortnight of Feb-2024

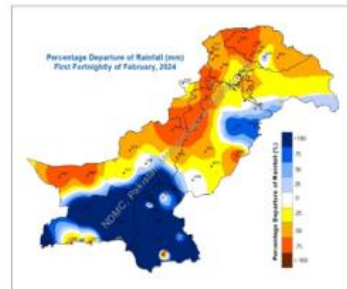


Figure 2: Rainfall Departure from Normal during First fortnight of Feb-2024

Figure 2 depicts the Percentage Departure of rainfall from normal during first fortnight. Most parts of Punjab, Khyber Paktunkhawa, Rawalpindi / Islamabad, AJK and GB receive below normal rainfall as shown in figure2 during the fortnight while rest of the areas in south receive normal to above normal rainfall as shown in figure blue. Farmers are advised to keep themselves abreast of weather updates and plan field activities accordingly to minimize weather induced losses to matured/cultivated crops.

Pakistan Meteorological Department



Highlights

- During the month of January 2024, Light to moderate rainfall events were reported in the country where as some of the areas in Balochistan, Sindh, Punjab and KP received trace to zero rainfall during the month.
- Less to No Precipitation over some of the areas of Balochistan, Sindh and Cholistan region in Punjab province have raised the moisture stressed conditions in previously moisture stressed areas over there.
- During the month of February 2024, overall near normal rainfall is expected in most parts of the country. Temperatures are forecasted to remain slightly above normal nationwide.
- Moderate Drought conditions may observed in Nokundi, Jiwani, Gawadar, Ormara, Bolan, Sibbi while Mild Drought conditions may observed in Kharan, Kech, Turbat, Killa Saifullah, Quetta, Zhob districts and coastal areas of Balochistan. In Sindh, Dadu, Tharparkar, Umerkot, Sanghar, Khairpur, Ghotki, Thatta, Badin, Sajawal and Karachi districts while cholistan in Punjab Mild Drought conditions may be observed.
- Keeping in view the weather forecast for the month of January 2024, disaster management authorities are requested to plan DRM activities accordingly.

National Drought Monitoring Centre (NDMC)

Headquarters Office, Sector H-8/2, Islamabad

Tel : + (92-51) 9250598, Fax: + (92-51) 9250368, URL: <http://www.pmd.gov.pk>

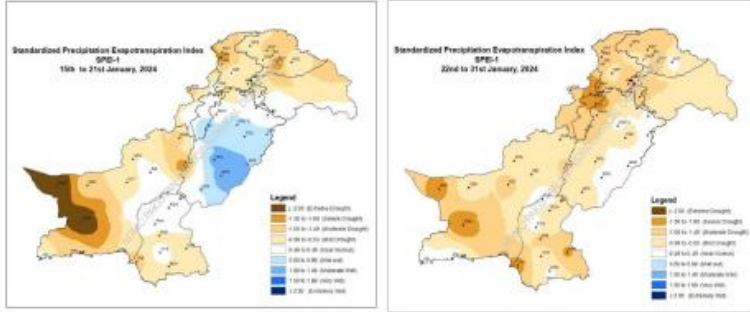
1



ہفتہ وار خشک سالی کی اطلاع

Dated: 02nd February, 2024

گزشتہ ہفتے کے دوران ملک کے چند مقامات پر بارش رکارڈ ہوئی۔ جس کا خشک سالی کی موجودہ صورتحال پر زیادہ اثر نہیں ہوا جس کو خشک سالی کی مدد سے نیچے ظاہر کیا گیا ہے اس وقت پاکستان میں مجموعی طور پر موسم یکے درہے کے ساتھ خشک ہے۔



پیش گوئی کا دورانیہ: 2 تا 8 فروری 2024

- 2 سے 3 فروری تک بلوچستان، سندھ، جنوبی پنجاب، خیبر پختونخوا، گلگت بلتستان اور کشمیر میں بارش۔ آمدنی آگرن پک (پہاڑوں پر برف پڑی) متوقع ہے۔ بلوچستان میں موسم سرد اور خشک رہنے کا امکان ہے۔
- 4 فروری کو پانڈی خیبر پختونخوا، گلگت بلتستان، کشمیر، خطہ پوٹوہار، شمال مشرقی پنجاب، سرری اور گلگت میں بارش (پہاڑوں پر برف) کا امکان ہے۔ ملک کے دیگر علاقوں میں موسم سرد اور خشک رہنے کا امکان ہے۔
- 5 فروری کو ملک کے بیشتر حصوں میں بنیادی طور پر سرد اور خشک موسم کی توقع ہے۔ جب کہ گلگت بلتستان اور کشمیر میں مطلع جزوی طور پر آبدار ہے۔
- 6 سے 8 فروری تک ملک کے بیشتر حصوں میں بنیادی طور پر سرد اور خشک موسم کی توقع ہے۔

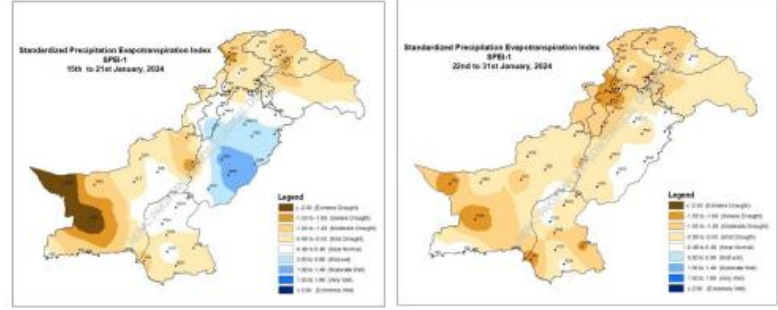
نوٹ: یہ ہفتہ وار پیش گوئی جولین دنوں کے مطابق شائع ہوتا ہے۔



Dated: 02nd February, 2024

Weekly Drought Information

During the last week, the rain occurred in some places of the country. Which has not had much impact on the current drought situation which is shown below with the help of maps. At present, overall climate in Pakistan is dry with mild degree.



Duration of Forecast: 2nd to 8th February, 2024

- From 2nd to 3rd February rain-wind/thunderstorm (snowfall over mountain) is expected in Balochistan, Sindh, south Punjab, Khyber Pakhtunkhwa Gilgit Baltistan and Kashmir. Isolated heavy falls/snowfall is likely in Balochistan.
- On 4th February rain (snow over hills) is likely in upper upper Kyber-Pakhtunkhwa, Gilgit-Baltistan, Kashmir, Pothohar region, northeast Punjab, Muree and Galiyat. Cold and dry weather is expected in other parts of the country.
- On 5th February Mainly Cold and dry weather is expected in most parts of the country. while partly cloudy in Gilgit-Baltistan and Kashmir.
- From 6th to 8th February Mainly Cold and dry weather is expected in most parts of the country.

Note: This weekly bulletin is published according to Julian days.



No.DR-5/DRT/ADV/ALERT/2021-22

Islamabad, 09th January, 2024

SUBJECT: DROUGHT ADVISORY-I

Overall, below-normal rainfall (-36.79%) has been received across the country from August 1st, 2023 to December 31st, 2023. Sindh and Balochistan have experienced the main anomalies, with rainfall departures of -62.08% and -47.77%, respectively. The percentage departures in rainfall for each region are as follows



Figure-1: Rainfall Departure (%) across Pakistan

2. Deficient rainfall has emerged as a mild meteorological drought condition in most areas of Sindh province: Tharparkar, Umerkot, Sanghar, Dadu, Ghotki, Sukkur, Khairpur, Thatta, Badin, Sajwal, and Karachi. In Balochistan province, mild to moderate drought-like conditions have emerged in Bolan, Gawadar, Jiwani, Kharan, Kech, Kalat, Ormara, Nokundi, Panjgur, Qilla Saif Ullah, Quetta, Sibbi and Zhob. Mild drought-like conditions have emerged in Punjab province, over Khanpur, Shorkot, Bahawalpur, Bahawalnagar, and adjacent areas as shown in figure-2.

3. Keeping in view the climatology and latest seasonal forecast of PMD, drought conditions may exacerbate in drought affected areas of Sindh and Punjab, significantly impacting agriculture and live stocks. Long persistent dry conditions may cause water stress in the cultivated lands/areas (particularly the rainfed areas) of the country due to the limited supply of irrigation water for Rabi crops, while in Balochistan province, upcoming weather and water saving techniques may give some relief in drought-affected areas.

4. It is advised to all stakeholders to take pre-emptive measures for drought prone areas. Farmers/agriculturists are advised to keep themselves updated from PMD website <http://www.pmd.gov.pk>. NDMC of Pakistan Meteorological Department (PMD), Islamabad is continuously monitoring the water availability and moisture conditions over the country.

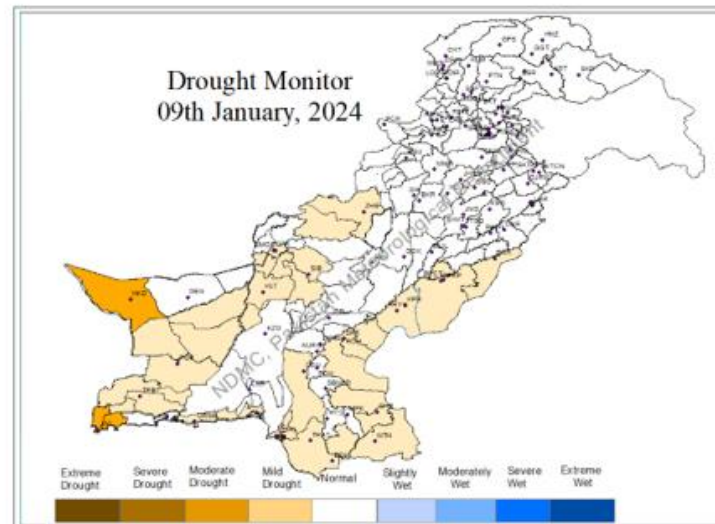


Figure-2: Drought Monitor 09th January, 2024

Distribution:-

1. Chairman, NDMA, Islamabad <chairman@ndma.gov.pk>
2. Member, DRR NDMA, mdrr@ndma.gov.pk
3. DG, PDMA, Sindh dg@pdma.gov.pk
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11. CM, NSMC, PMD Karachi, <sarfrazmet@hotmail.com>
12. CM, R&D, PMD Islamabad <dihazrafi@gmail.com>
13. CM, FFD, Lahore, <chmas64@hotmail.com>
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15. DD(Co), PMD, Islamabad <shaz_adnan@gmail.com>
16. WEB master NDMC <naveed.metio@live.com>



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Advisories / Alerts (14)

Type	Title	Month, Year	File
Advisory	Drought Advisory-I	January, 2024	Download
Alert	Dengue Alert-I	September, 2023	Download
Advisory	Drought Watch 2023	September, 2023	Download
Alert	Drought Alert-I 2022	May, 2022	Download
Alert	Cholistan report (May 2022)	May, 2022	Download
Advisory	Dams Water Level Advisory-1	August, 2021	Download
Alert	Drought Alert-II (June 2021)	June, 2021	Download
Advisory	Weekly Drought Bulletin (08 May to 16 May 2021)	May, 2021	Download
Advisory	Weekly Drought Bulletin (4-10 May,2021)	May, 2021	Download
Advisory	Weekly Drought Bulletin (27 April - 3 May, 2021)	April, 2021	Download

1

2



National Drought Monitoring & Early Warning Centre, Islamabad

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Bulletins (215)

Interval	Title	Month, Year	File
Monthly	Monthly Drought Bulletin January, 2024	January, 2024	
Weekly	Weekly Drought Bulletin 22 to 31 January, 2024	February, 2024	
Weekly	Weekly Drought Bulletin 15 to 21 January, 2024	January, 2024	
Weekly	Weekly Drought Bulletin 8 to 14 January, 2024	January, 2024	
Quarterly	Quarterly Drought Bulletin (October-December) 2023	December, 2023	
Weekly	Weekly Drought Bulletin 1 to 7 January, 2024	January, 2024	
Monthly	Monthly Drought Bulletin December, 2023	December, 2023	
Weekly	Weekly Drought Bulletin 22 to 31 December, 2023	December, 2023	
Weekly	Weekly Drought Bulletin 15 to 21 December, 2023	December, 2023	
Monthly	Monthly Drought Bulletin November, 2023	November, 2023	



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FEEL FREE TO DROP US A MESSAGE

Do you have any queries or suggestions? Please contact us about Drought using the form below.

<input type="text" value="Full NAME"/>	<input type="text" value="Contact No"/>
<input type="text" value="EMAIL"/>	<input type="text" value="SUBJECT"/>
<input type="text"/>	

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ABOUT DROUGHT

A drought is an extended period of months or years when a region notes a deficiency in its water supply. Generally, this occurs when a region receives consistently below average precipitation. Droughts can persist for several years, even a short, intense drought can cause significant damage & harm the local economy.

Early Warning, Early Action

**UNDERSTAND the Climate RISK
COMMUNICATE the Climate RISK**

THANKS

For Further details: <http://www.ndmc.pmd.gov.pk/index.htm>

or contact: National Drought Monitoring Centre,
Pakistan Meteorological Department, Islamabad
Phone No. 051-9250598; Fax No. 051-9250368