HIGHLIGHTS

Rainfall Prediction

- *Fairly heavy rainfall is predicted for the Sabaragamuwa, Western, Southern, North Western, and Central provinces. Cyclone Mocha can lead to high winds and rainfall in South-west facing mountain slopes during 12th-15th May.*

Monitored Rainfalls

- *During the last week, average daily rainfall over Sri Lanka was 13.2 mm and hydro catchment areas received 8.9 mm. The western slopes, hills and eastern hills received above-normal rainfall.*

Monitored & Predicted Wind

- *From 2nd- 8th May, up to 8 m/s of North westerly winds were at 850 mb level.*
- *During 12th- 18th May, up to 8 m/s of Easterly winds are expected at 850 mb*
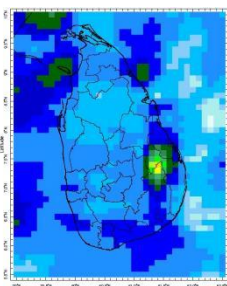- *Long-range impact of Cyclone Mocha in Central BoB(engal) will lead to high wind*
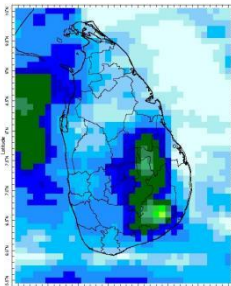
Monitored Sea & Land Temp

- *Sea surface temperature around Sri Lanka was about 0.5 - 1 degree above the seasonal norm.*
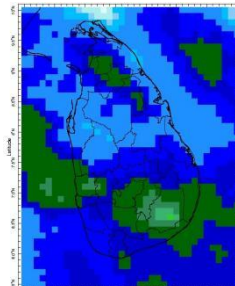- *Land surface temperature remained near normal.*

Monitoring
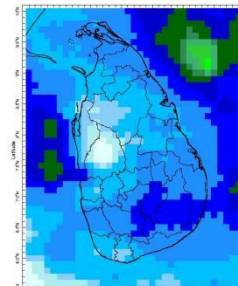### Rainfall

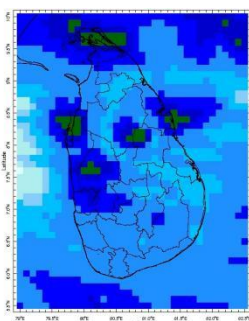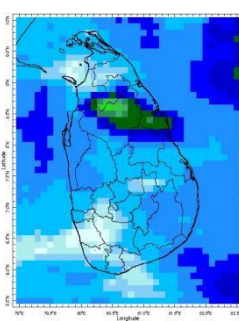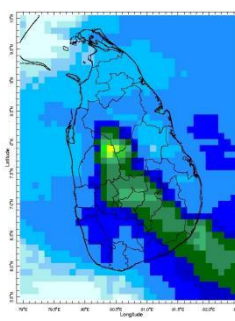*Daily Estimates for Rainfall from 2nd May – 9th May 2023*

2 May

3 May

4 May

5 May

6 May

7 May

8 May

9 May

Estimated Precipitation [mm/day]
0 20 40 60 80 100 120 140 160 180 200 220 240
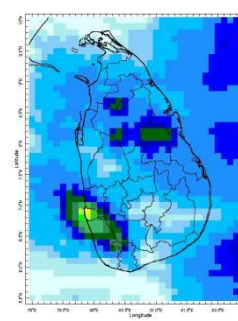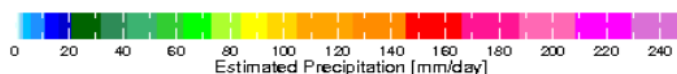
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Ocean State *(Text Courtesy IRI)*

Pacific sea state: May 8, 2023

Equatorial sea surface temperatures (SSTs) are near-to-above average across most of the Pacific Ocean early-May. The tropical Pacific atmosphere is consistent with ENSO-neutral conditions. A large majority of the models indicate ENSO-neutral conditions are expected to continue through the Northern Hemisphere spring, followed by a 62% chance of El Nino developing during May-July 2023.

Indian Ocean State

Sea surface temperature around Sri Lanka was 0.5°C above normal to the country except northern half in 18th – 24th April, 2023.

Predictions

Rainfall

14-day prediction: NOAA NCEP models

From 11th May – 17th May:

Total rainfall by Provinces:

Rainfall	Provinces
95 mm	Western
85 mm	Sabaragamuwa
75 mm	Southern, North Western
65 mm	Central
45 mm	Uva
35 mm	Northern, North Central, Eastern

From 18th May – 24th May:

Total rainfall by Provinces:

Rainfall	Provinces
115 mm	Western
95 mm	Sabaragamuwa, Southern, North Western
75 mm	Central, Uva
55 mm	Northern, North Central, Eastern

MJO based OLR predictions

For the next 15 days:

MJO shall slightly suppress the rainfall during 11th May – 25th May for Sri Lanka.

Interpretation

Monitoring

Rainfall: During the last two weeks, there had been very heavy rainfall over the following area: Katunayake

Daily Average Rainfall in the Met stations for previous week of (3rd May – 10th May) = 13.2 mm

Maximum Daily Rainfall: 171.1 mm & Minimum Daily Rainfall: 0.0 mm.

Region	Average rainfall for the Last 8 days
Northern Plains	15.3 mm
Eastern	10.7 mm
Western	17.3 mm
Southern Plains	6.6 mm

The Hydro Catchment Areas recorded 8.9 mm of average rainfall for the last week.

Maximum Daily Rainfall: 61.0 mm & Minimum Daily Rainfall: 0.0 mm.

Wind: North westerly winds prevailed in the sea area and around the island last week.

Temperatures: The temperature anomalies were below normal for Northern, North Central, and North Western provinces and some parts of the Eastern, and Central provinces driven by the warm SST's.

Predictions

Rainfall: During the next week (11th May – 17th May), fairly heavy rainfall (≥ 65 mm) is predicted for the Western, Sabaragamuwa, Southern, North Western, and Central provinces and less rainfall is predicted for rest of the country.

Temperatures: The temperature will remain above normal for some parts of the Northern, Eastern, North Central, Southern, and Uva provinces during 12th May – 18th May.

Teleconnections: ENSO-neutral conditions are expected to continue through the Northern Hemisphere spring, followed by a 62% chance of El Nino developing during May-July 2023.

MJO shall slightly suppress the rainfall during 11th May – 25th May for Sri Lanka.

Seasonal Precipitation: The precipitation forecast for the May-June-July, 2023 season shows near normal precipitation for the country.

Terminology for Rainfall Ranges

	Rainfall (During 24 hours of period)
Light Showers	Less than 12.5 mm
Light to Moderate	Between 12.5 mm and 25 mm
Moderate	Between 25 mm and 50 mm
Fairly Heavy	Between 50 mm and 100 mm
Heavy	Between 100 mm and 150 mm
Very Heavy	More than 150 mm

Weekly Climate Bulletin for Sri Lanka

Inside This Issue

MONITORING

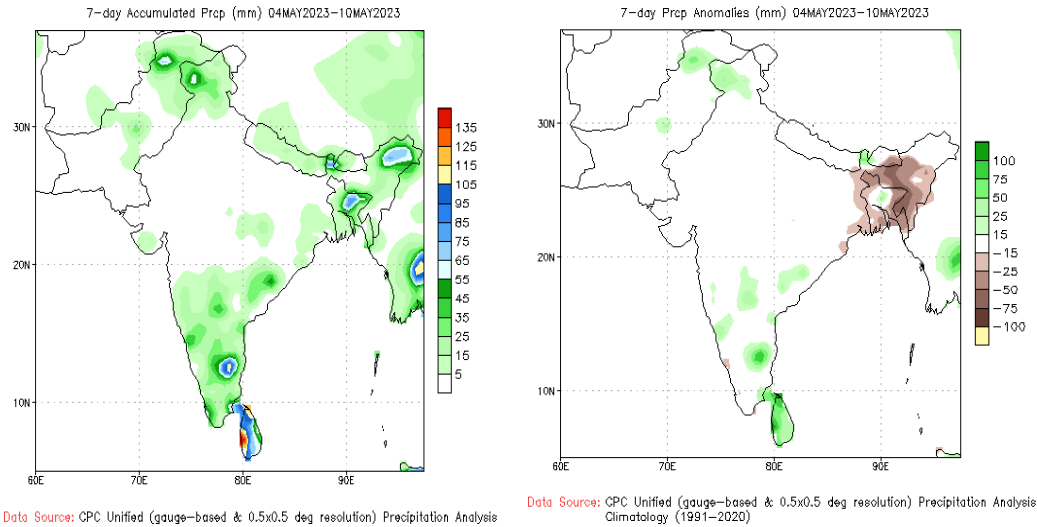### Daily Rainfall Monitoring

**The following figures show the satellite observed rainfall in the last 7 days in Sri Lanka.**

2 May 2023

3 May 2023

4 May 2023

5 May 2023

6 May 2023

7 May 2023

8 May 2023

9 May 2023

Estimated Precipitation [mm/day]

Weekly Rainfall Monitoring

The following figures show the total satellite observed rainfall in the last week in Sri Lanka. The figure in the left is the total 7-day rainfall from NOAA Climate Prediction Center (CPC) Unified Precipitation Analysis and the figure in the right is the total 7-day rainfall from CPC RFE 2.0 Satellite Rainfall Estimates. The bottom two figures are the respective anomalies.

Monthly Rainfall Monitoring

The figure in the left shows the average observed rainfall in the previous month. The rainfall anomaly in the previous month is shown in the figure to the right. The brown color in the anomaly figure shows places which received less rainfall than the historical average while the green color shows places with above average rainfall. Darker shades show higher magnitudes in rainfall

Monthly Average   **Monthly Anomaly**
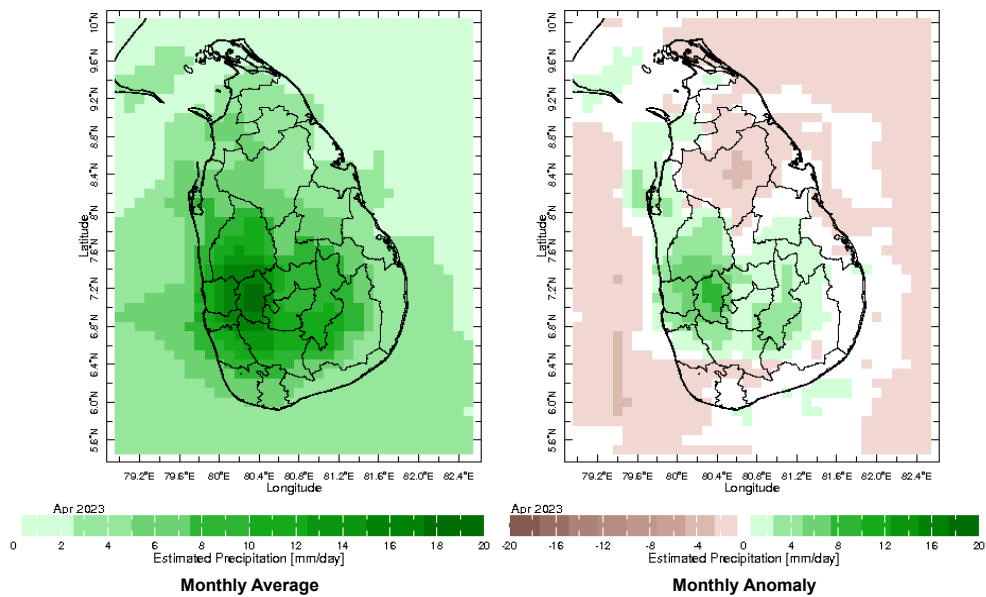
The figure in the top-left shows the total rainfall in the past 30 days from CPC Unified Precipitation Analysis while the figure in the top-right shows the total rainfall for the same period from RFE 2.0 Satellite Rainfall Estimates. The bottom two figures show the percentage of rainfall received in the past 30 days compared to normal rainfall in this period.
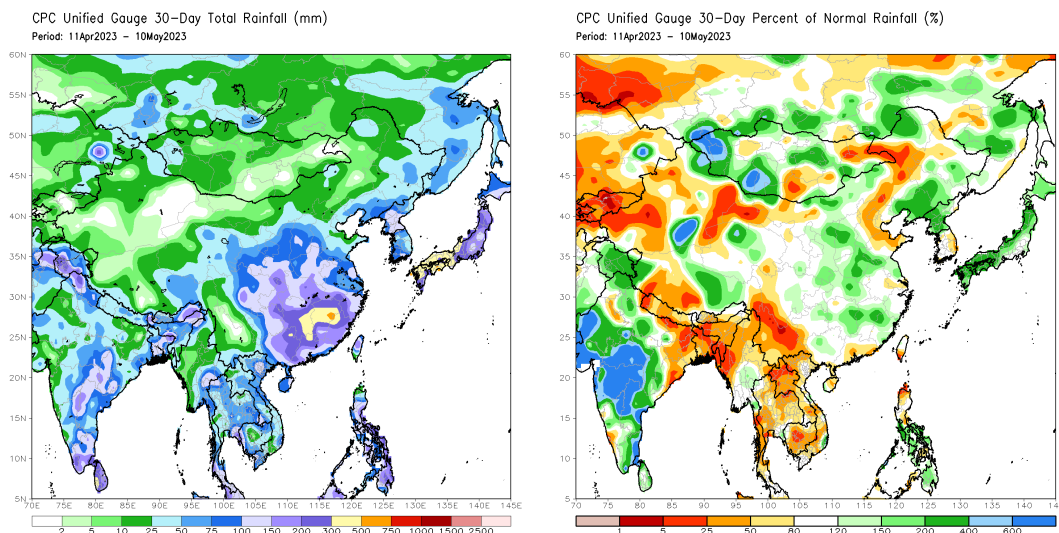
The following figure shows the observed accumulated rainfall (top) and daily observed rainfall (bottom) in Sri Lanka in the last 30 days.
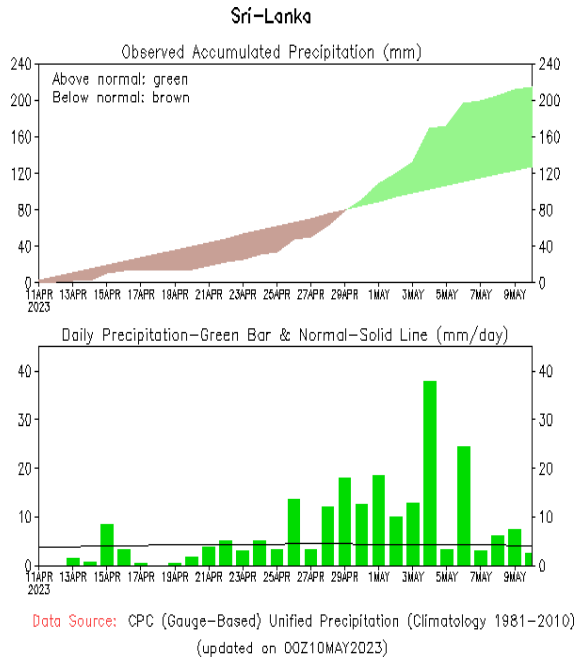
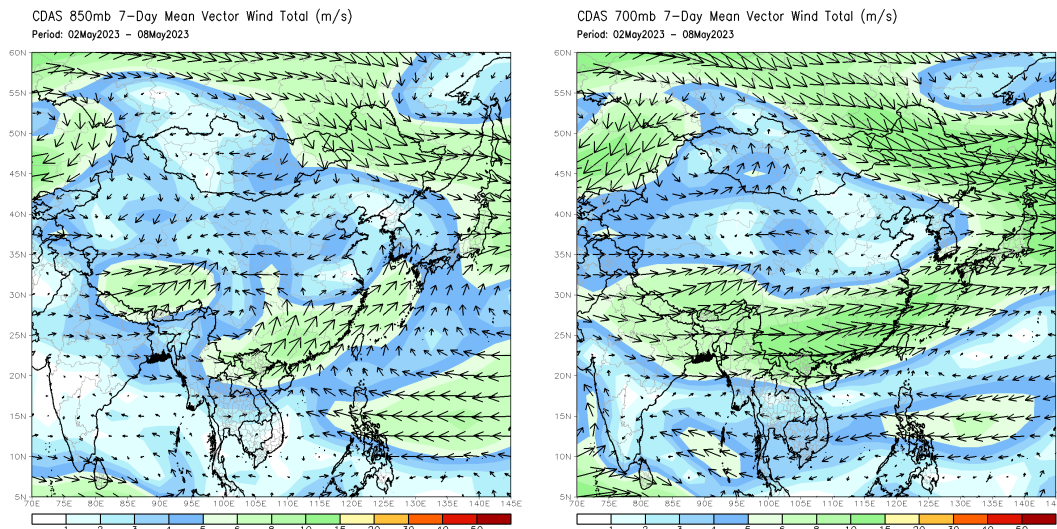## Dekadal (10 Day) Satellite Derived Rainfall Estimates
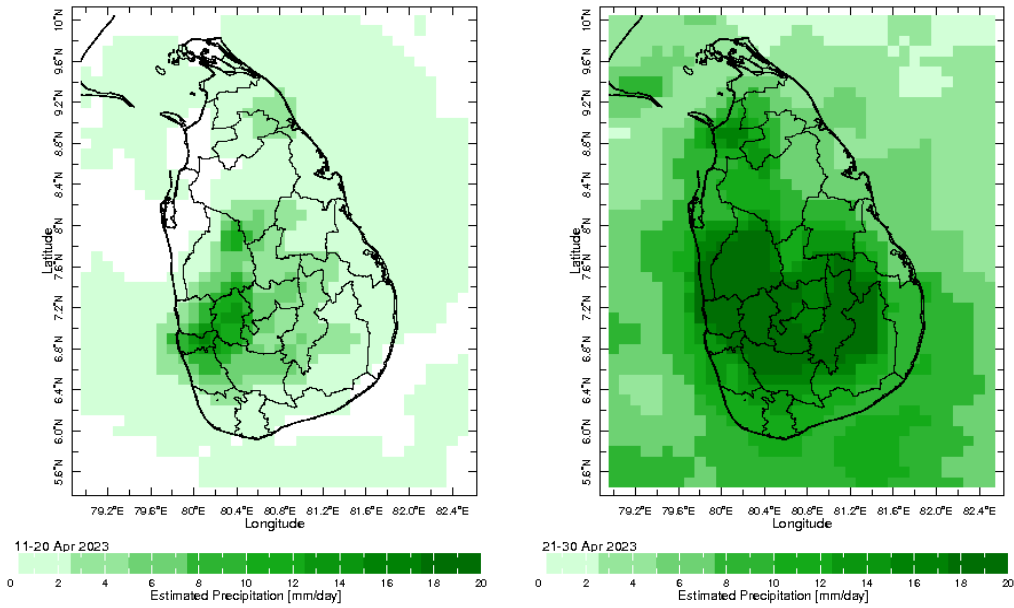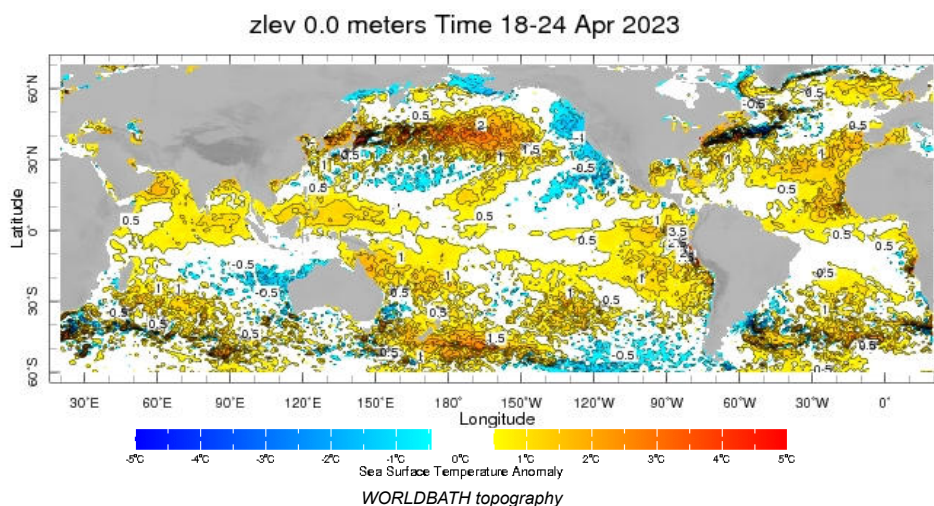

Weekly Temperature Monitoring
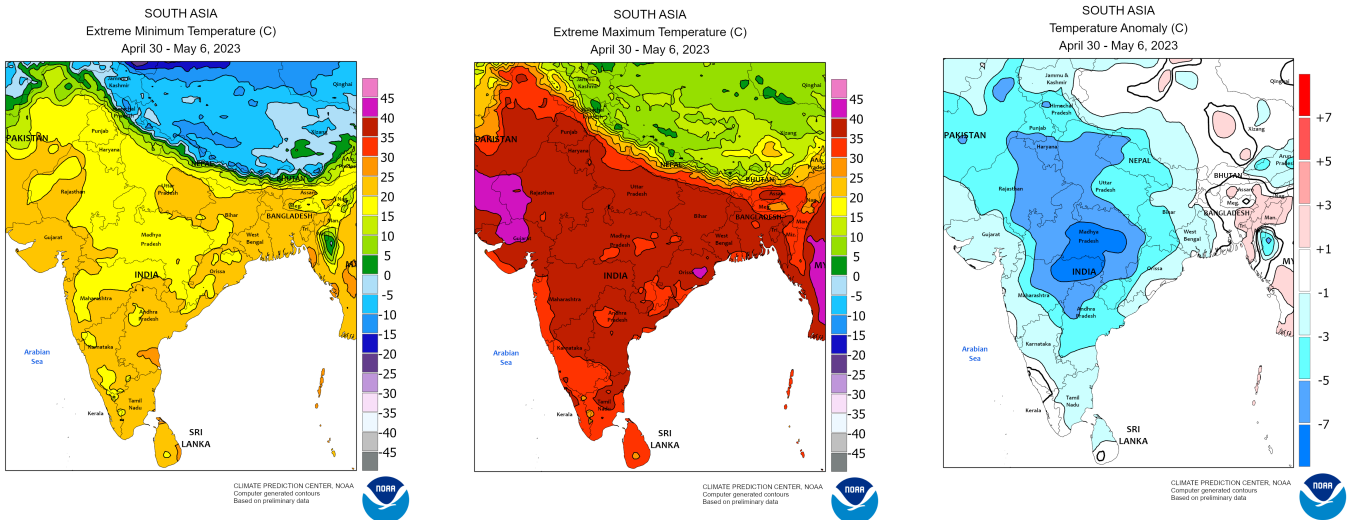
Weekly Wind Monitoring

The following figures show the mean vector wind total of the past 7 days near Sri Lanka at two levels. The figure on the left shows 850 mb (~1500 m) level and the figure on the right shows 700 mb (~3000 m) level.
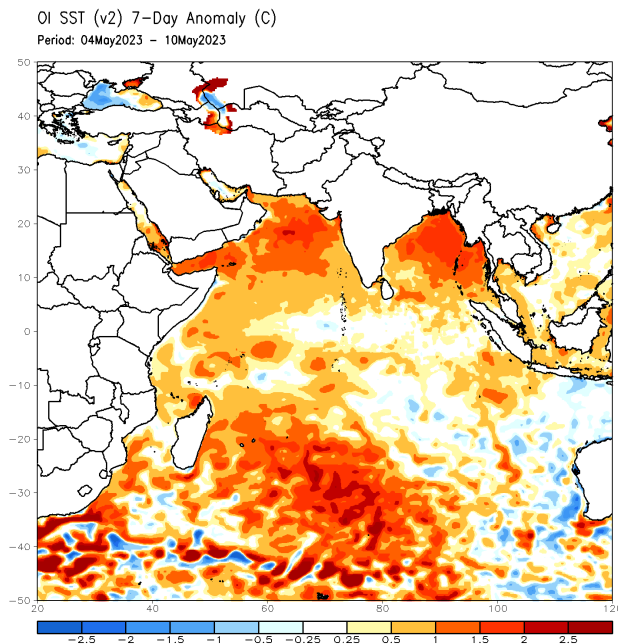

Weekly Average SST Anomalies

Weekly average Sea Surface Temperature (SST) anomaly in the world from NOAA NCEP

Optimum Interpolated Sea Surface Temperature Anomaly in the Indian Ocean from NOAA CPC

NCEP GFS 1- 14 Day prediction
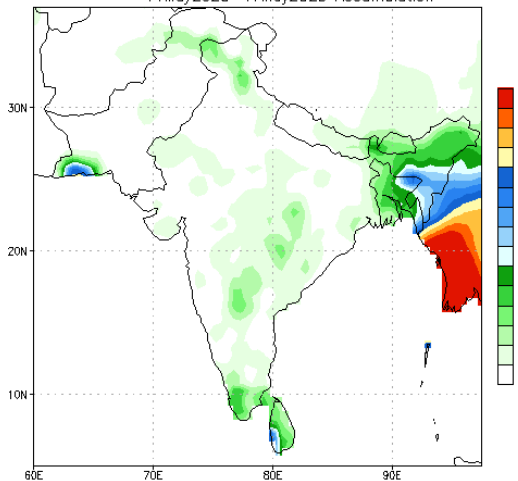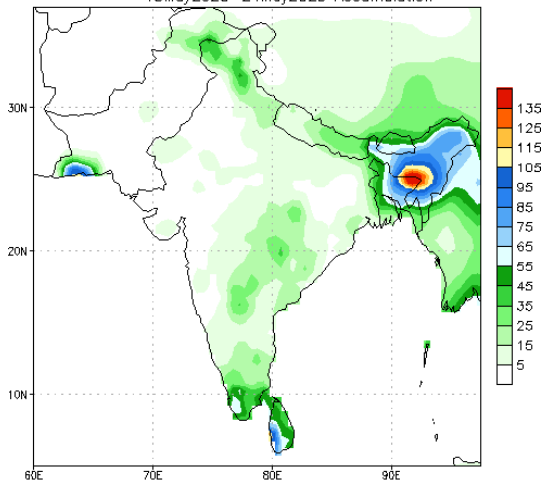
IMD GFS (T574) Model Rainfall Forecast from RMSC New Delhi, India
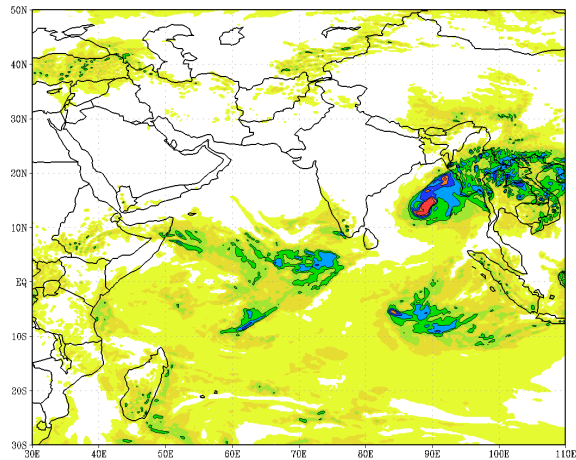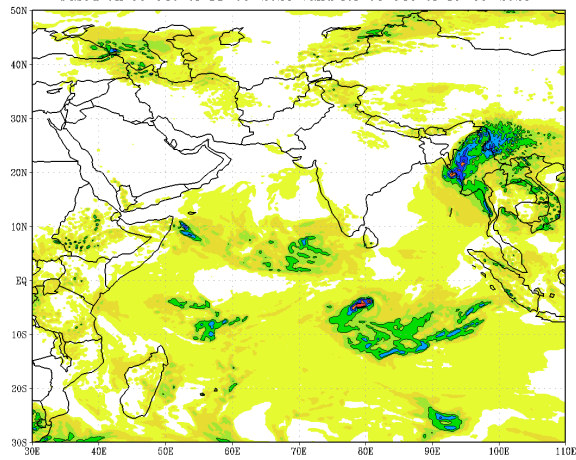
Madden Julian Oscillation (MJO) related Outgoing Longwave Radiation (OLR) Forecast

The Outgoing Longwave Radiation (OLR) is a proxy for rainfall. This can be used to identify convective rain clouds based on the MJO phase. Violet and Blue shading indicates enhanced tropical weather and Orange shading indicates suppressed conditions. The following figure shows the forecasts of MJO associated anomolous OLR for the next 15 days from the Constructed Analogue (CA) model forecasts.
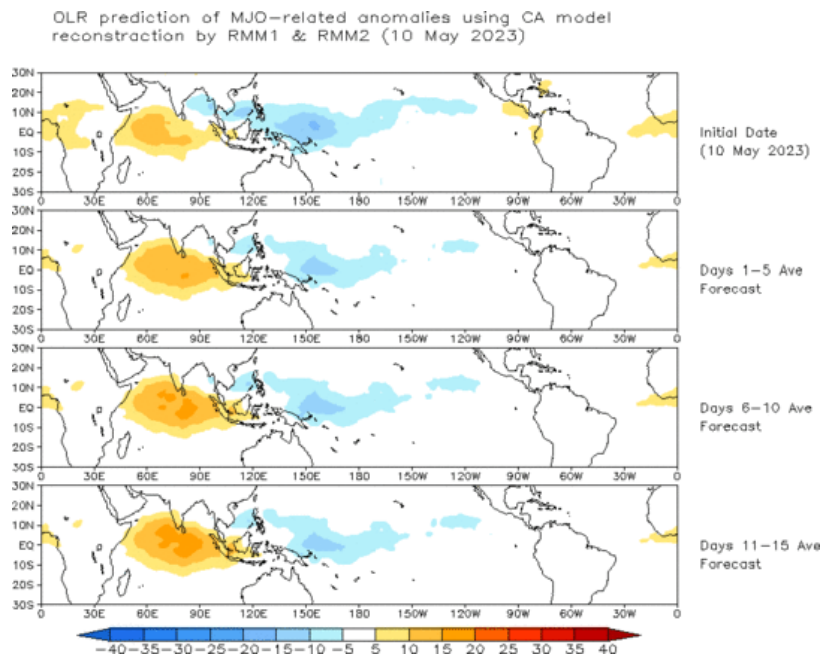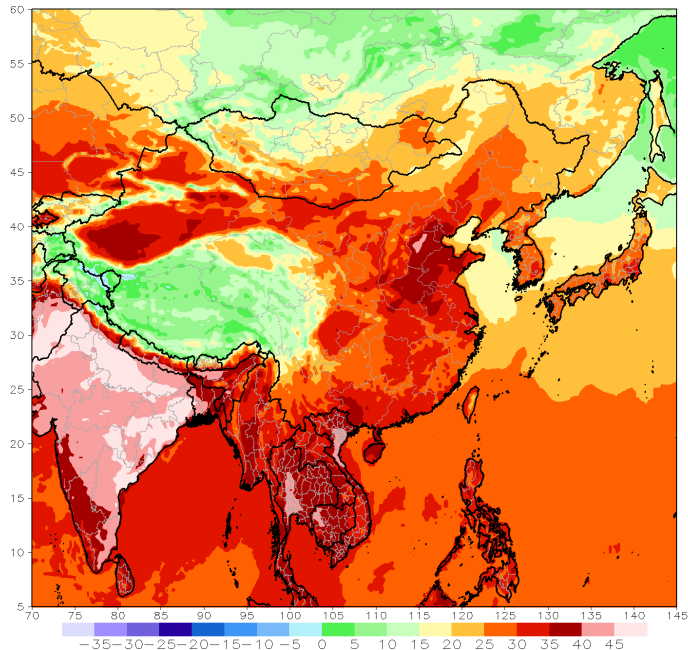
Weekly Temperature Forecast

Weekly Minimum and Maximum Temperature prediction from the GFS model (from NOAA CPC)
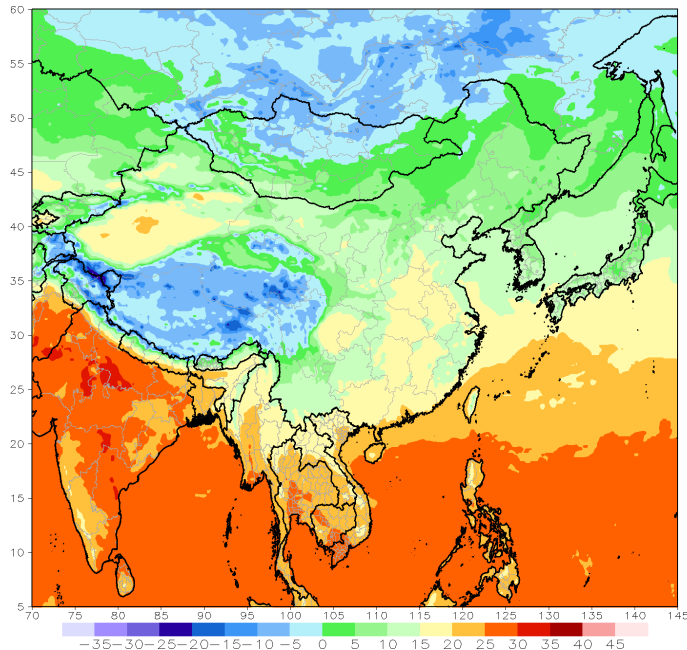
GFS week1 Temperature Max (C)
Period: 18z12May2023 – 18z18May2023

GFS week1 Temperature Min (C)
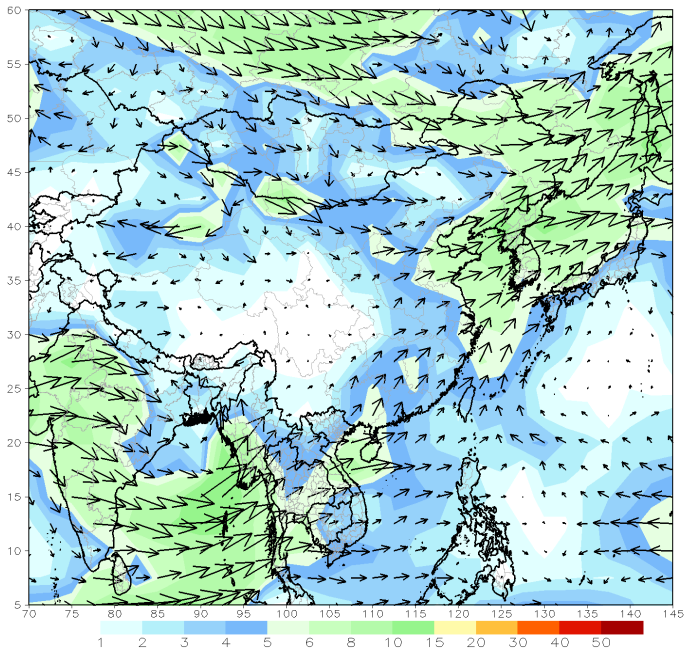Period: 18z12May2023 – 18z18May2023

Weekly Wind Forecast

Weekly mean vector wind total prediction from the GFS model at 850 mb (left) and 700 mb (right) levels. (from NOAA CPC)
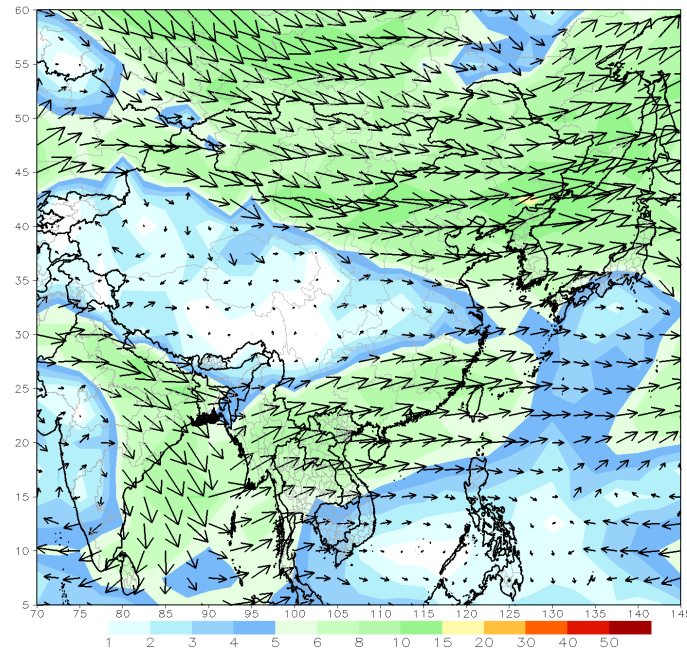
GFS 850mb week1 Mean Vector Wind Total (m/s)
Period: 18z12May2023 – 18z18May2023

GFS 700mb week1 Mean Vector Wind Total (m/s)
Period: 18z12May2023 – 18z18May2023

Seasonal Rainfall and Temperature Forecast

Following is the latest seasonal precipitation and temperature prediction for the next 3 months by the IRI. The color shading indicates the probability of the most dominant tercile -- that is, the tercile having the highest forecast probability. The color bar alongside the map defines these dominant tercile probability levels. The upper side of the color bar shows the colors used for increasingly strong probabilities when the dominant tercile is the above-normal tercile, while the lower side shows likewise for the below-normal tercile. The gray color indicates an enhanced probability for the near-normal tercile (nearly always limited to 40%).

IRI Multi–Model Probability Forecast for Precipitation for May–June–July 2023, Issued April 2023
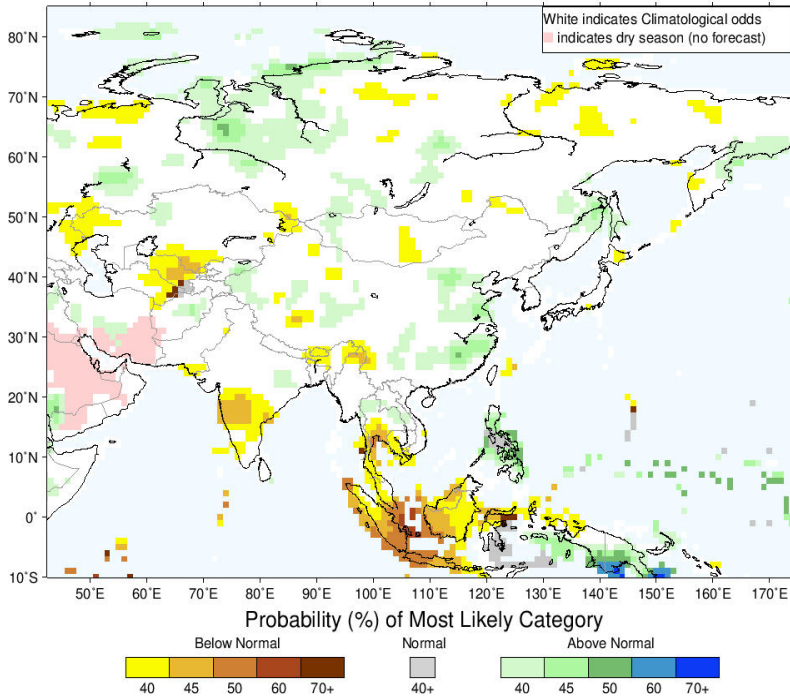
IRI Multi–Model Probability Forecast for Temperature for May–June–July 2023, Issued April 2023
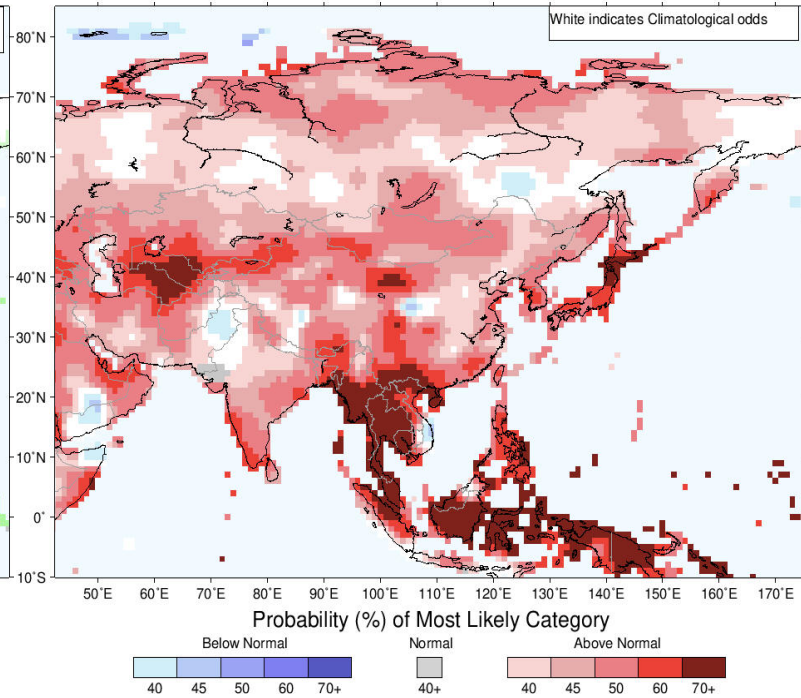
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