

HIGHLIGHTS

Rainfall Prediction



- During 21 - 27 Aug, high likelihood of Light Showers (<12.5 mm) is predicted for the whole SL.
- The middle atmospheric convergence at latitudes around Sri Lanka has the potential to bring rainfall to the SL.
- According to the medium-range weather forecast, the Eastern Province has a highly tendency of above normal rainfall due to these conditions.

Monitored Rainfalls



- On average, 10 mm was received in SL and rainfall was concentrated in the Western plains (16.2 mm) and hills (11.5 mm) for last 8 days.
- On average, 9.6 mm was received in the hydro catchments in SL; Kukule Ganga (Kalutara District) received the highest rainfall (125 mm) for last 8 days.
- Highest daily rainfall was in Mullativu on 20 Aug (151 mm).

Monitored & Predicted Wind



- From 13 Aug - 19 Aug, winds at 850mb (1.5km) were north-westerly, reaching up to 15 m/s.
- From 22 Aug - 28 Aug, winds are predicted to be westerly, reaching up to 15 m/s.

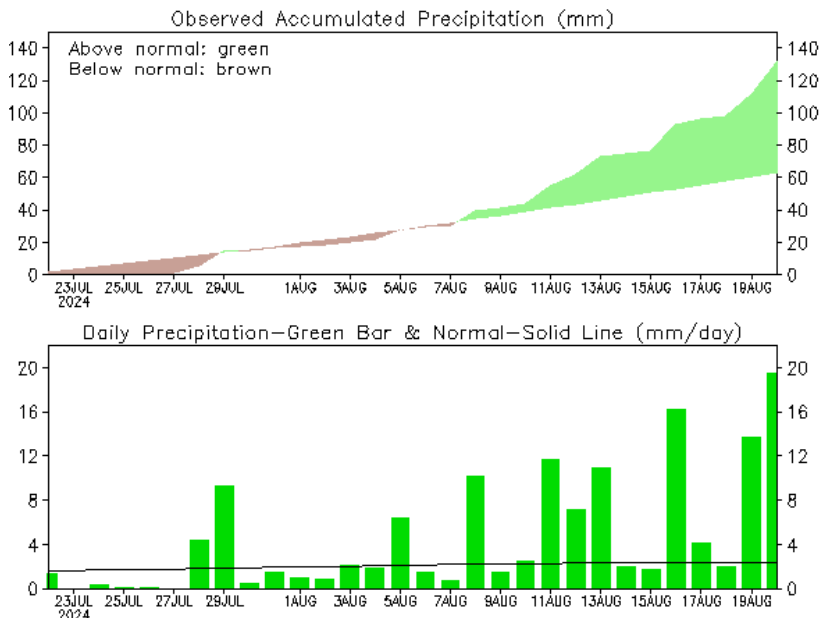
Monitored Sea & Land Temp



- Average land surface temperature was 31.0°C in the last week with warmer anomalies from seasonal average of 1-3 °C and cooler anomalies from seasonal average of 1-3 °C.
- Eastern plains was warmest followed by Northern and Southern plains.
- Sea surface temperature around Sri Lanka was 1.0°C above average of the country

Monitoring Rainfall

Daily Estimates for Accumulated Rainfall from 22 Jul - 20 Aug 2024
Sri-Lanka



Data Source: CPC (Gauge-Based) Unified Precipitation (Climatology 1981-2010)
(updated on 00Z20AUG2024)



Federation for
Environment, Climate
& Technology

Federation for Environment, Climate and Technology

c/o, Maintenance Office, Mahaweli Authority, Digana Village, Rajawella, Sri Lanka.

Phone (+94) 81-2376746, (+94) 81-2300415

Web Site: www.fect.lk

E mail: info@fect.lk

LI: www.linkedin.com/in/fectlk

FB: www.facebook.com/fectlk

TW: www.twitter.com/fectlk

Ocean State (Text Courtesy IRI)

Pacific sea state: August 21, 2024

ENSO-neutral conditions are present. Equatorial sea surface temperatures (SSTs) are above average in the western Pacific, near average in the east-central Pacific, and below average in the eastern Pacific Ocean. ENSO-neutral is expected to continue for the next several months, with La Niña favored to emerge during September-November (66% chance) and persist through the Northern Hemisphere winter 2024-25 (74% chance during November-January).

Indian Ocean State

Sea surface temperature around Sri Lanka was 1.0°C above average from 30 Jul to 5 Aug 2024.

Predictions

Rainfall

14-Day prediction: NCEP GFS models

From 21st August - 27th August:

Total rainfall by Provinces

Rainfall (mm)	Provinces
≤10	Northern, Southern, Sabaragamuwa, Western, Uva, Central, North Western, North Central, Eastern

From 28th August - 3rd September:

Total rainfall by Provinces

Rainfall (mm)	Provinces
≤25	Northern, Southern, Sabaragamuwa, Western, Uva, Central, North Western, North Central, Eastern

MJO-based OLR predictions

For the next 15 days:

MJO shall slightly enhance the rainfall during 21st – 30th August and near neutral the rainfall during 31st August – 4th September for Sri Lanka.

Interpretation

Monitoring

Rainfall: During the last two weeks, there has been fairly heavy rainfall over the following area: Palugaswewa Estate (Puttlam)

Daily Average Rainfall in the Met stations for the previous week of (15 - 21 Aug) = 6.6 mm
 Maximum Daily Rainfall: 96.4 mm & Minimum Daily Rainfall: 0.0 mm.

Region	Average rainfall for 15 - 21 Aug (mm)	Average temperature for 15 - 21 Aug (°C)	
		Maximum	Minimum
Northern plains	8.5	32.3	25.1
Eastern hills	10.2	29.1	24.0
Eastern plains	7.3	32.7	23.1
Western hills	11.5	27.7	23.7
Western plains	16.2	30.1	24.5
Southern plains	9.5	30.9	26.1

Region	Average rainfall for 15 - 21 Aug (mm)	Daily maximum rainfall for 15 - 21 Aug (mm)	Daily minimum rainfall for 15 - 21 Aug (mm)
All SL	10.3	151.1	0.0
Hydro catchment	9.6	125.0	0.0

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

Temperatures: The temperature anomalies were above normal for some parts of the Central and Sabaragamuwa province and below normal for some parts of the Eastern province for Sri Lanka driven by the warm SSTs.

Predictions

Rainfall: During the next week (21 - 27 Aug), Light Showers (<12.5 mm) is predicted for the whole SL.

Temperatures: The temperature will remain above normal for the Northern and Eastern provinces during 22 August - 28 August.

Teleconnections: MJO shall slightly enhance the rainfall during 21st – 30th August and near neutral the rainfall during 31st August – 4th September for Sri Lanka.

Seasonal Precipitation: The precipitation forecast for the September-October-November, 2024 season shows a 40% or more tendency toward normal precipitation for the country.

Terminology for Rainfall Ranges

	Rainfall
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

Tropical Climate Guarantee, Federation of Environment, Climate and Technology, Columbia University Water Center, ¹ International Research Institute for Climate and Society, Earth Institute at Columbia University, New York.



FECT Web

www.fect.lk
<http://www.climate.lk>
<http://www.tropicalclimate.org/>



FECT Blog

Past reports available at
<http://fect.lk/blog/>
<http://fectsl.blogspot.com/>



Facebook

www.facebook.com/fectlk



Twitter

www.twitter.com/fectlk

Weekly Climate Bulletin for Sri Lanka

Inside This Issue

1. Monitoring

- a. Daily Rainfall Monitoring
- b. Weekly Rainfall Monitoring
- c. Monthly Rainfall Monitoring
- d. Dekadal (10 Day) Satellite Derived Rainfall Estimates
- e. Weekly Temperature Monitoring
- f. Weekly Wind Monitoring
- g. Weekly Average SST Anomalies

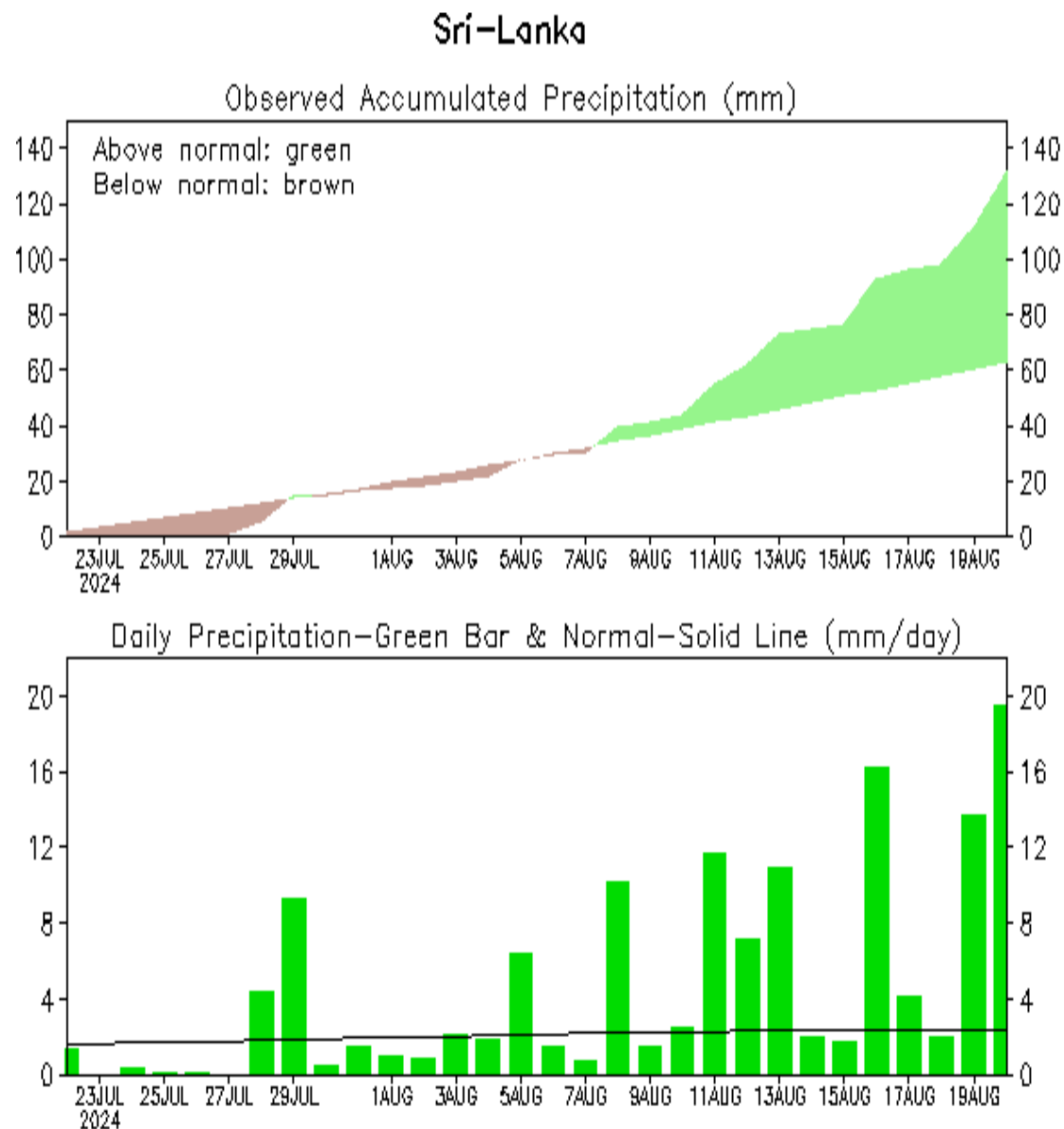
2. Predictions

- a. NCEP GFS Ensemble 1-14 day Rainfall Predictions
- b. GFS (T574) Model Rainfall Forecast from RMSC New Delhi
- c. MJO Related OLR Forecast
- d. Weekly Temperature Forecast
- e. Weekly Wind Forecast
- f. Seasonal Predictions from IRI

MONITORING

Daily Rainfall Monitoring

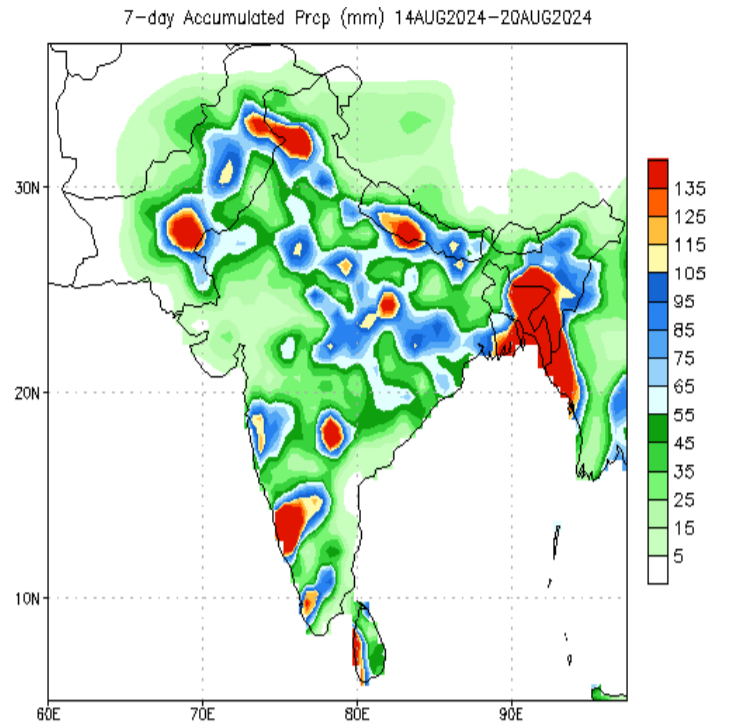
The following figure shows the observed accumulated rainfall (top) and daily observed rainfall (bottom) in Sri Lanka in the last 30 days.



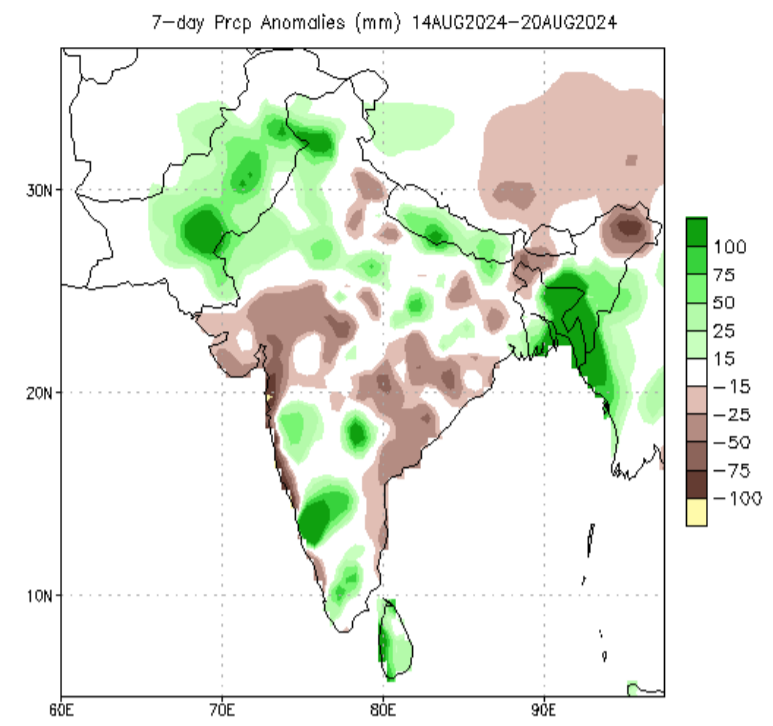
Data Source: CPC (Gauge-Based) Unified Precipitation (Climatology 1981-2010)
(updated on 00Z20AUG2024)

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.



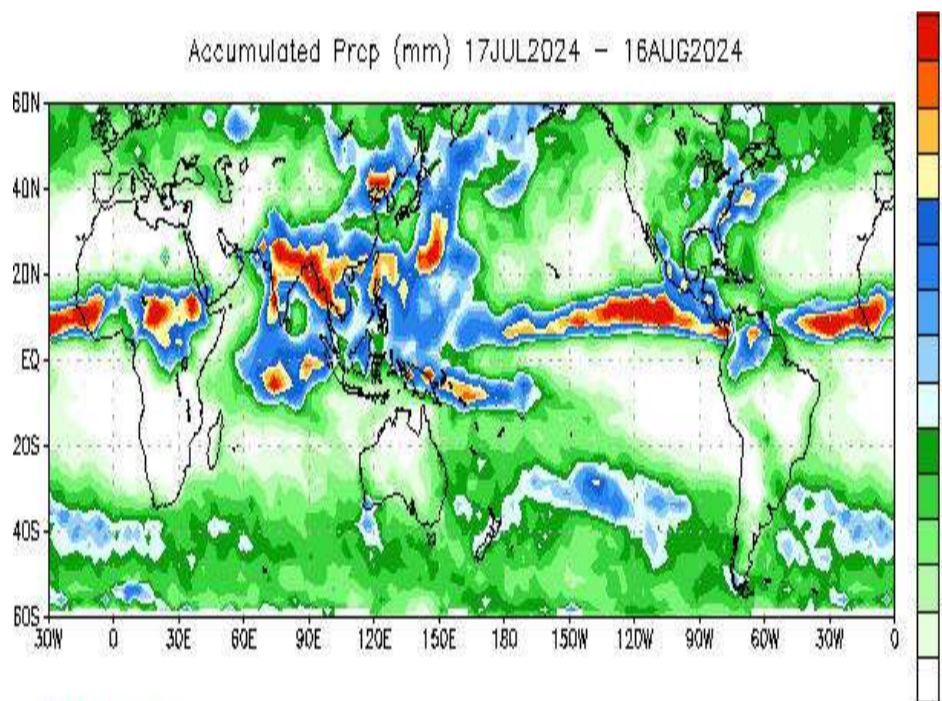
Data Source: CPC Unified (gauge-based & 0.5x0.5 deg resolution) Precipitation Analysis



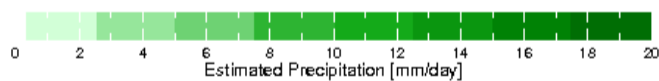
Data Source: CPC Unified (gauge-based & 0.5x0.5 deg resolution) Precipitation Analysis Climatology (1991-2020)

Monthly Rainfall Monitoring

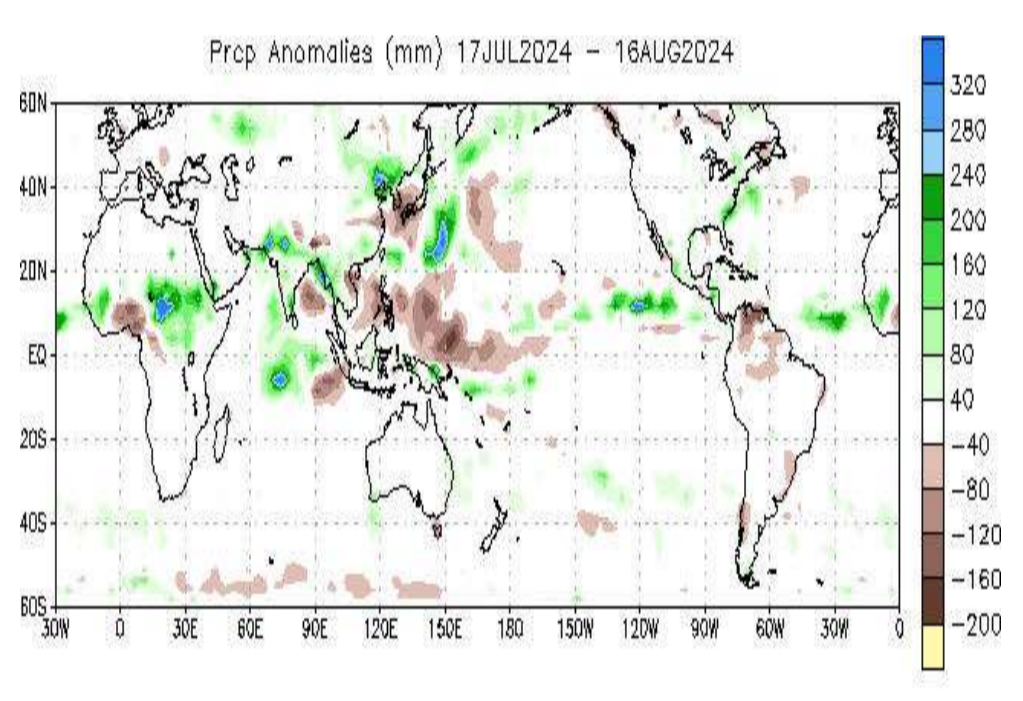
The figure in the left shows the total observed rainfall in the previous month. The rainfall anomaly in the previous month is shown in the figure to the right. The brown color in the anomaly figure shows places which received less rainfall than the historical average while the green color shows places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



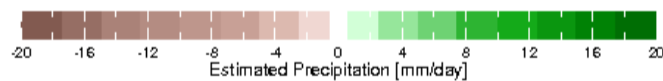
Data Source: NCEP CMAP Precipitation



Monthly Total

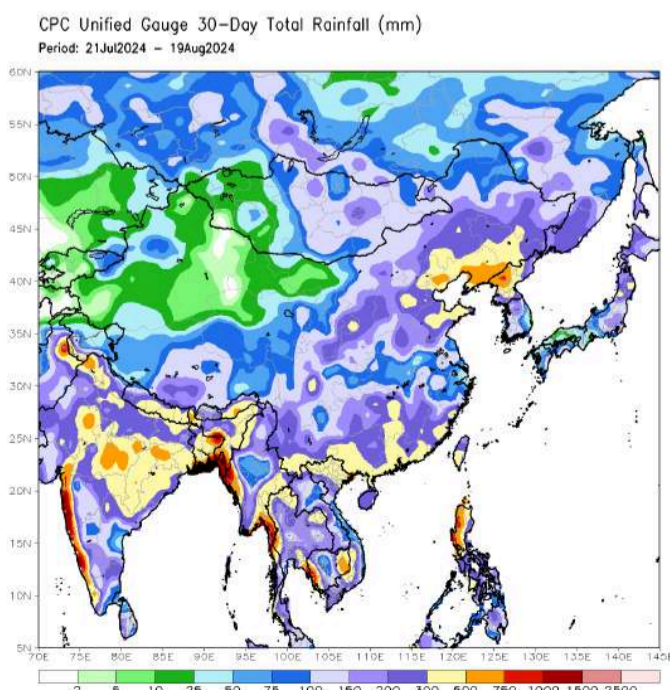
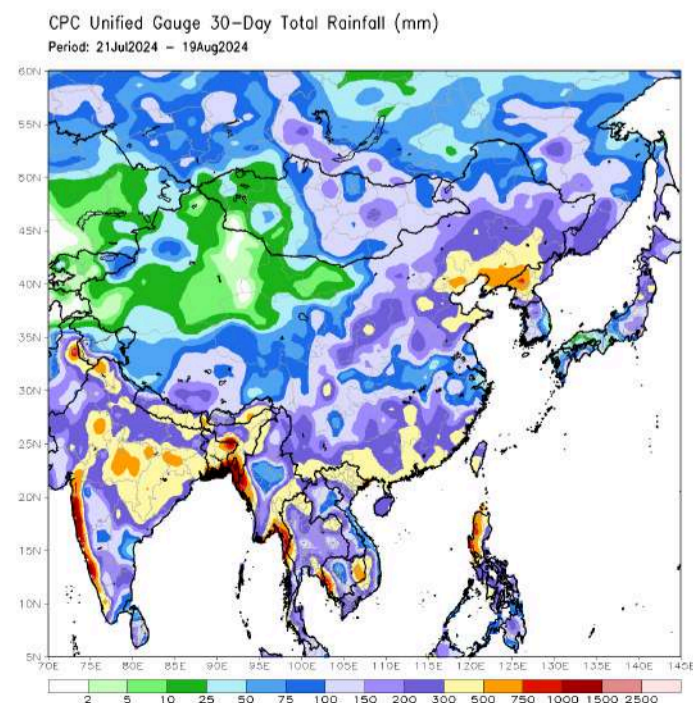


Data Source: NCEP CMAP Precipitation Climatology (1991-2020)

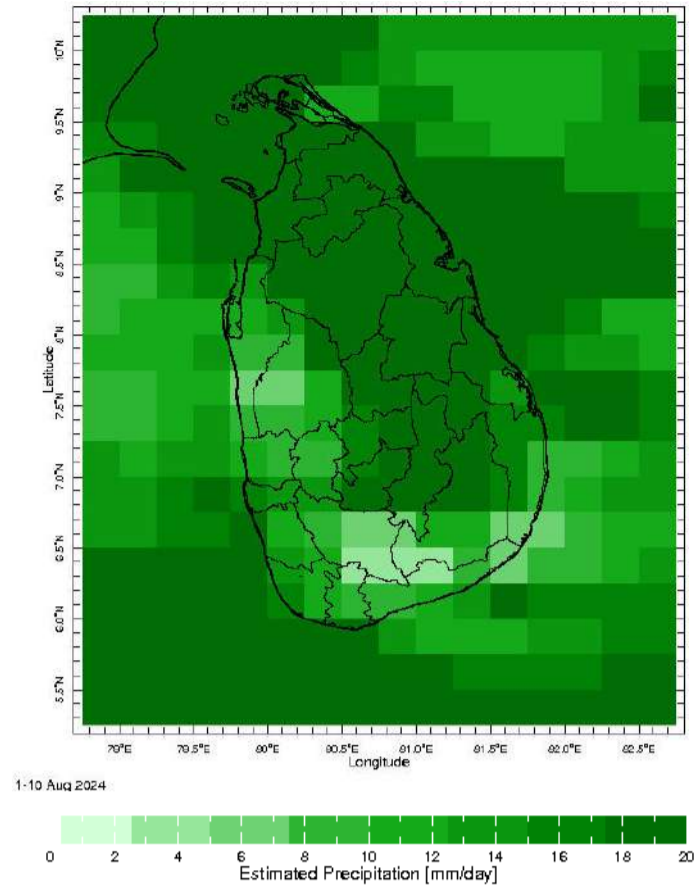
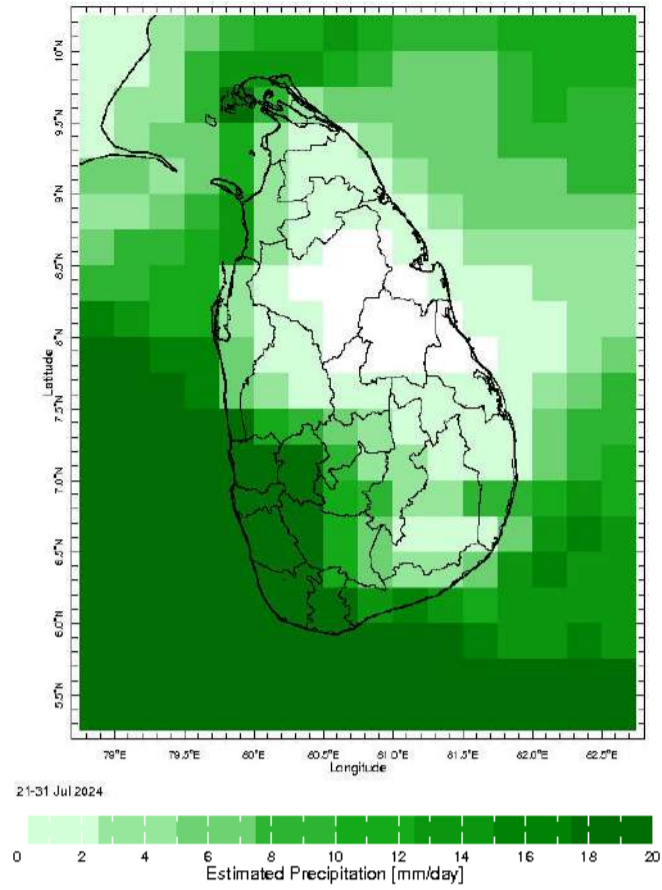


Monthly Anomaly

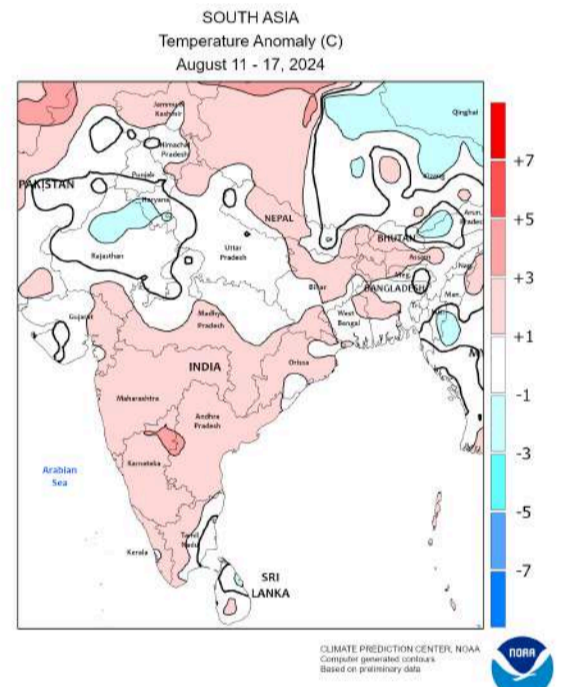
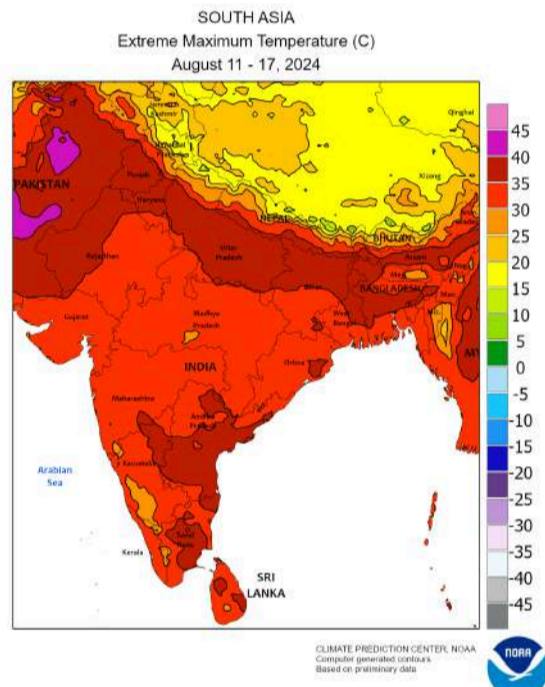
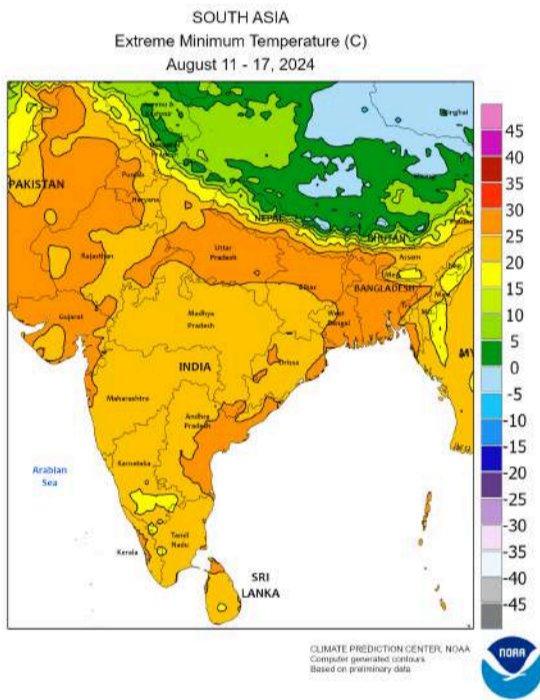
The figure in the top-left shows the total rainfall in the past 30 days from CPC Unified Precipitation Analysis while the figure in the top-right shows the total rainfall for the same period from RFE 2.0 Satellite Rainfall Estimates. The bottom two figures show the percentage of rainfall received in the past 30 days compared to normal rainfall in this period.



Dekadal (10 Day) Satellite Derived Rainfall Estimates

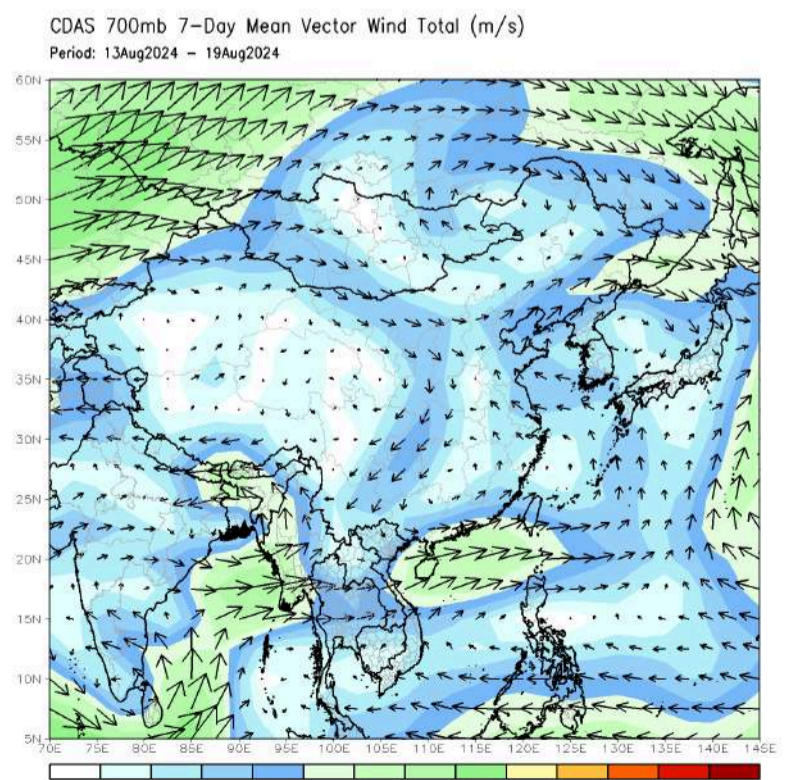
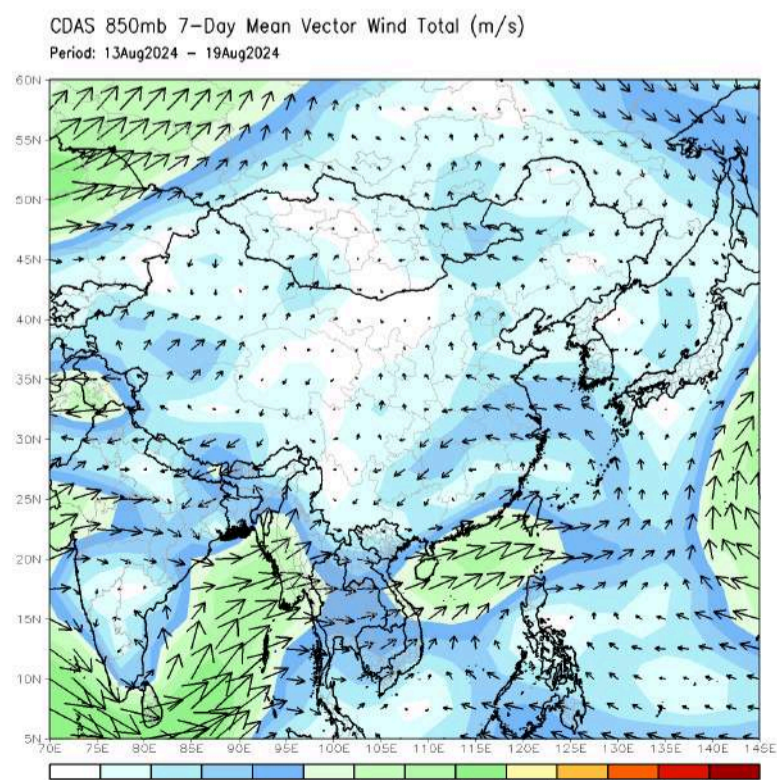


Weekly Temperature Monitoring



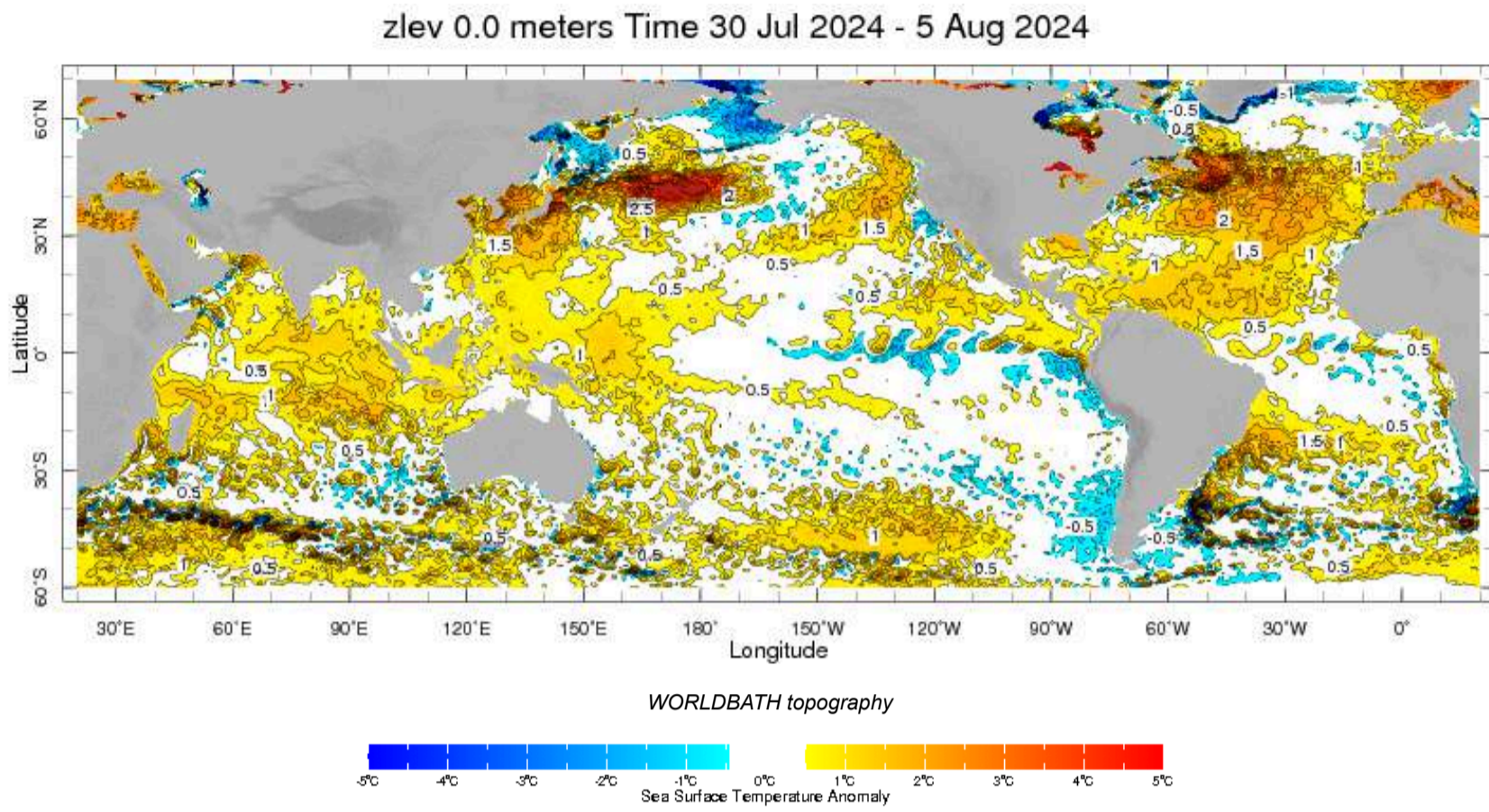
Weekly Wind Monitoring

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.

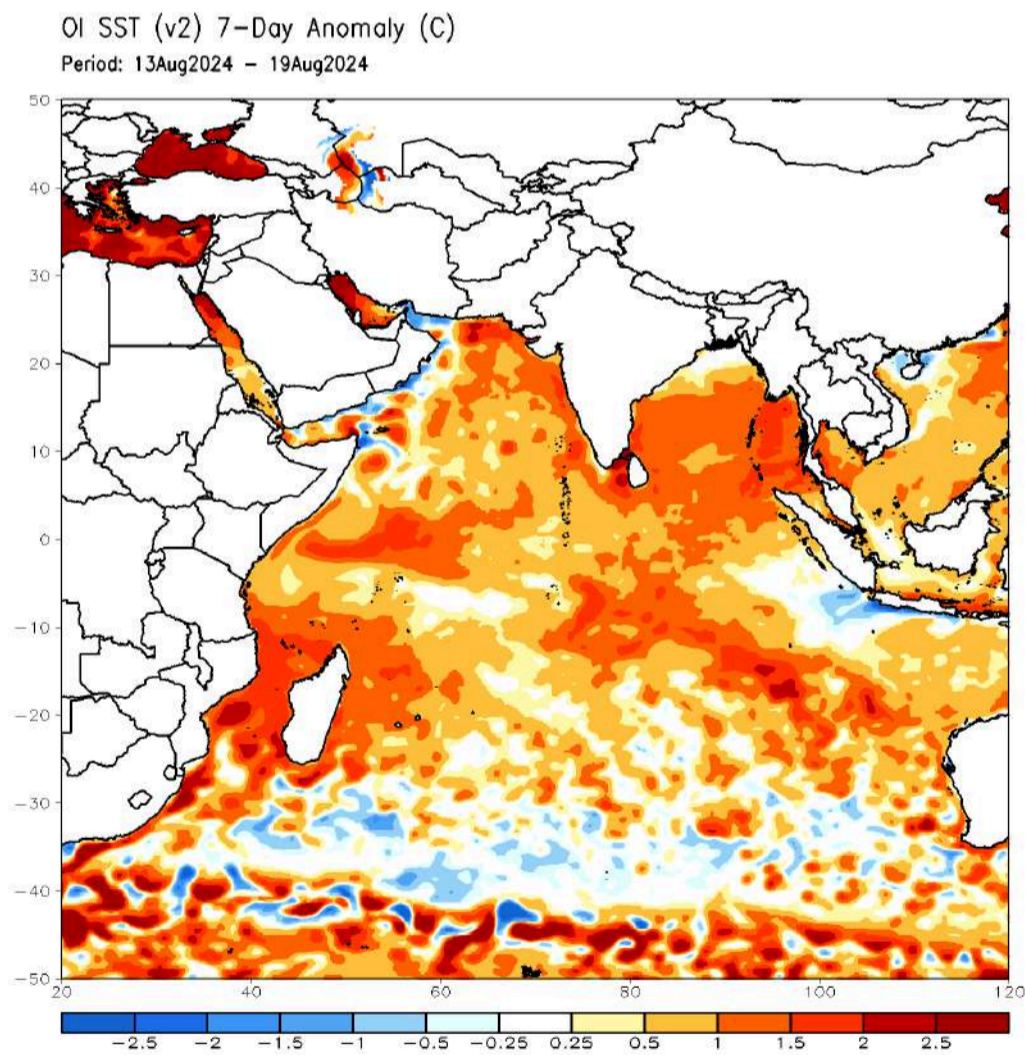


Weekly Average SST Anomalies

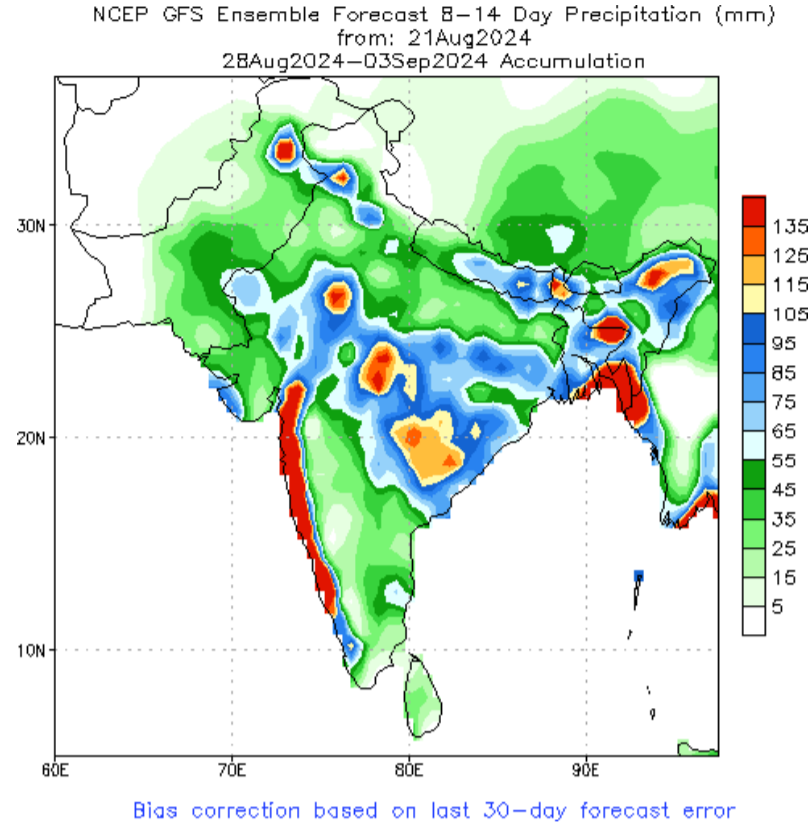
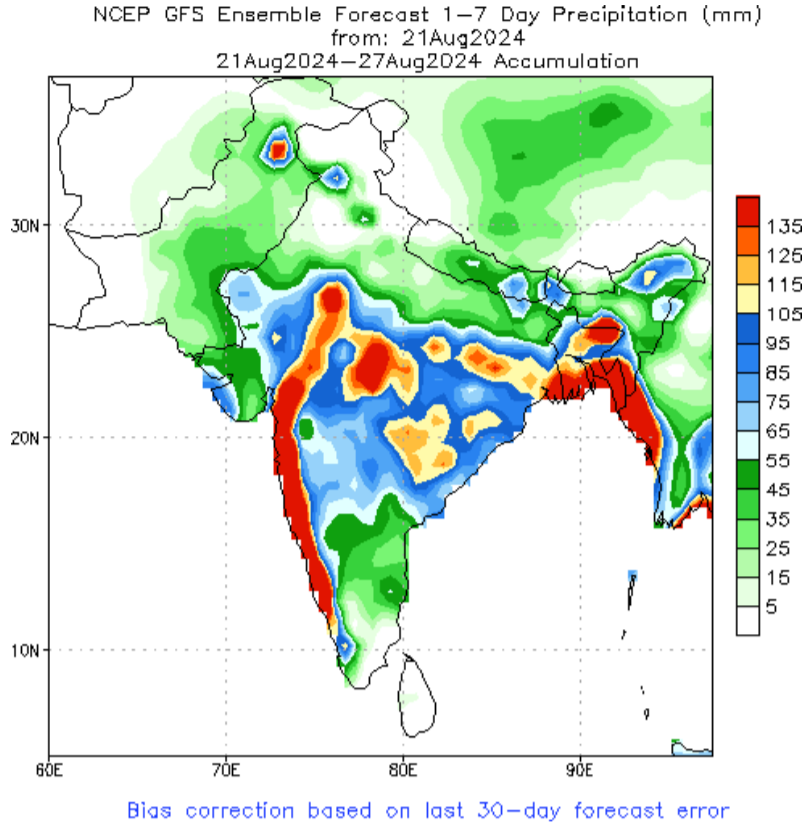
Weekly average Sea Surface Temperature (SST) anomaly in the world from NOAA NCEP



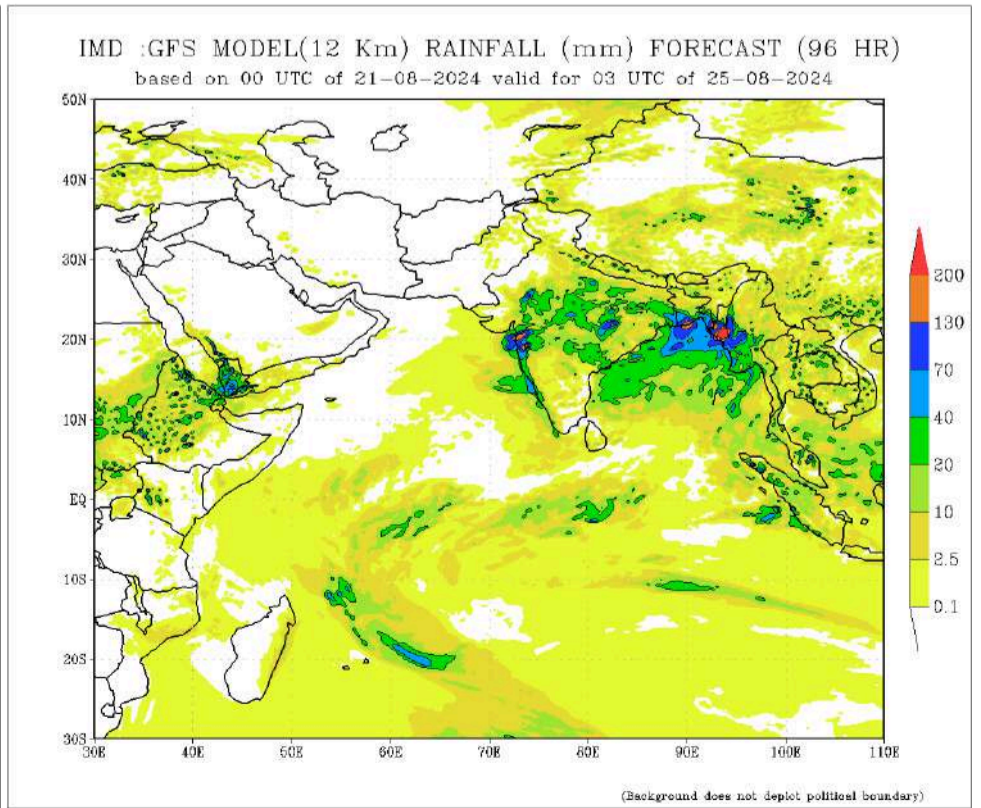
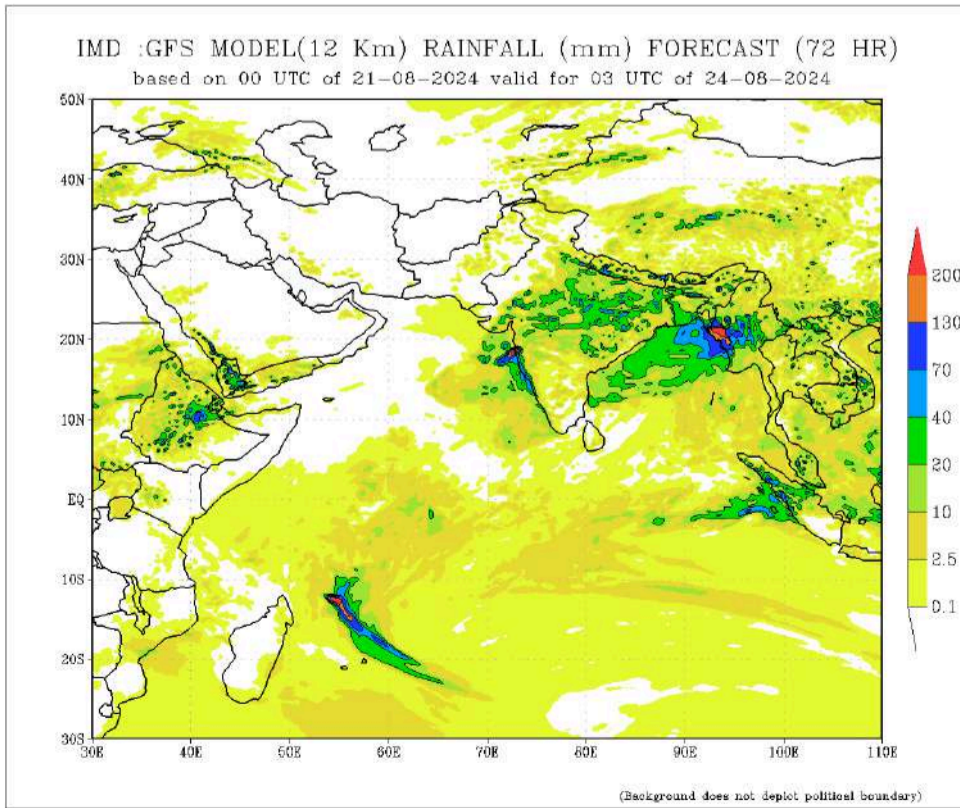
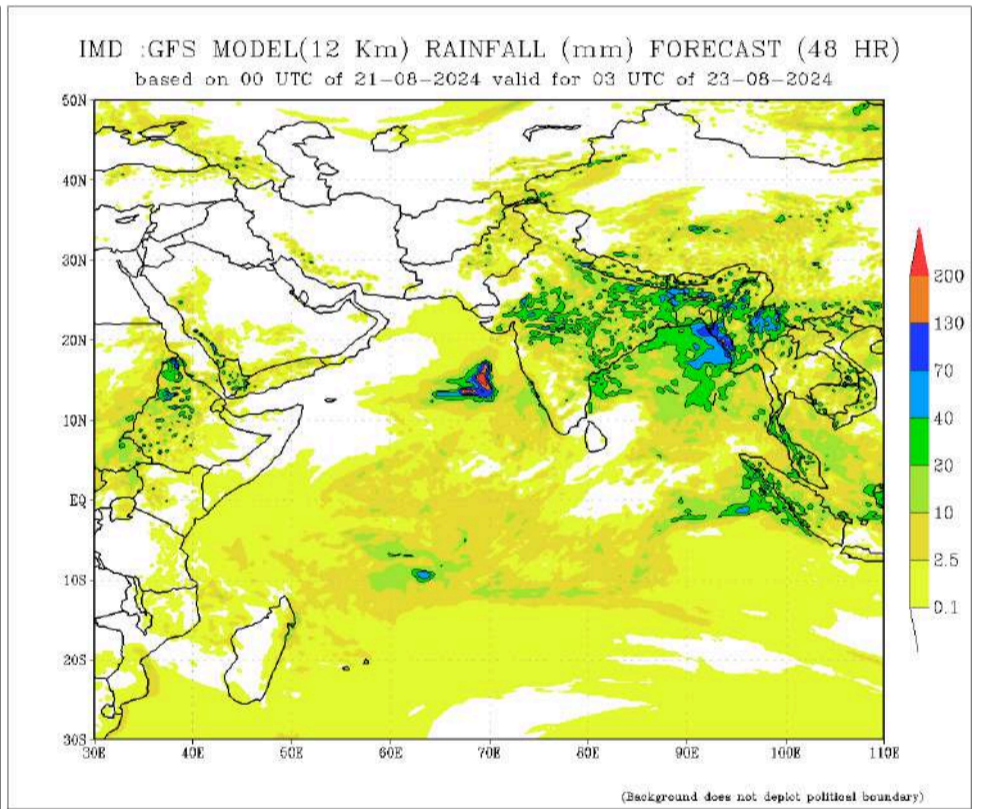
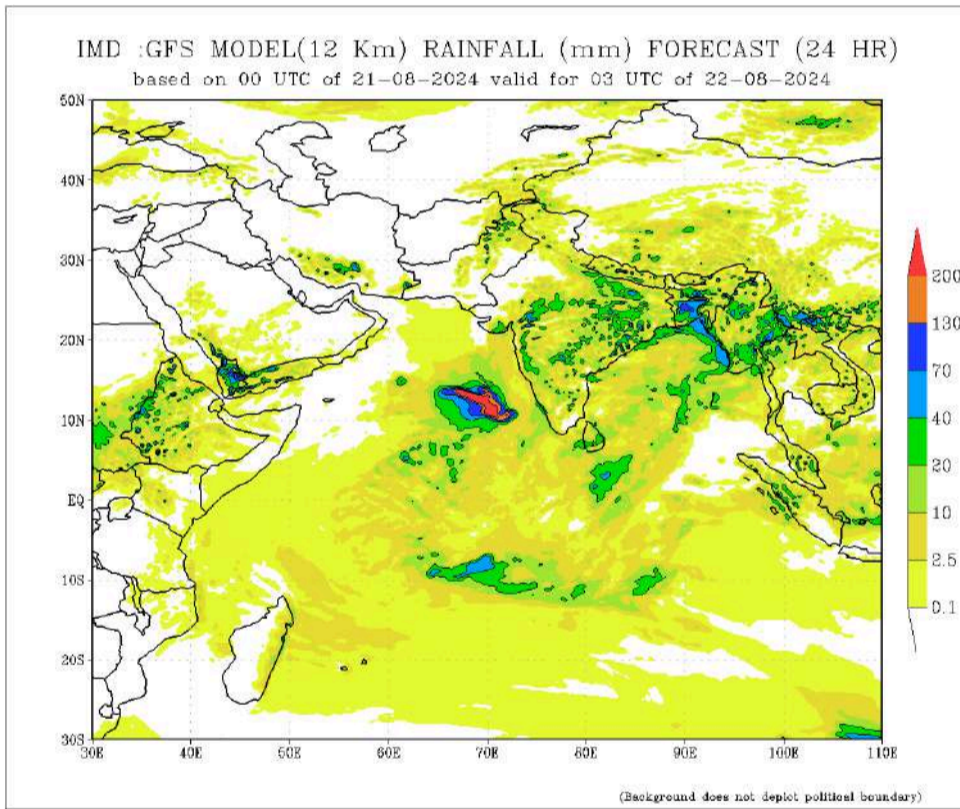
Optimum Interpolated Sea Surface Temperature Anomaly in the Indian Ocean from NOAA CPC

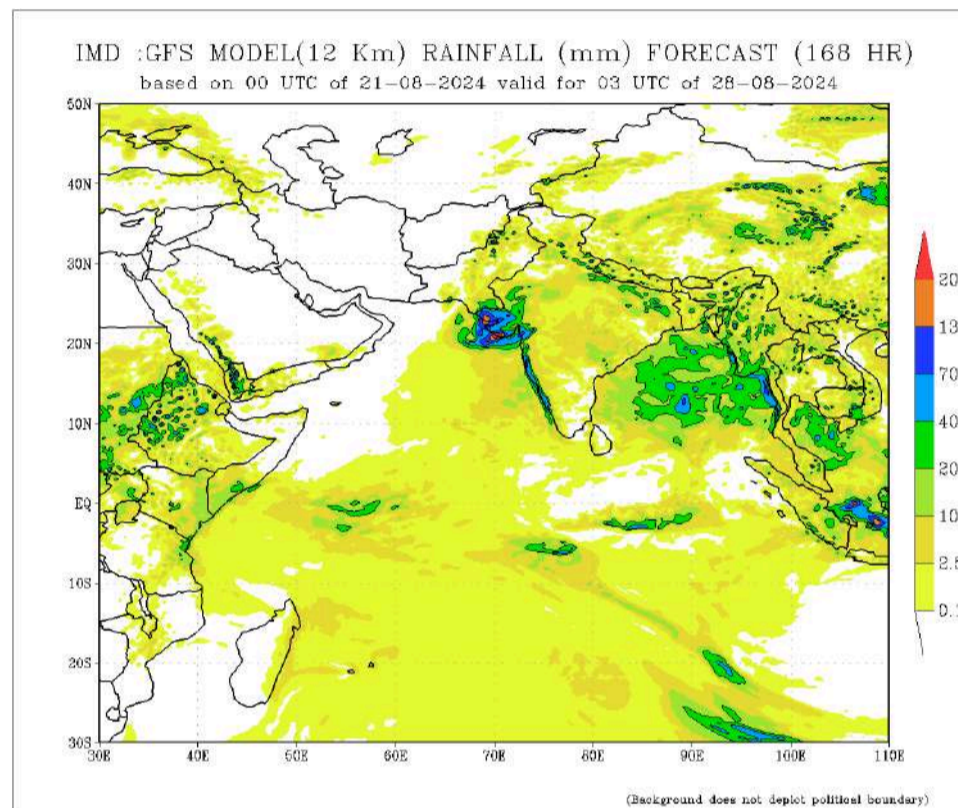
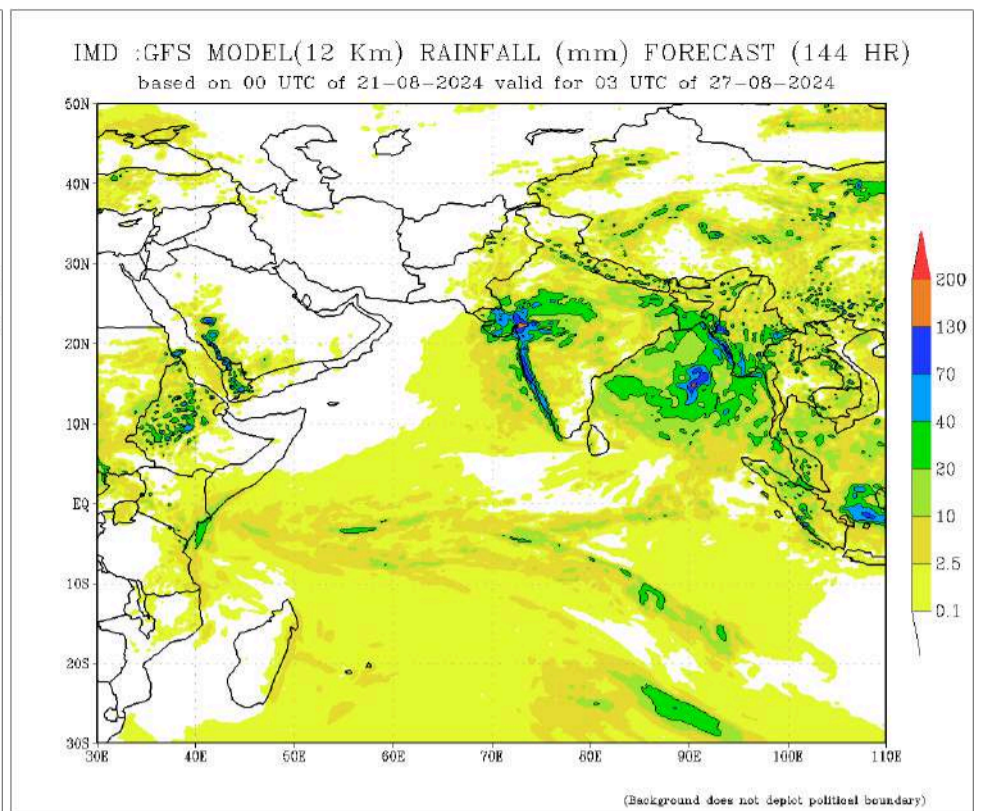
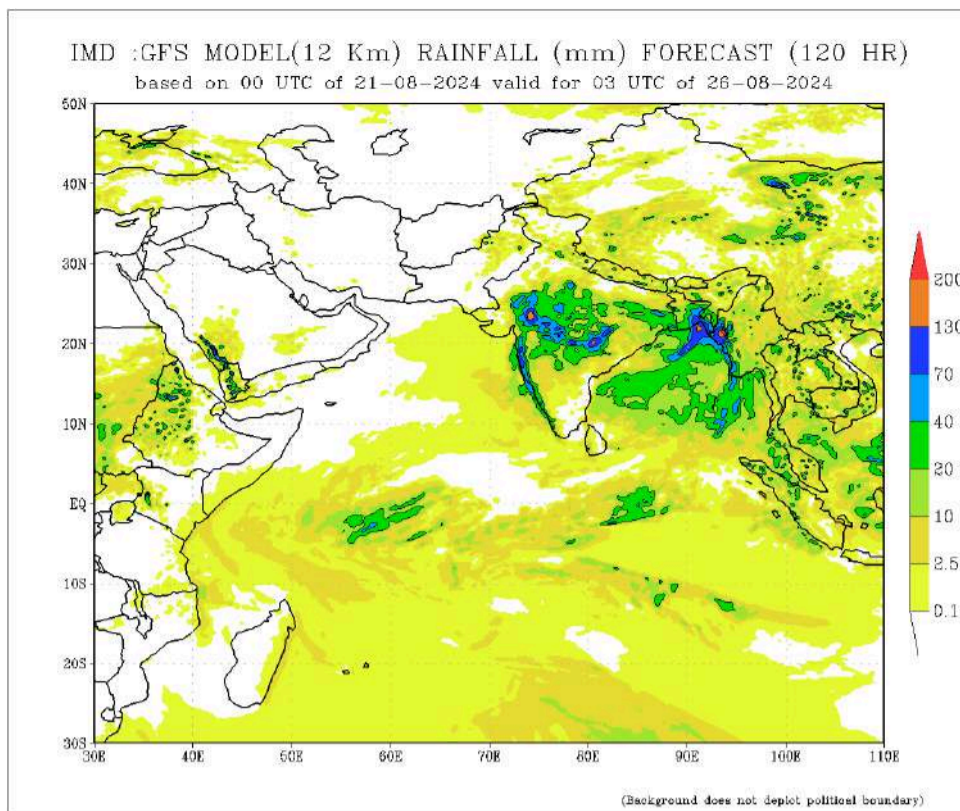


NCEP GFS 1- 14 Day prediction



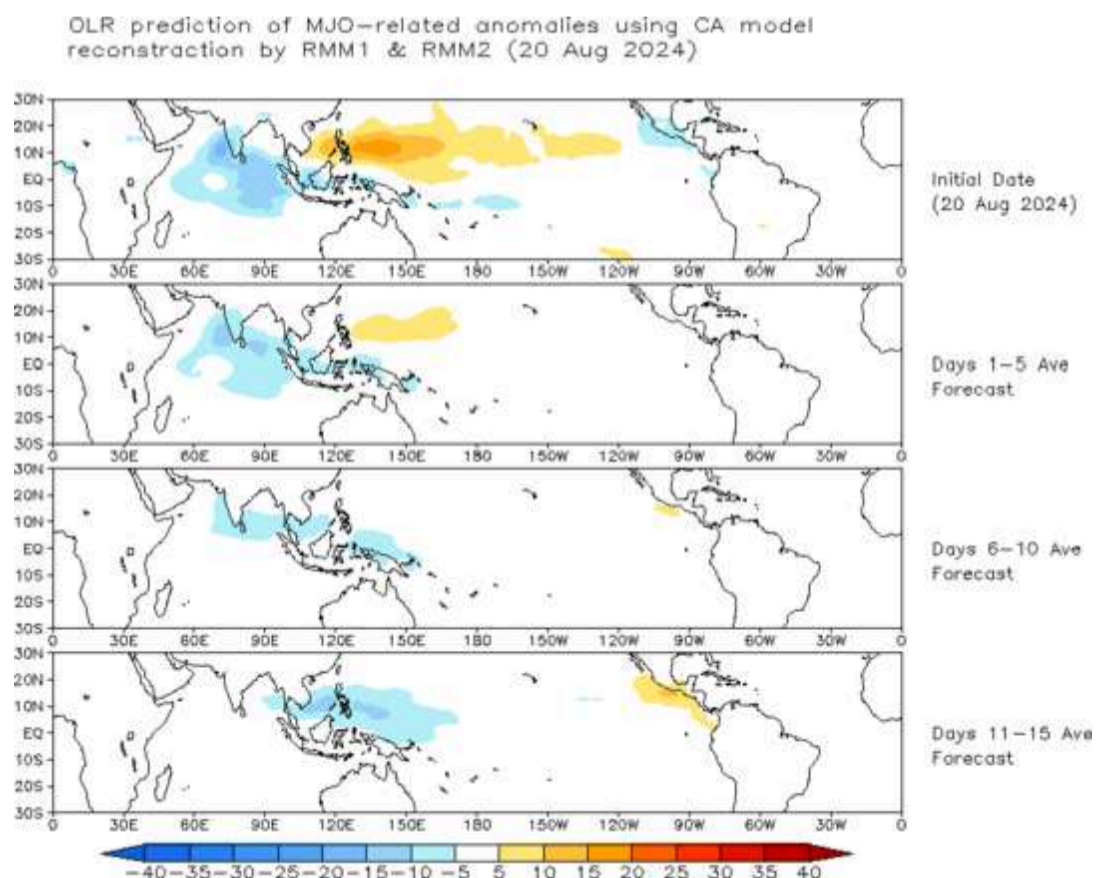
IMD GFS (T574) Model Rainfall Forecast from RMSC New Delhi, India





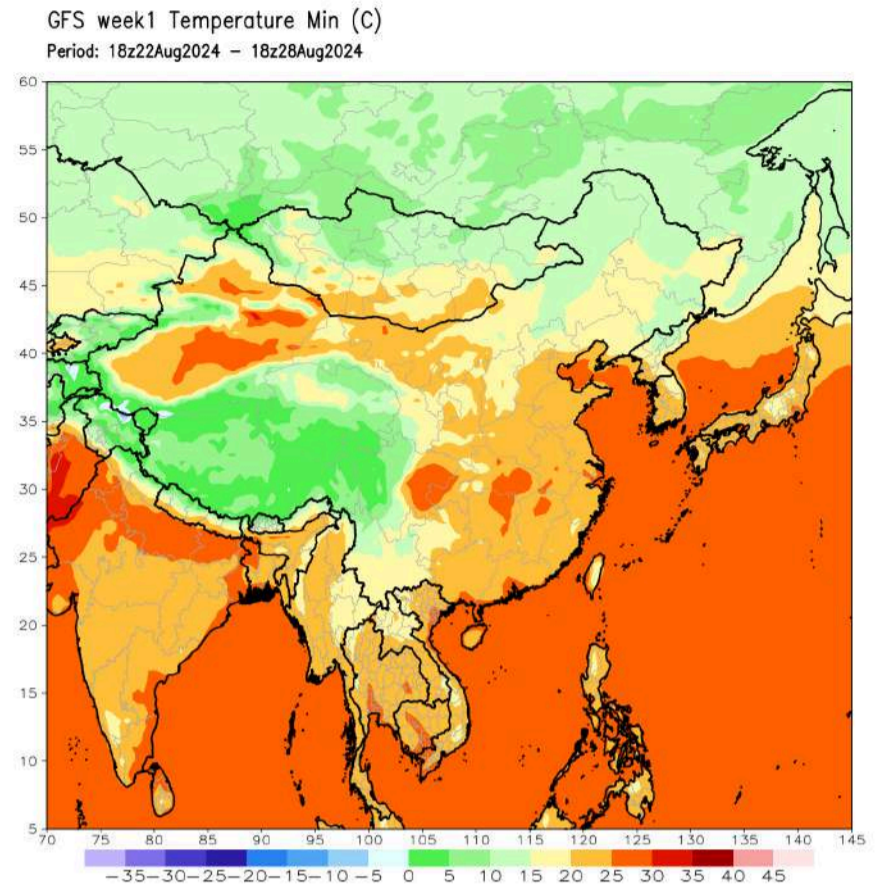
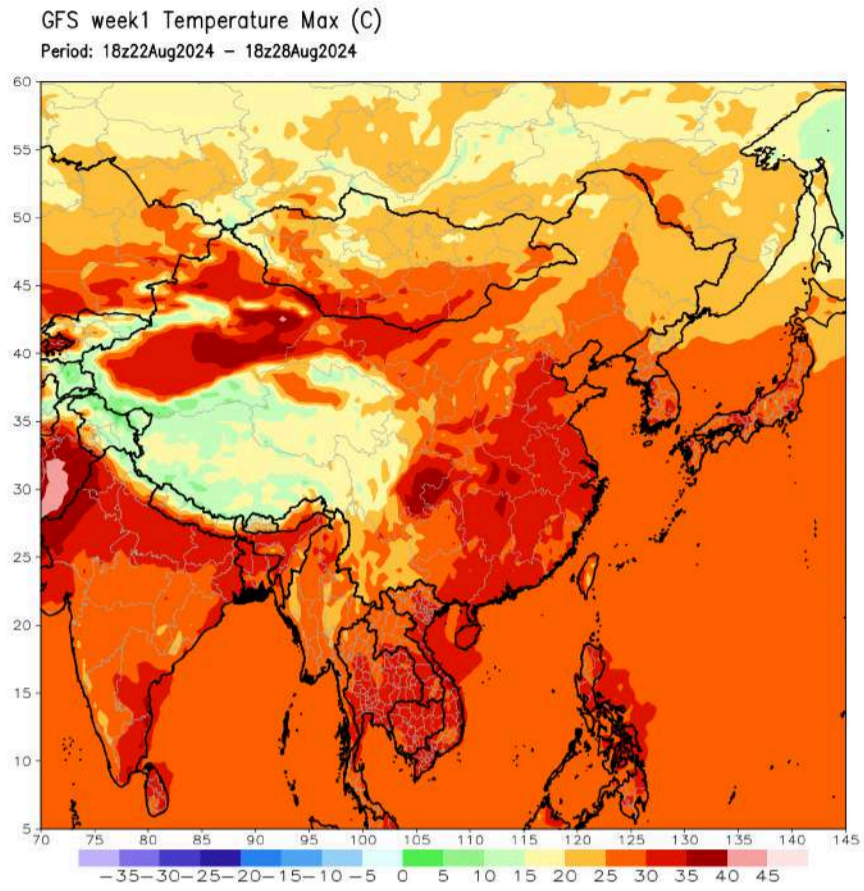
Madden Julian Oscillation (MJO) related Outgoing Longwave Radiation (OLR) Forecast

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 anomalous OLR for the next 15 days from the Constructed Analogue (CA) model forecasts.



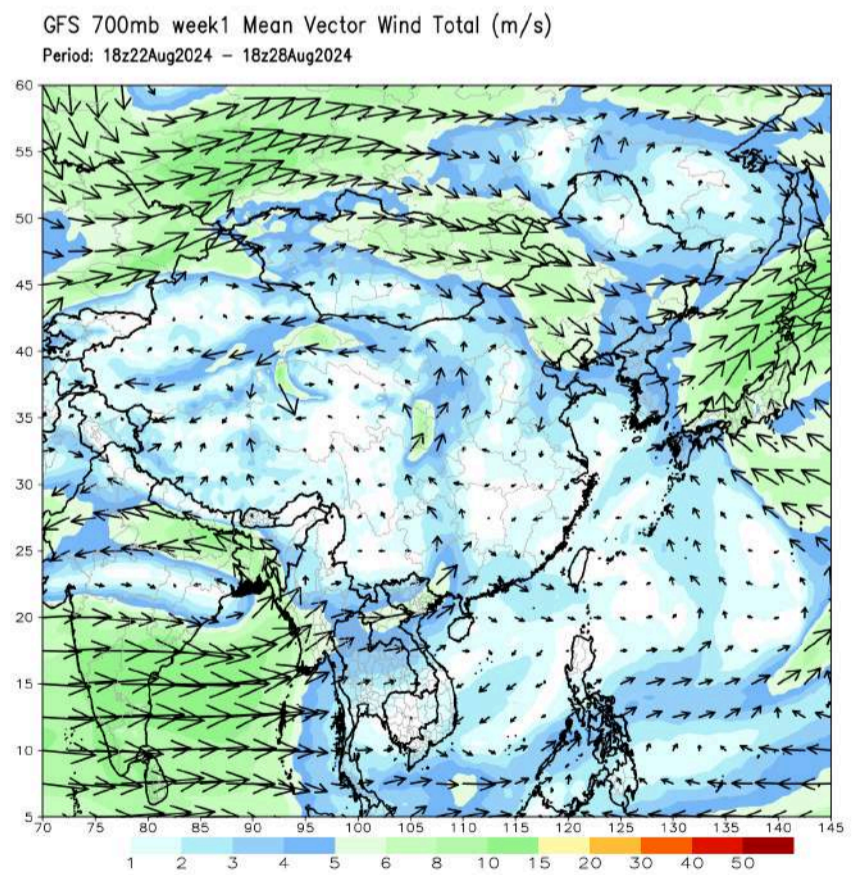
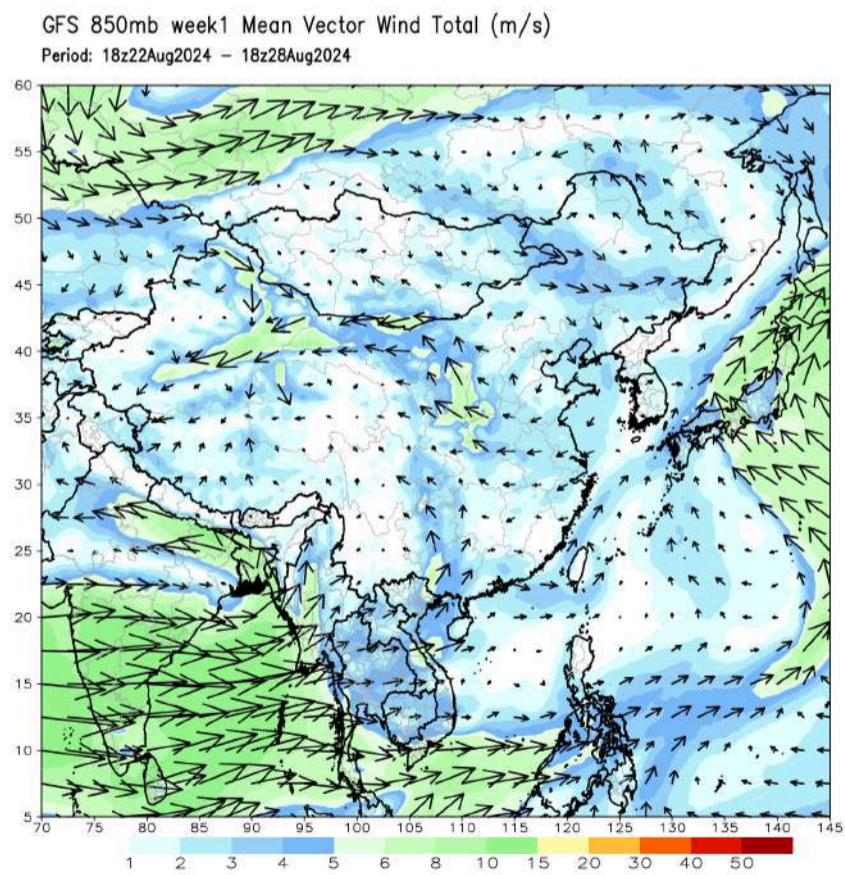
Weekly Temperature Forecast

Weekly Minimum and Maximum Temperature prediction from the GFS model (from NOAA CPC)



Weekly Wind Forecast

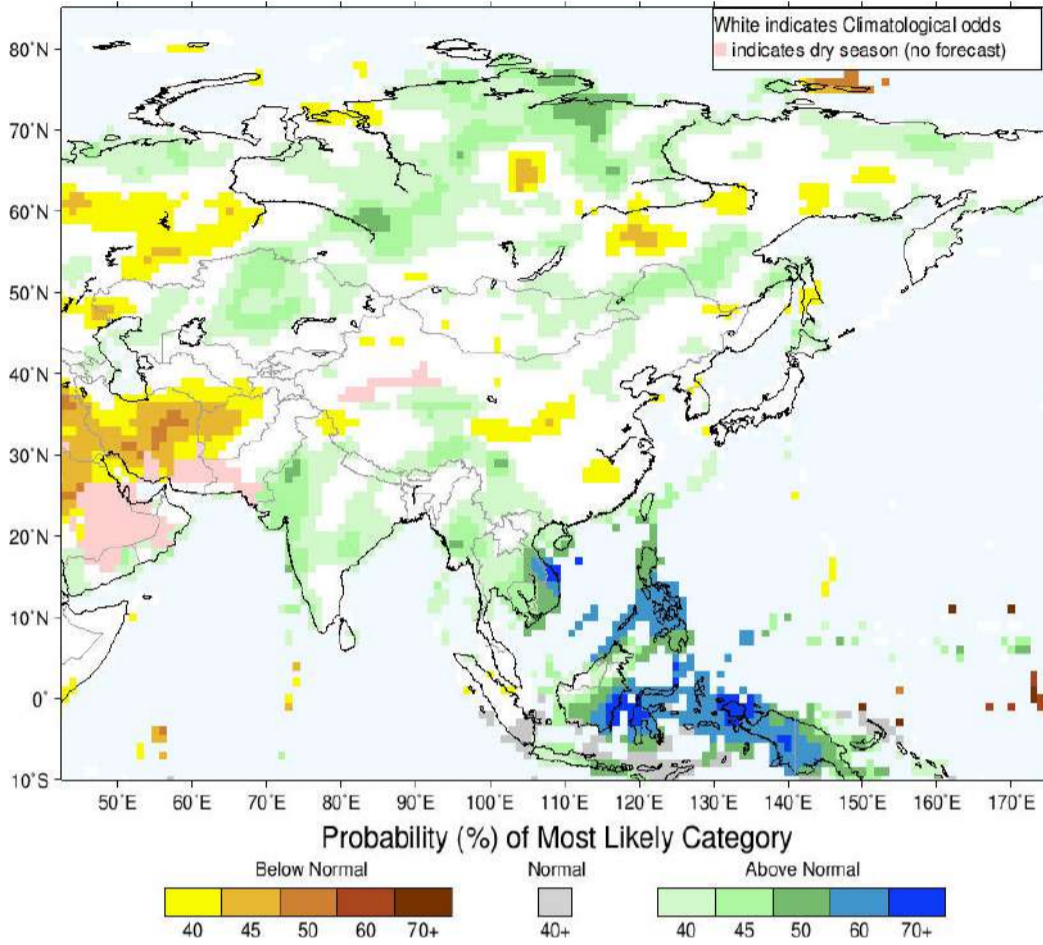
Weekly mean vector wind total prediction from the GFS model at 850 mb (left) and 700 mb (right) levels. (from NOAA CPC)



Seasonal Rainfall and Temperature Forecast

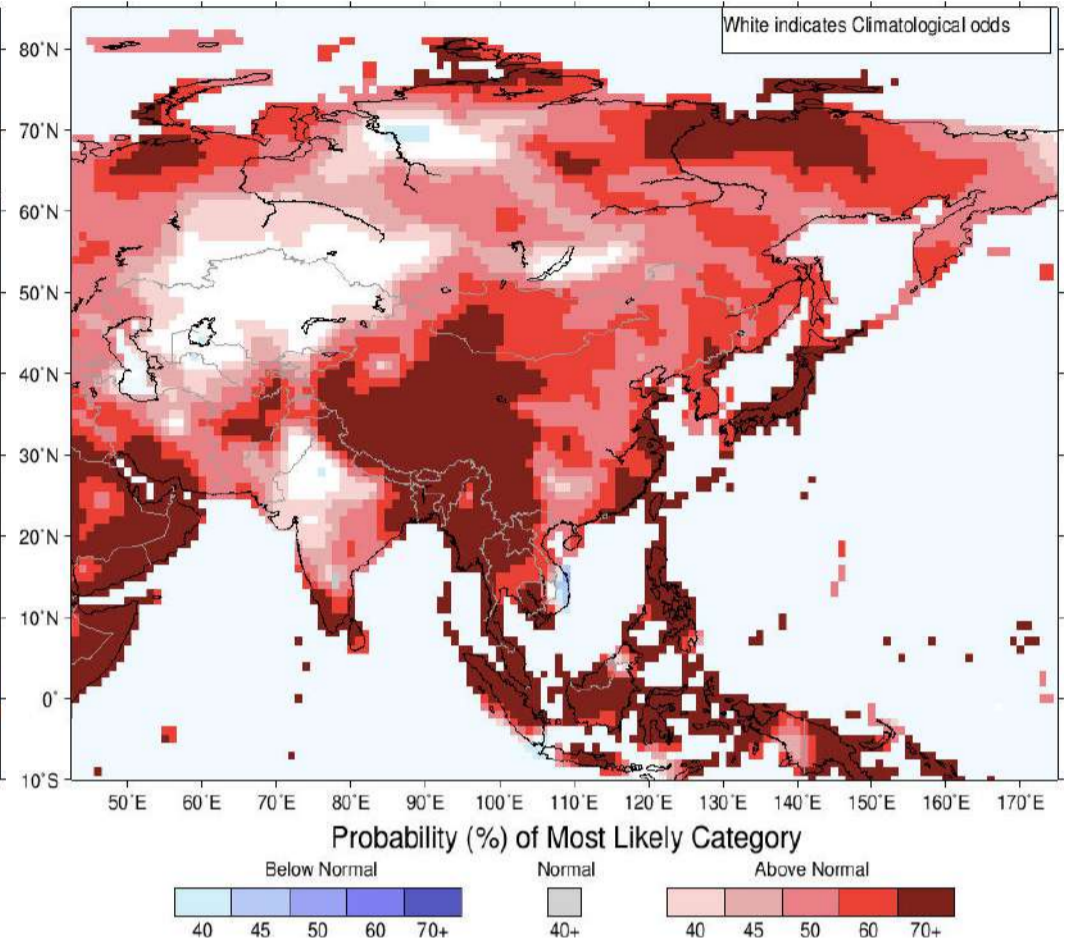
Following is the latest seasonal precipitation and temperature prediction for the next 3 months by the IRI. The color shading indicates the probability of the most dominant tercile -- that is, the tercile having the highest forecast probability. The color bar alongside the map defines these dominant 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 September–October–November 2024, Issued August 2024



Precipitation Forecast

IRI Multi-Model Probability Forecast for Temperature for September–October–November 2024, Issued August 2024



Temperature Forecast

About Us

FECT is a federation of 7 organizations registered in four countries which works in countries across the Indian Ocean Islands and its littoral. Over the last 20 years, we have had operations in Africa, South Asia, South-East Asia but now it is mostly in the Indian Ocean Islands.

Contact us

Digana Village, Rajawella, KY20180, Sri Lanka.
 76/2 Matala Road, Akurana, KY 20850, Sri Lanka.
 +94 81 230 0415
 +94 81 237 6746
 info@fect.lk

Follow Us

