

## HIGHLIGHTS

**Rainfall Prediction**



- During 25 Sep - 1 Oct, high likelihood of Moderate rainfall (25-50 mm) is predicted for the Sabaragamuwa, North Western, Central, Uva, Southern and Western provinces and Light Showers (12.5 mm) is predicted for the Northern, Eastern and North Central provinces of SL.

**Monitored Rainfalls**



- On average, 0.7 mm/day was received in SL and rainfall was concentrated in the Western plains (2.3 mm/day) and hills (2.3 mm/day) for last 8 days.
- On average, 2.7 mm/day was received in the hydro catchments in SL; Lakshapana received the highest daily rainfall (27mm/day) for last 8 days.
- Highest daily rainfall was in Ratnapura on 24 Sep (14.7 mm/day).

**Monitored & Predicted Wind**



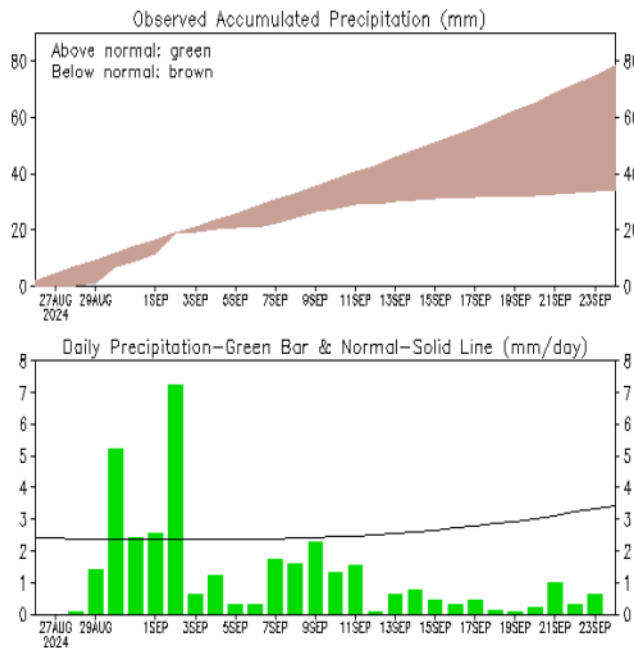
- From 17 Sep - 23 Sep, winds at 850mb (1.5km) were north westerly, reaching up to 15 m/s.
- From 27 Sep - 3 Oct, winds are predicted to be southerly, reaching up to 5 m/s.

**Monitored Sea & Land Temp**



- Average land surface temperature was 31.5°C in the last week with warmer anomalies from seasonal average of 1-3 °C.
- Eastern plains was warmest followed by Northern, Southern and Western plains.
- Sea surface temperature around Sri Lanka was 1.0 °C above average from 3 – 9 Sep 2024.

**Daily Estimates for Accumulated Rainfall from 26 Aug - 24 Sep 2024**  
Sri-Lanka



Data Source: CPC (Gauge-Based) Unified Precipitation (Climatology 1981-2010)  
(updated on 00Z24SEP2024)



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# Monitoring

**Rainfall:** During the last two weeks, there has been Moderate rainfall over the following area: Guruluwana (Ratnapura)

Average Rainfall in the Met stations for the previous week of (19 – 25 Sep) = 0.7 mm/day  
Maximum Daily Rainfall: 14.7 mm & Minimum Daily Rainfall: 0.0 mm.

Region	Average rainfall for 11 – 18 Sep (mm/day)	Average temperature for 11 – 18 Sep (°C)	
		Maximum	Minimum
Northern plains	0.1	34.1	26.7
Eastern hills	0.0	31.1	18.6
Eastern plains	0.0	36.3	25.1
Western hills	2.3	27.4	19.4
Western plain	2.3	31.7	26.8
Southern plains	0.3	33.2	25.3

Region	Average rainfall for 11 – 18 Sep (mm/day)	Daily maximum rainfall for 11 – 18 Sep (mm)	Daily minimum rainfall for 11 – 18 Sep (mm)
All SL	0.7	14.7	0.0
Hydro catchment	2.7	27.1	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 Sri Lanka except some parts of Northern and North Western provinces driven by the warm SSTs anomalies.

## Ocean State (Text Courtesy IRI)

### **Pacific Sea State: September 24, 2024**

ENSO-neutral conditions are present. Equatorial sea surface temperatures (SSTs) are near-to-below-average in the central and eastern Pacific Ocean. La Niña favored to emerge in September-November (71% chance) and is expected to persist through January-March 2025.

### **Indian Ocean State**

Sea surface temperature around Sri Lanka was 1.0°C above average from 3 – 9 Sep 2024.

# Predictions

## Rainfall

### **14-Day prediction: NCEP GFS models**

From 25<sup>th</sup> September – 1<sup>st</sup> October:

Total rainfall by Provinces

Rainfall (mm)	Provinces
45	Southern, Western
35	Sabaragamuwa, North Western
25	Central, Uva
≤15	Northern, Eastern, North Central

## From 2<sup>nd</sup> October - 8<sup>th</sup> October:

### Total rainfall by Provinces

Rainfall (mm)	Provinces
35	Southern, Western, Sabaragamuwa
25	North Western
≤15	Northern, Eastern, North Central, Central, Uva

## MJO-based OLR predictions

### For the next 15 days:

MJO shall slightly suppress the rainfall during 25 Sep – 9 Oct for Sri Lanka.

## Interpretation

### Monitoring

For the first two weeks of September 2024, we had lower rainfall than the average rainfall except Sep 1 and Sep 2. The Indian Oceanic Dome developed, leading to decreased temperature around SL and possible rainfall to the East of SL. The wind was flowing North Westerly and was quite high.

### Predictions

**Rainfall:** During the next week (25 Sep - 1 Oct), Moderate rainfall (25-50 mm) is predicted for the Sabaragamuwa, North Western, Central, Uva, Southern and Western provinces and Light Showers (12.5 mm) is predicted for the Northern, Eastern and North Central provinces.

**Temperatures:** The temperature will remain above normal for the Northern, Eastern, North Central and Uva provinces during 26 Sep – 2 Oct.

**Teleconnections:** MJO shall slightly suppress the rainfall during 25 Sep – 9 Oct for Sri Lanka.

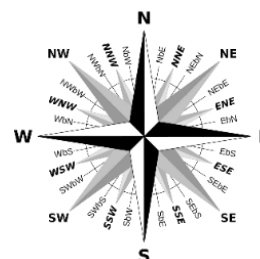
**Seasonal Precipitation:** The precipitation forecast for the October-November-December, 2024 season shows a 40% or more tendency toward above-normal precipitation for the Northern part of the country.

## Terminology

### Weekly Rainfall

	Rainfall (mm/week)
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

### Wind Direction



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



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## Weekly Climate Bulletin for Sri Lanka

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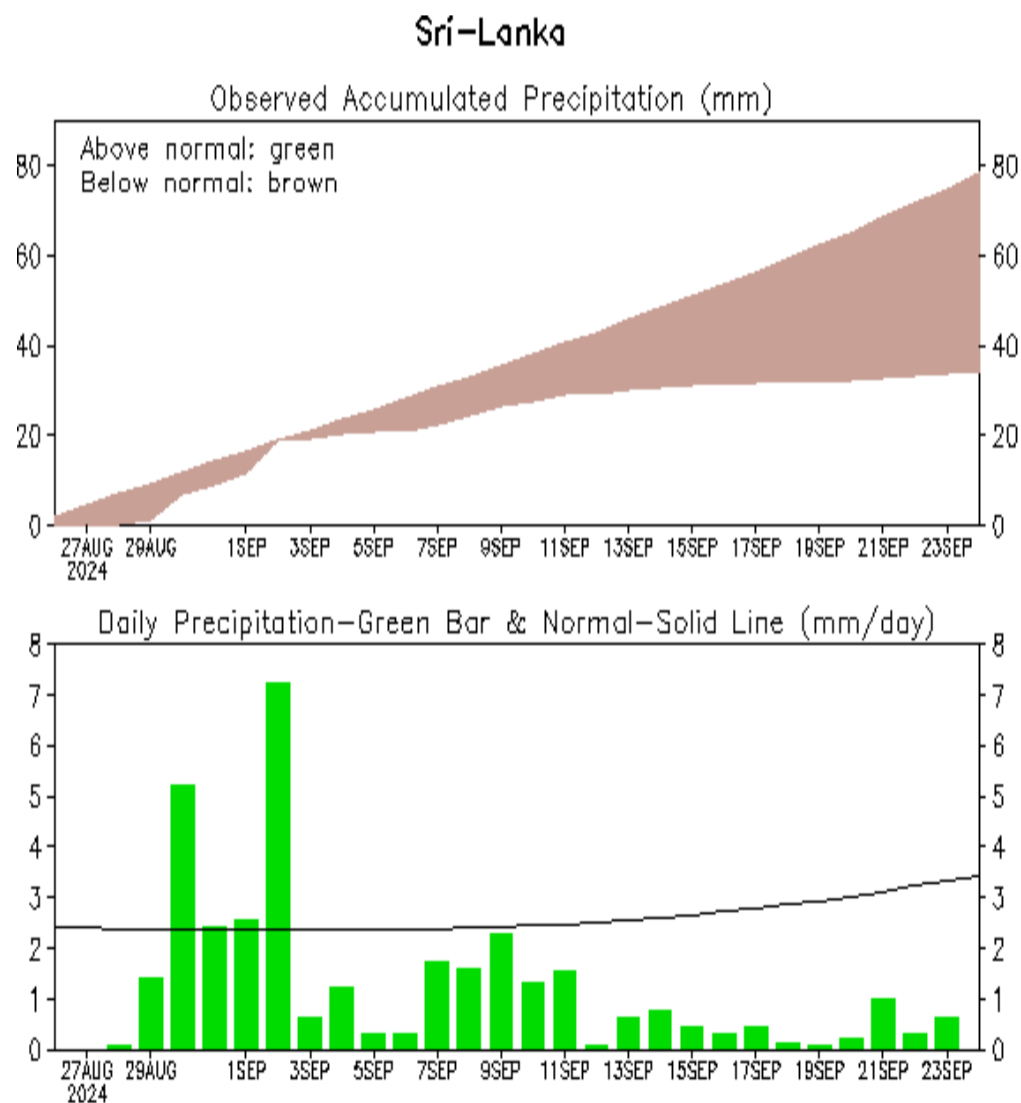
#### 2. Predictions

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### MONITORING

#### Daily Rainfall Monitoring

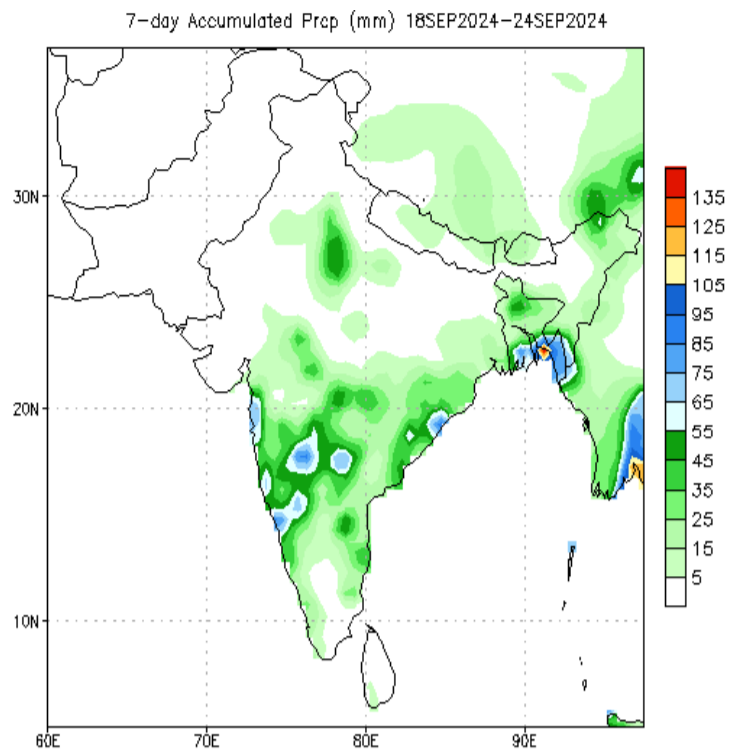
The following figure shows the observed accumulated rainfall (top) and daily observed rainfall (bottom) in Sri Lanka in the last 30 days.



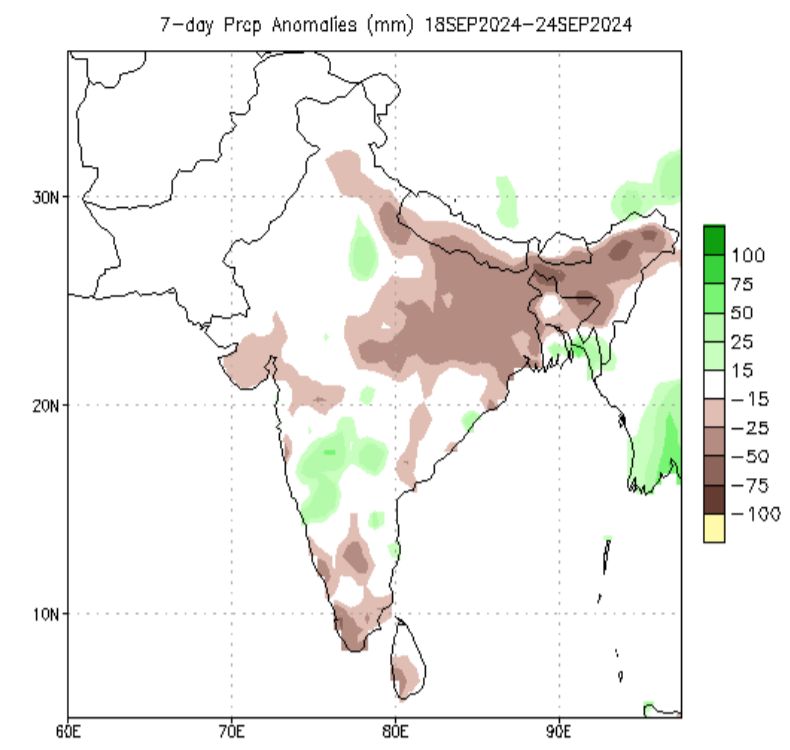
Data Source: CPC (Gauge-Based) Unified Precipitation (Climatology 1981–2010)  
(updated on 00Z24SEP2024)

## 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.



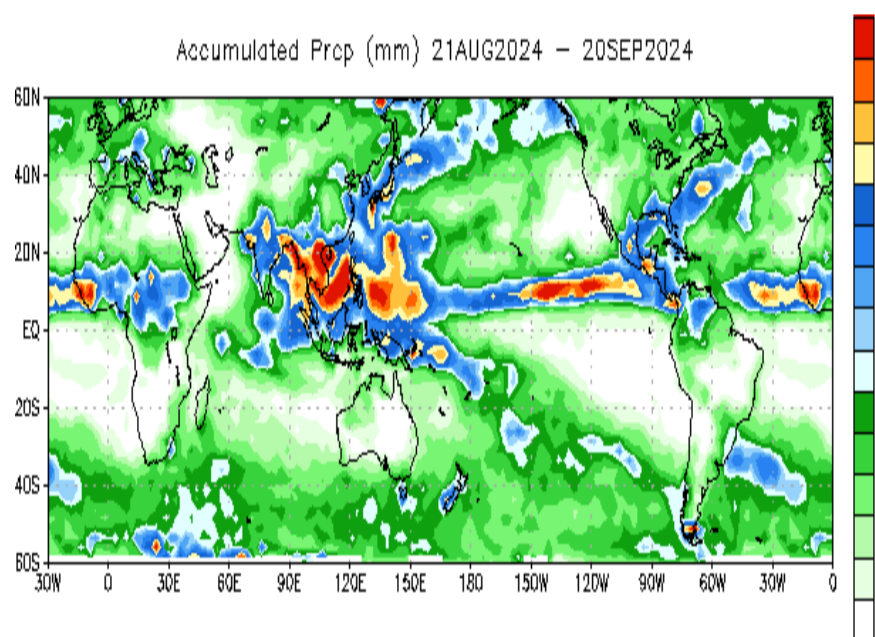
Data Source: CPC Unified (gauge-based & 0.5x0.5 deg resolution) Precipitation Analysis



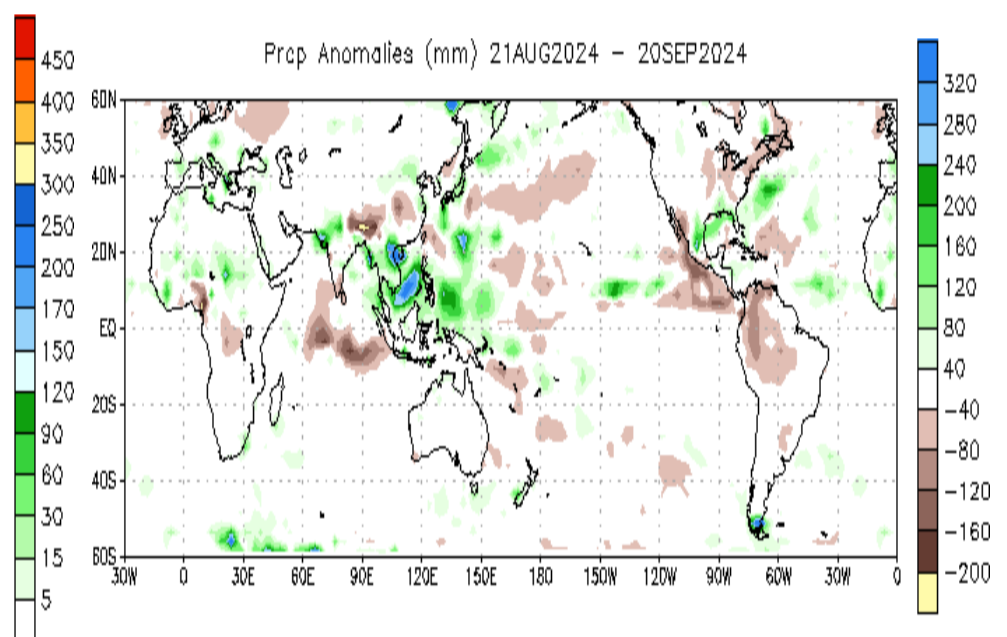
Data Source: CPC Unified (gauge-based & 0.5x0.5 deg resolution) Precipitation Analysis Climatology (1991-2020)

## 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

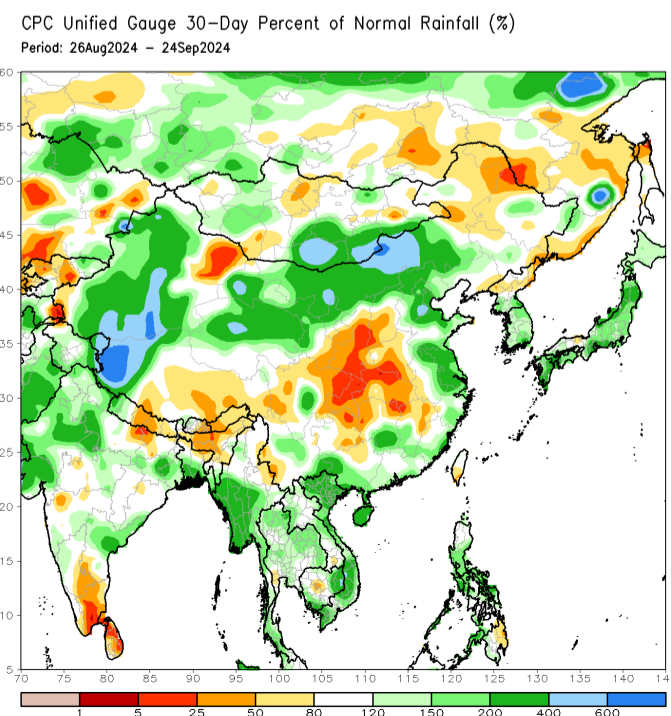
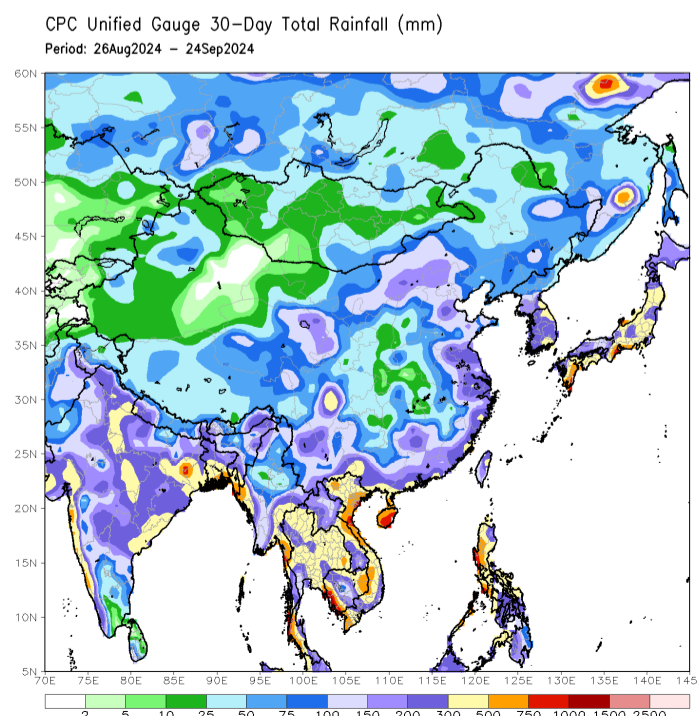


Data Source: NCEP CMAP Precipitation Climatology (1991-2020)

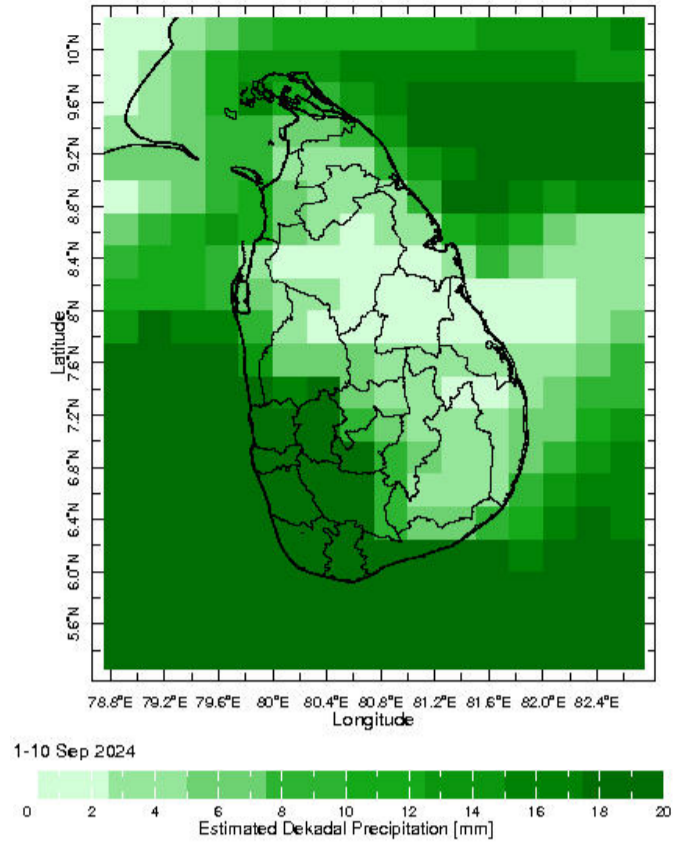
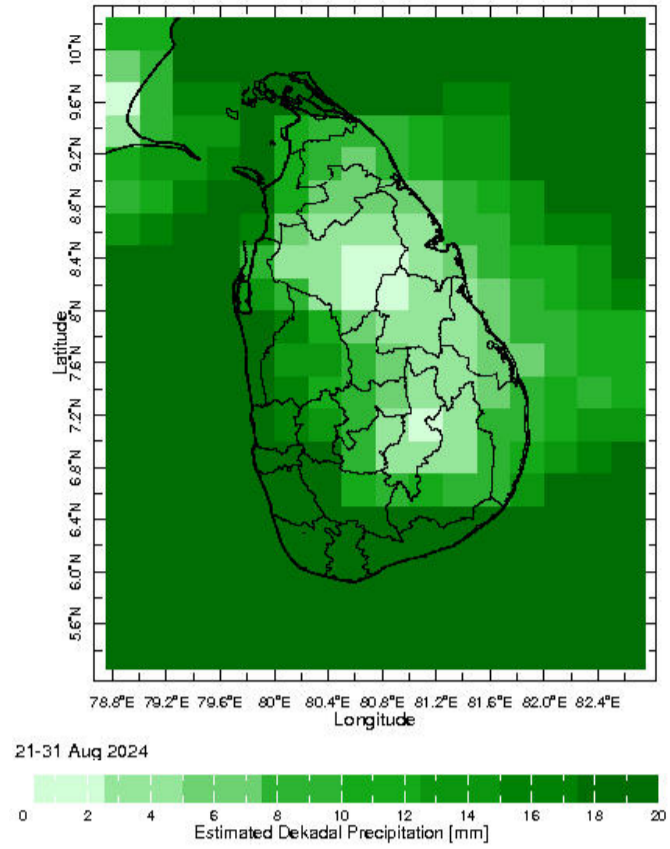
### Monthly Total

### Monthly Anomaly

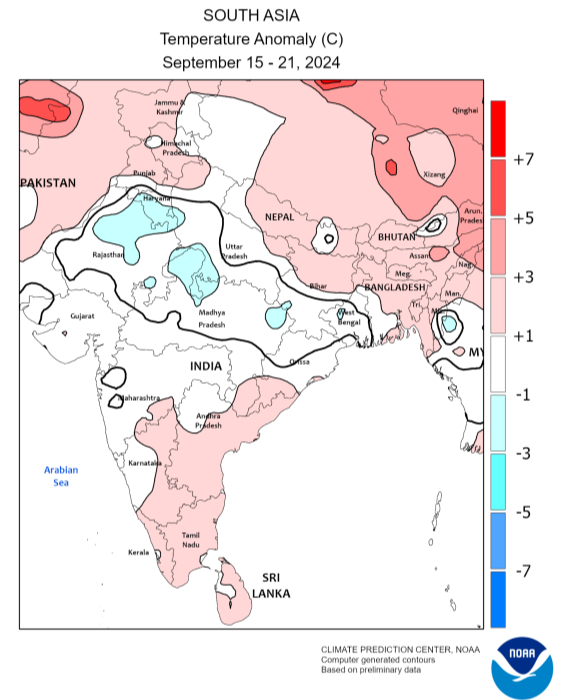
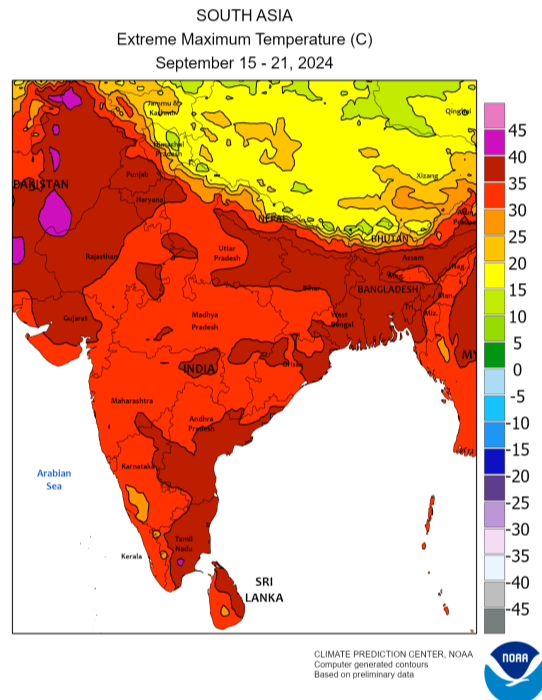
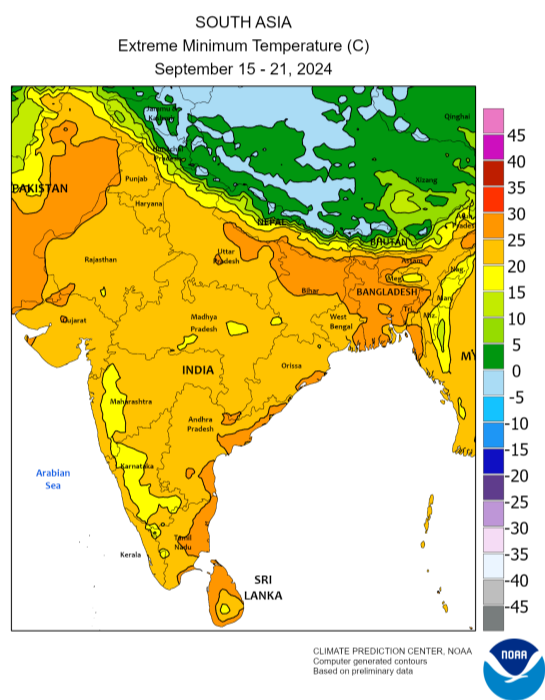
The figure in the top-left shows the total rainfall in the past 30 days from CPC Unified Precipitation Analysis while the figure in the top-right shows the total rainfall for the same period from RFE 2.0 Satellite Rainfall Estimates. The bottom two figures show the percentage of rainfall received in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



## Dekadal (10 Day) Satellite Derived Rainfall Estimates

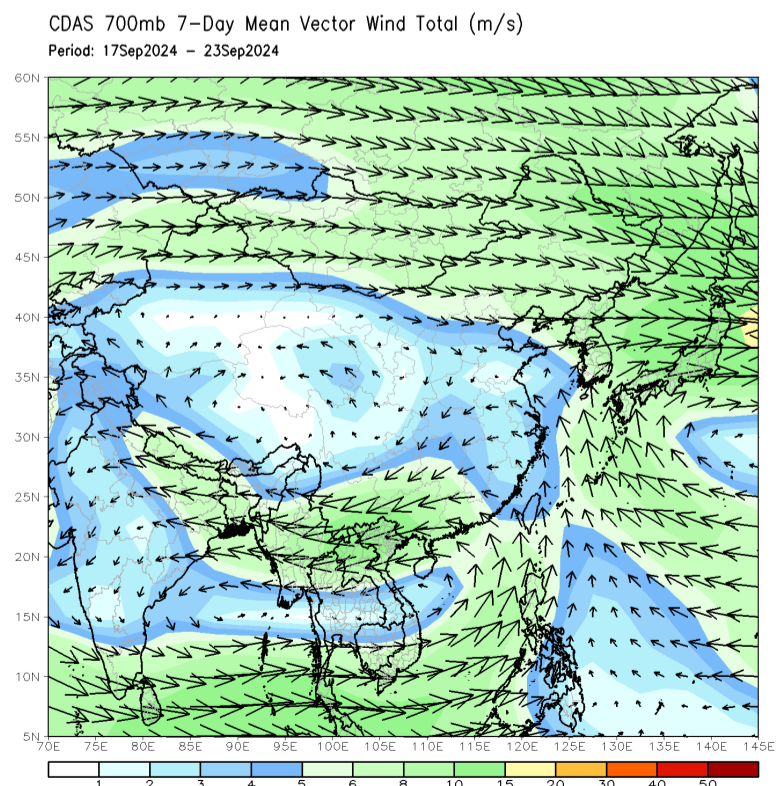
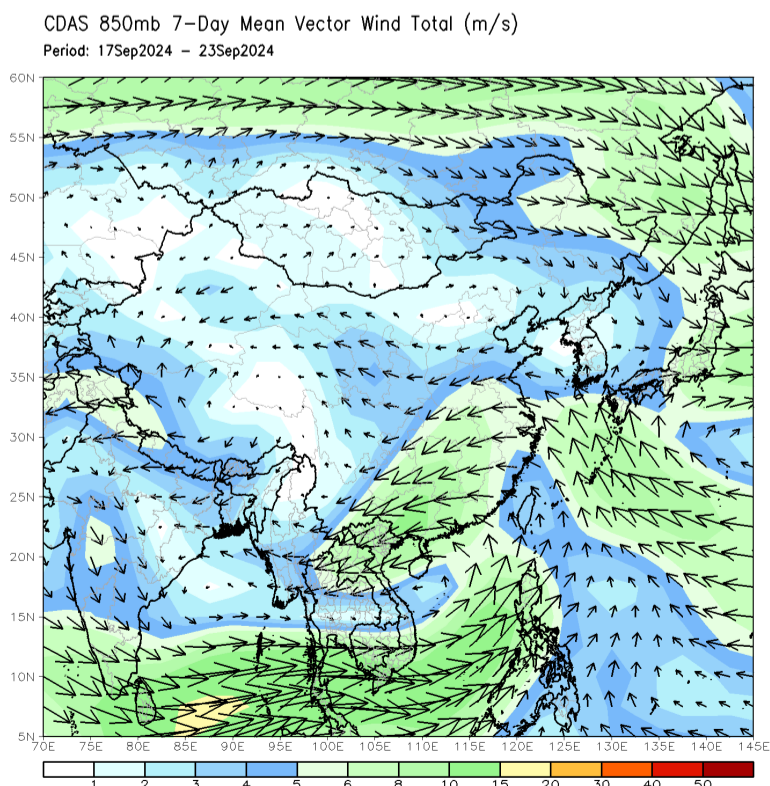


## Weekly Temperature Monitoring



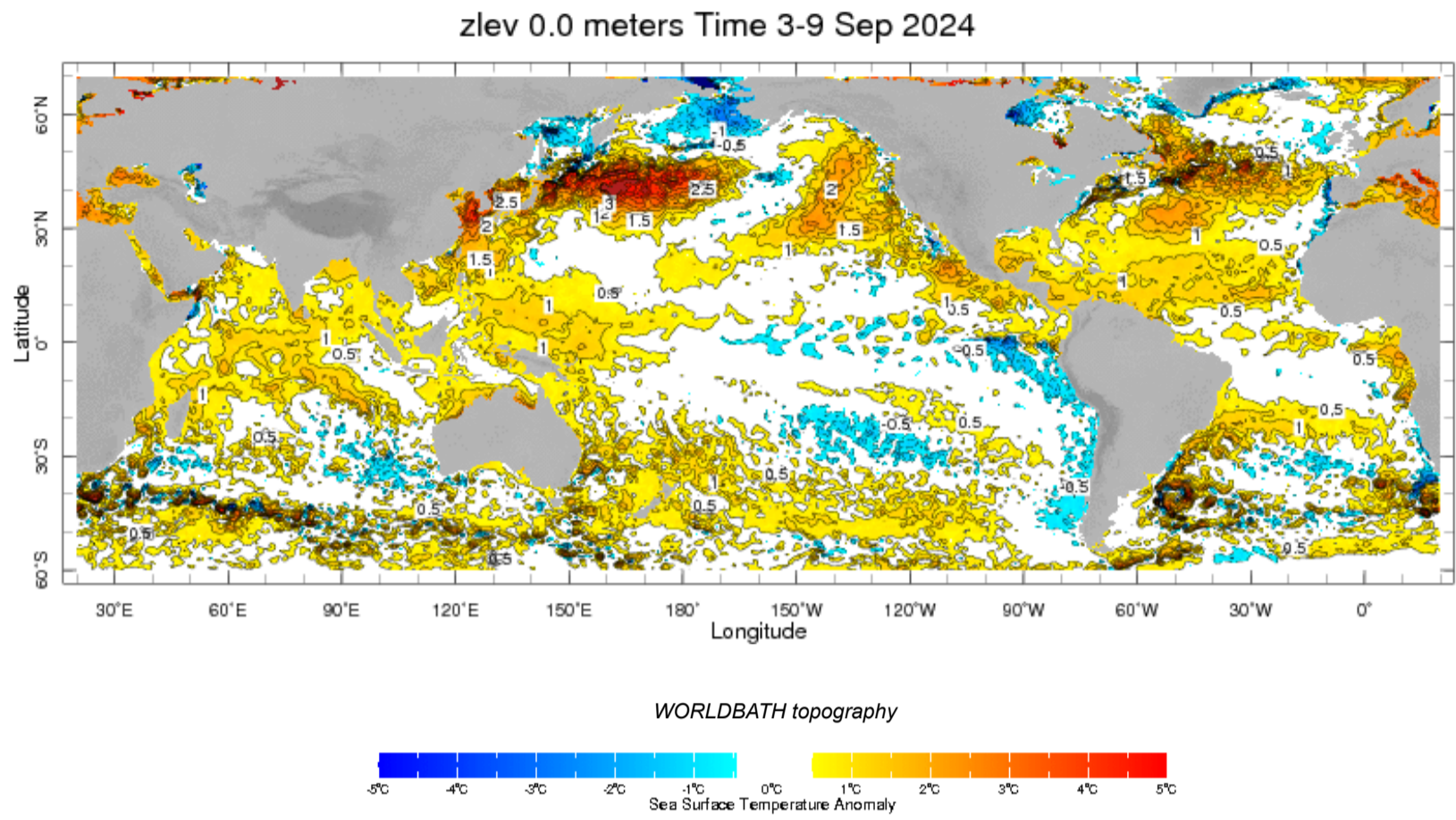
## Weekly Wind Monitoring

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.

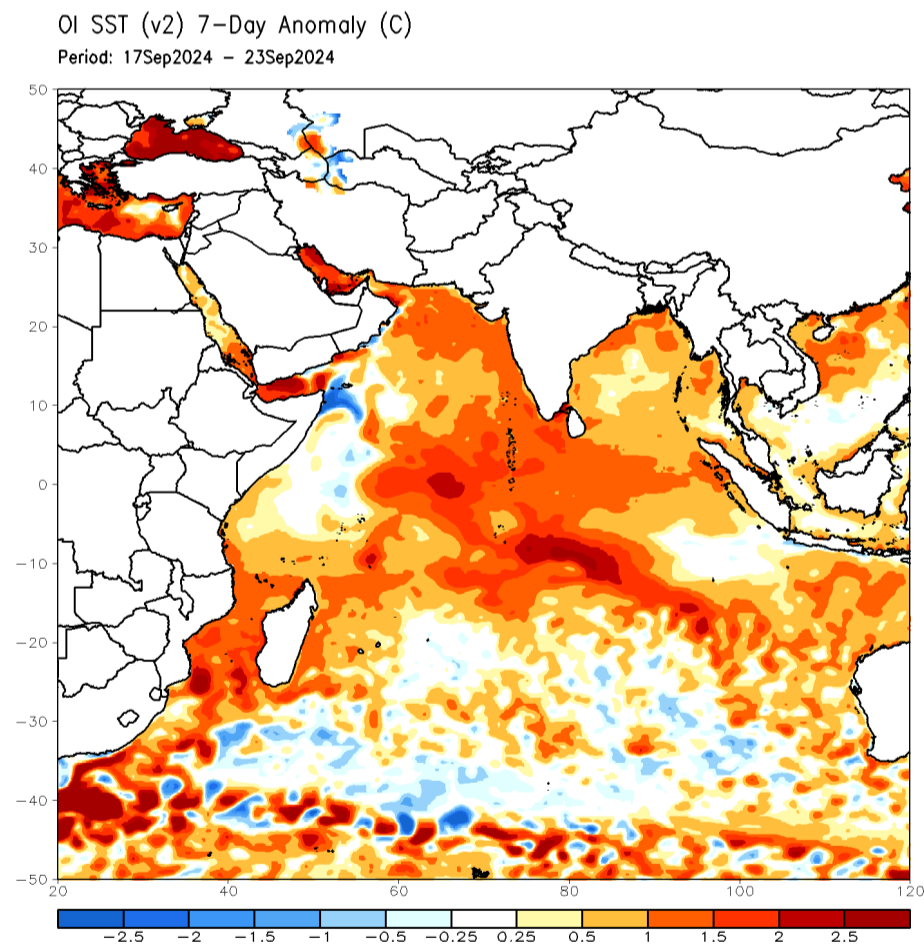


## Weekly Average SST Anomalies

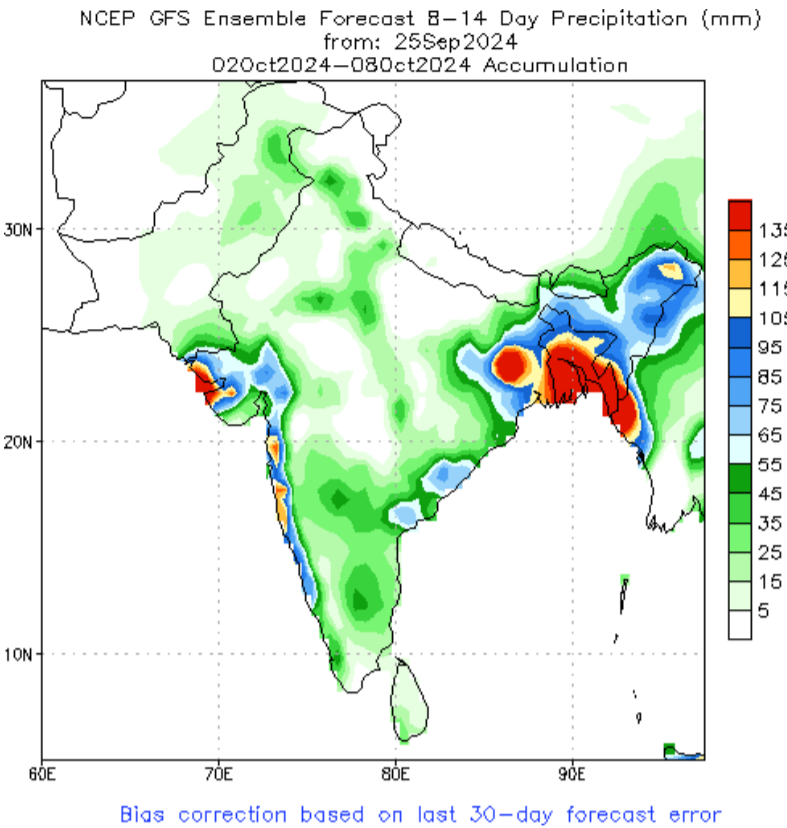
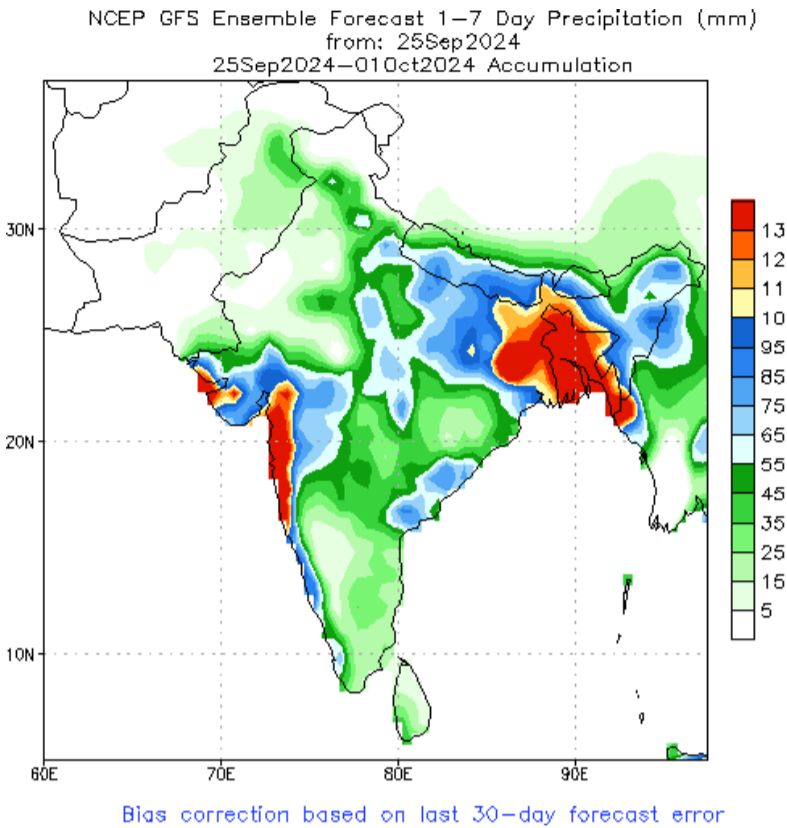
Weekly average Sea Surface Temperature (SST) anomaly in the world from NOAA NCEP



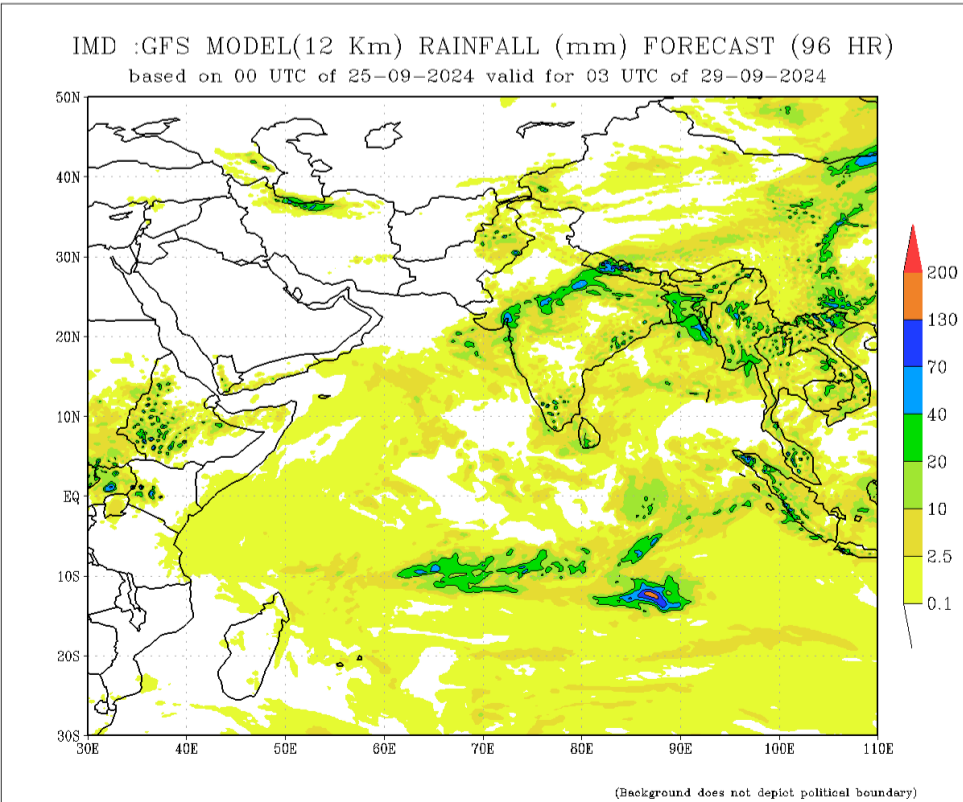
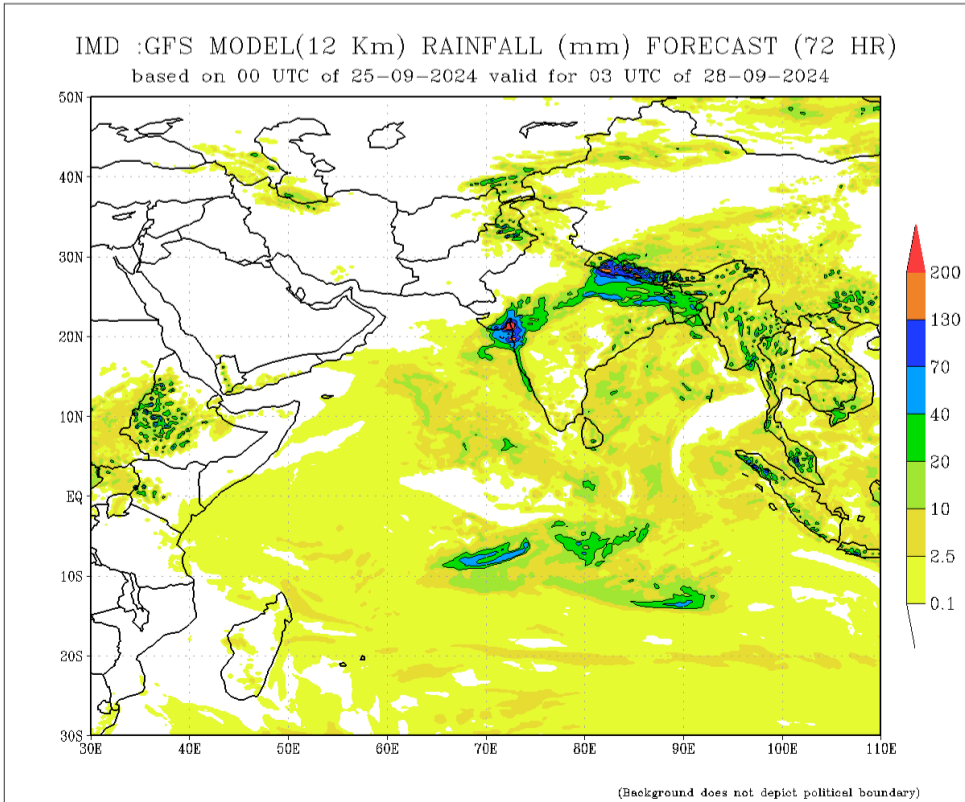
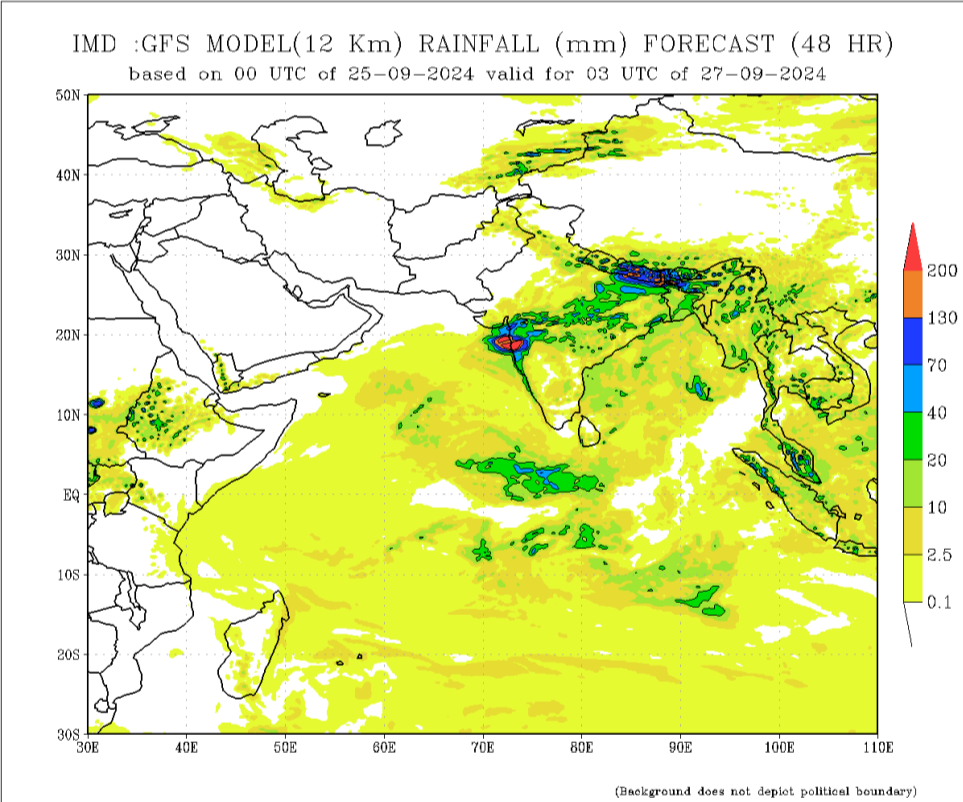
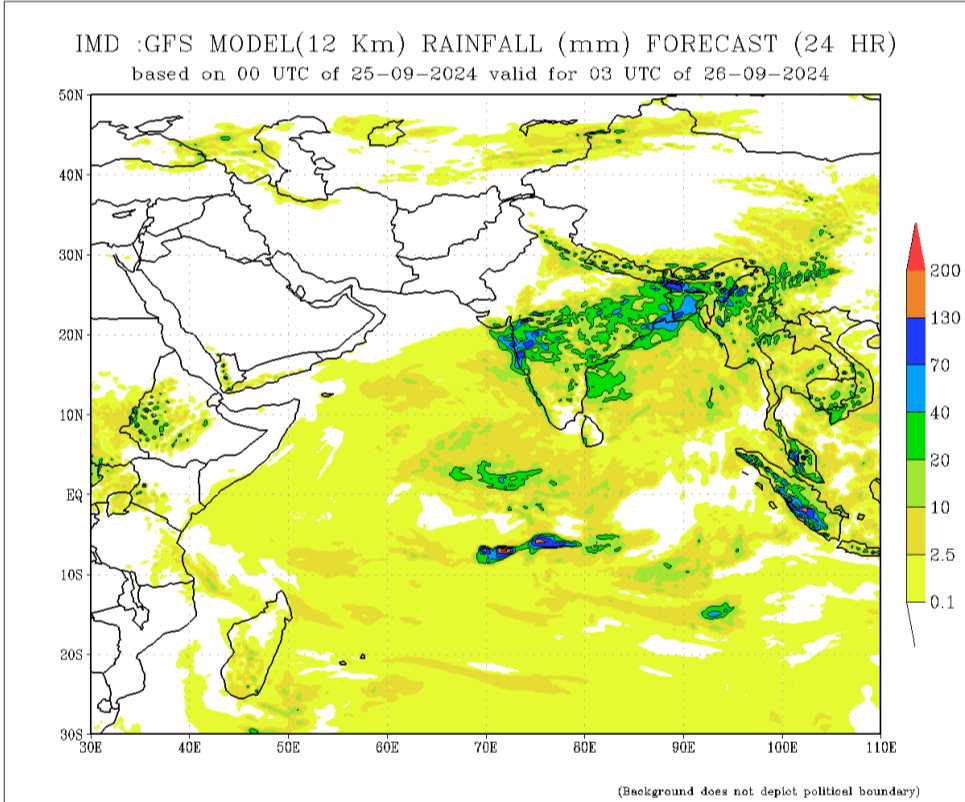
Optimum Interpolated Sea Surface Temperature Anomaly in the Indian Ocean from NOAA CPC



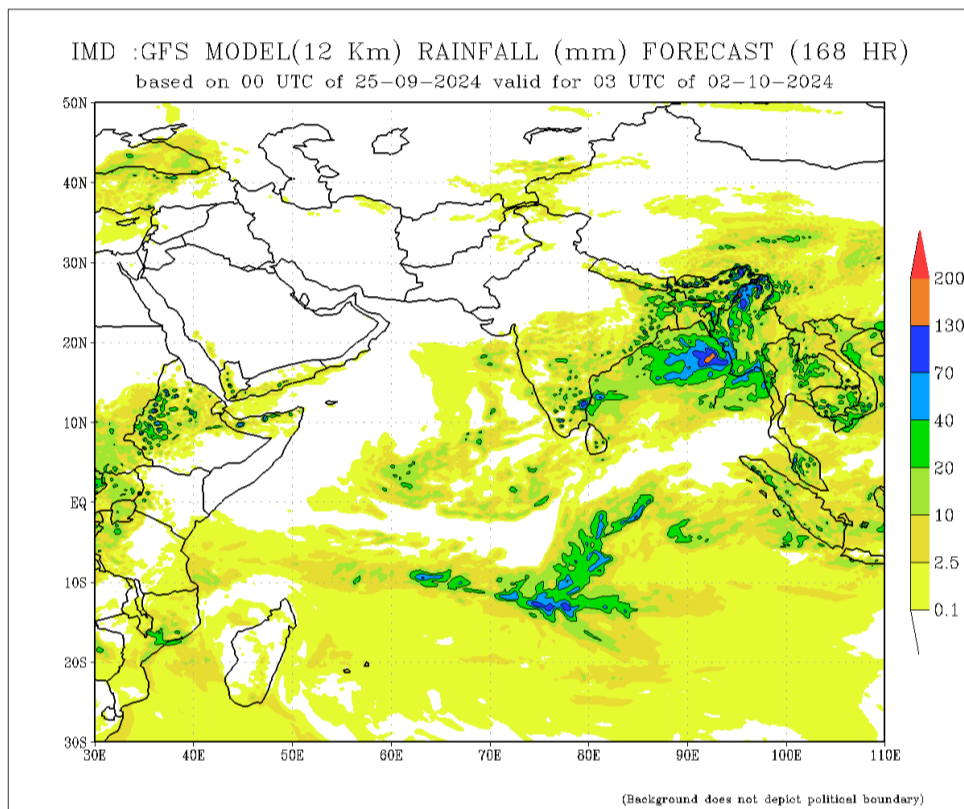
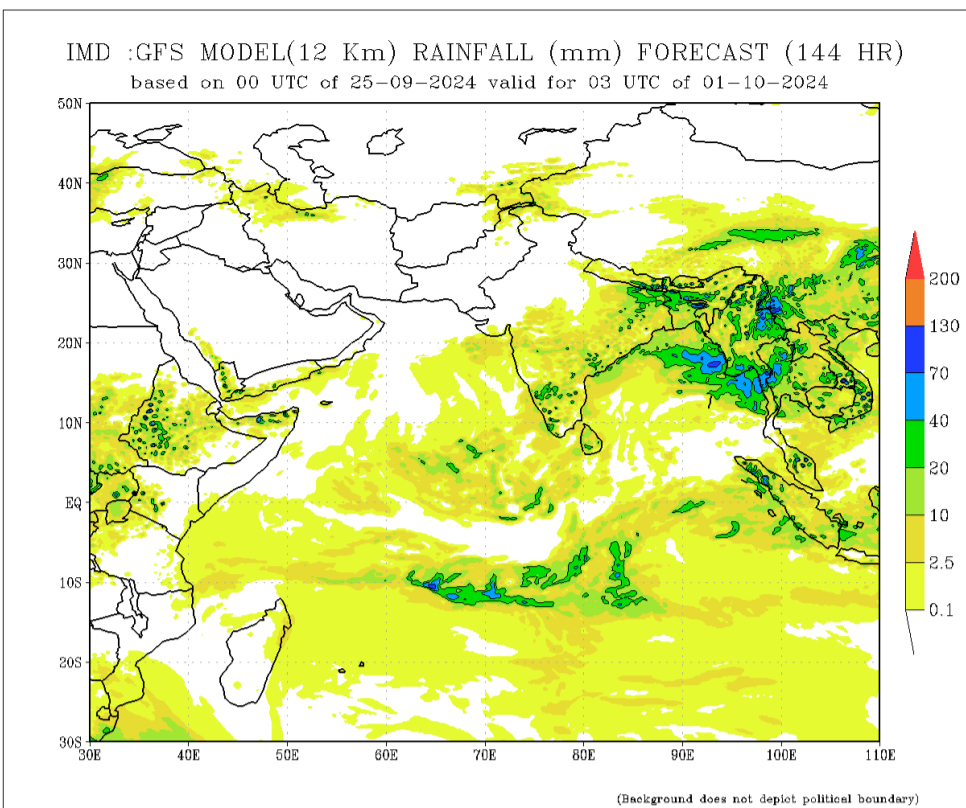
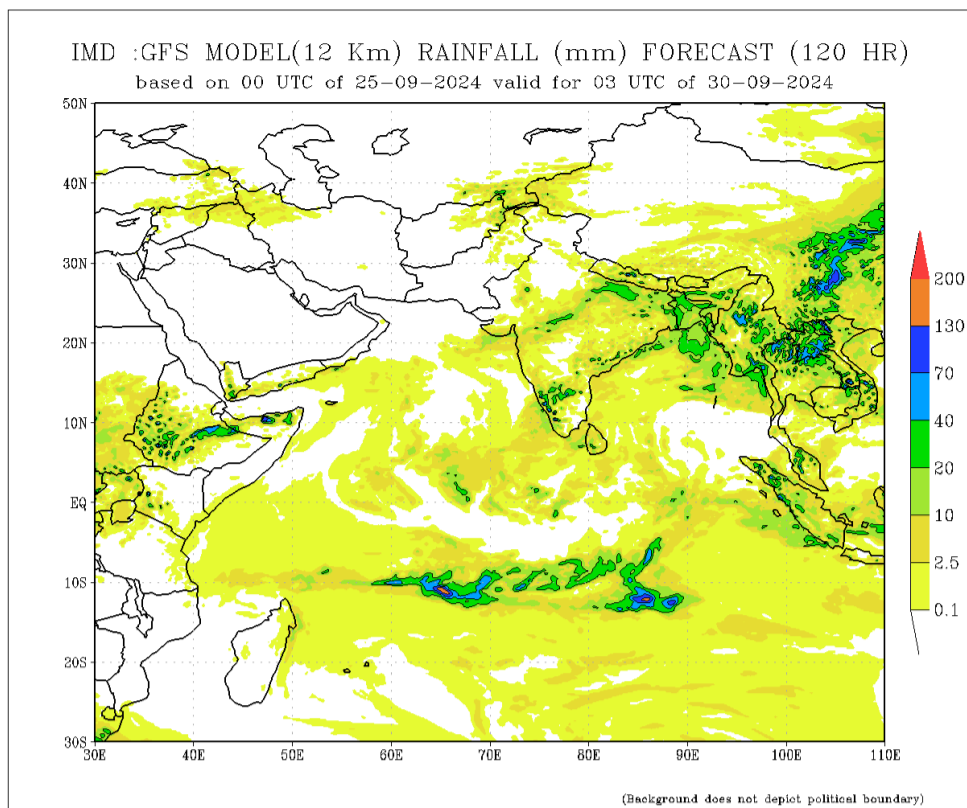
NCEP GFS 1- 14 Day prediction



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

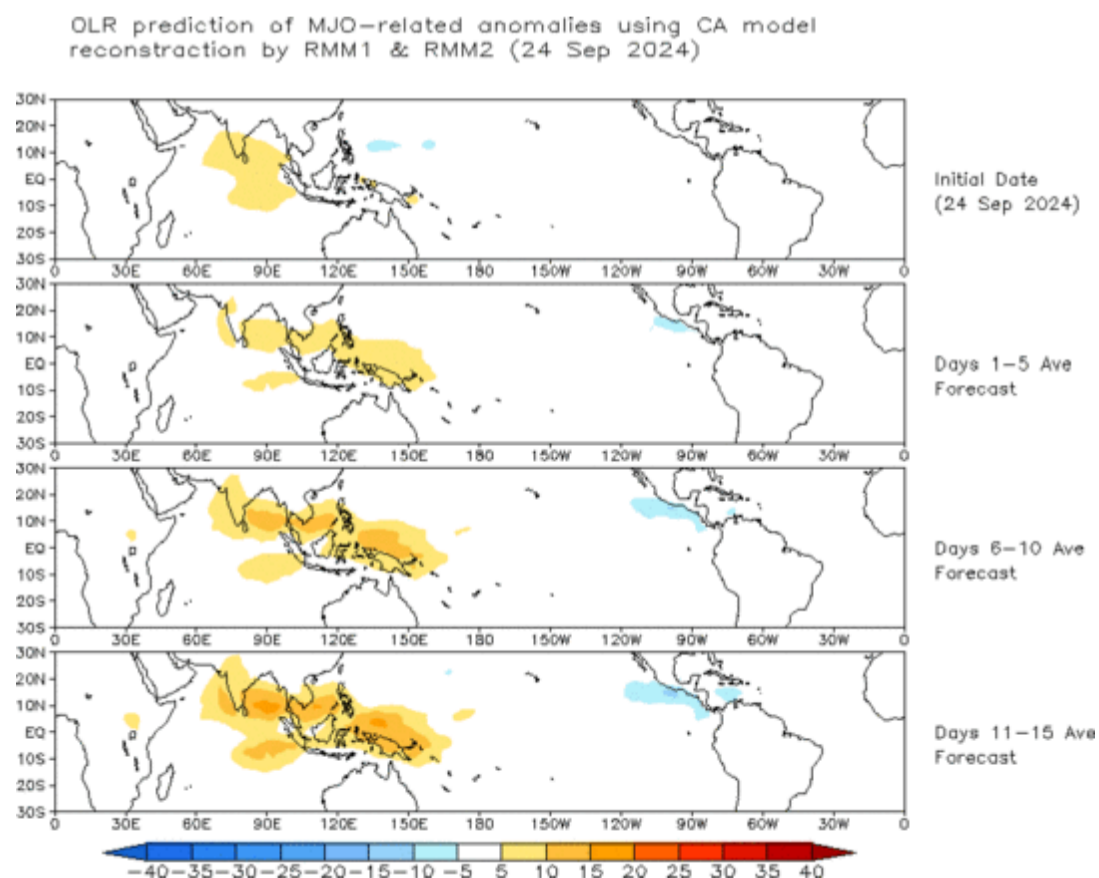






### Madden Julian Oscillation (MJO) related Outgoing Longwave Radiation (OLR) Forecast

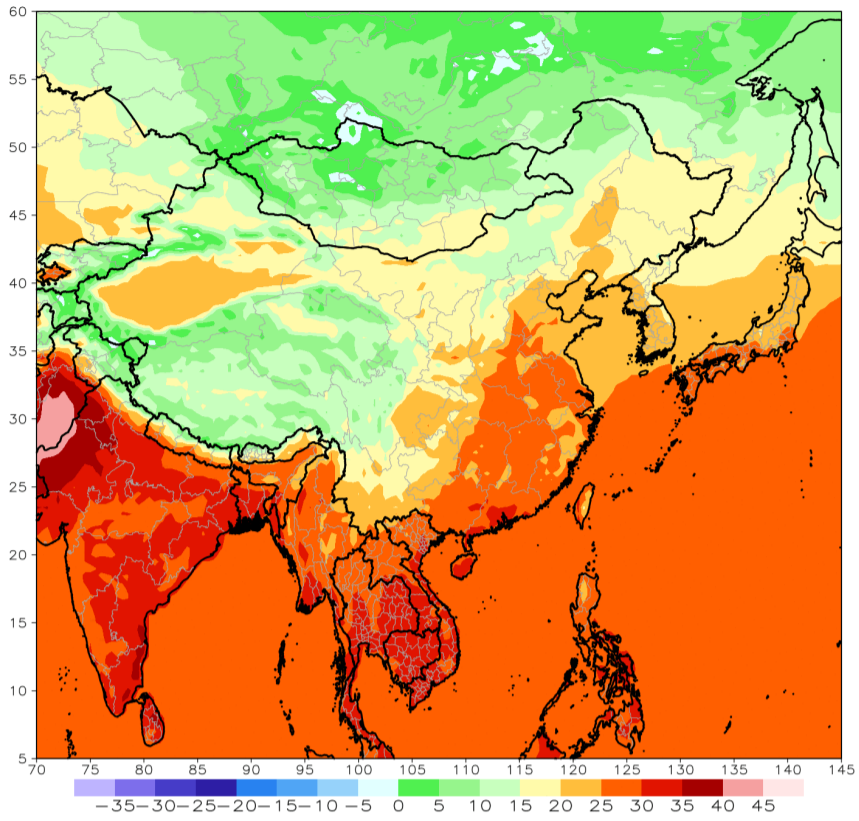
The Outgoing Longwave Radiation (OLR) is a proxy for rainfall. This can be used to identify convective rain clouds based on the MJO phase. Violet and Blue shading indicates enhanced tropical weather and Orange shading indicates suppressed conditions. The following figure shows the forecasts of MJO associated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



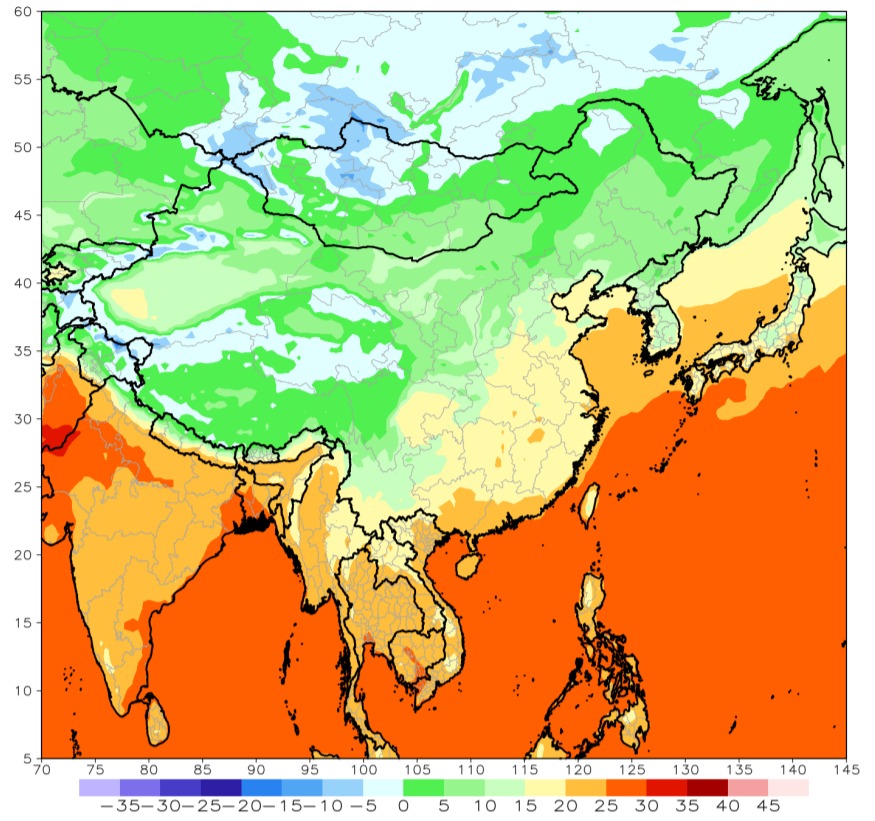
## Weekly Temperature Forecast

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

GFS week1 Temperature Max (C)  
Period: 18z26Sep2024 - 18z02Oct2024



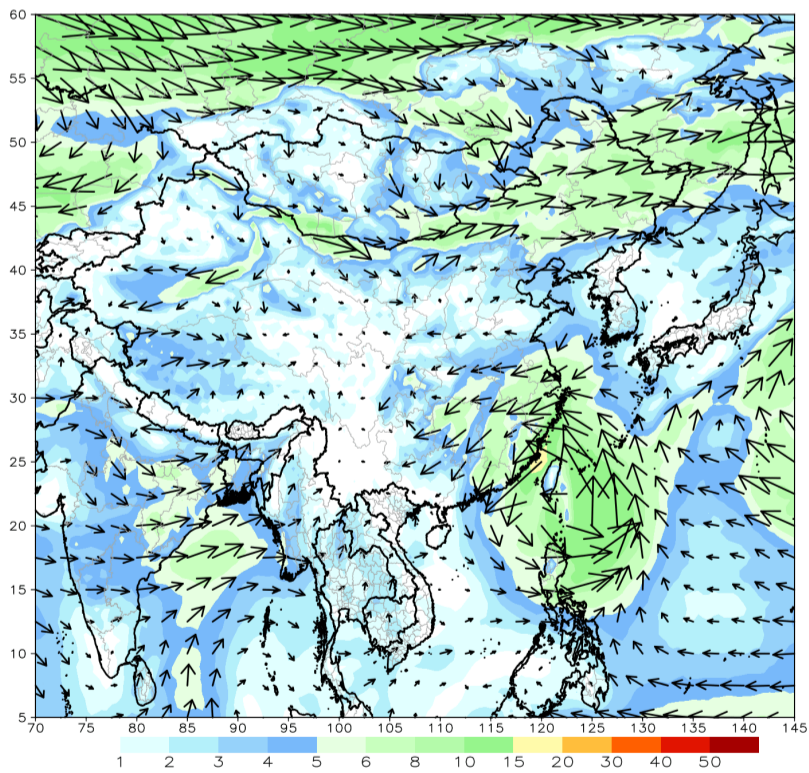
GFS week1 Temperature Min (C)  
Period: 18z26Sep2024 - 18z02Oct2024



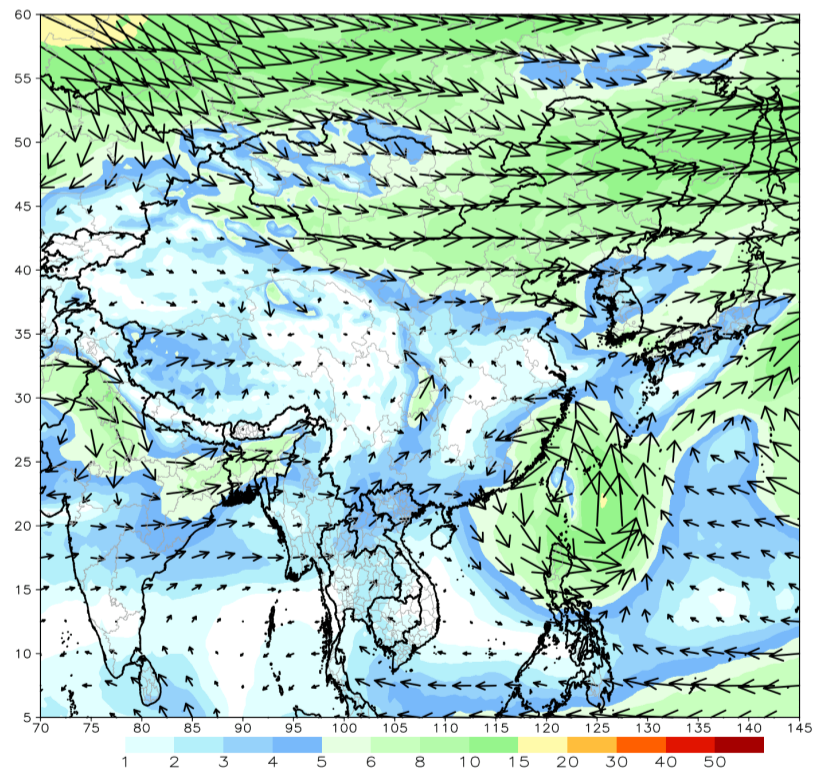
## Weekly Wind Forecast

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: 18z26Sep2024 - 18z02Oct2024



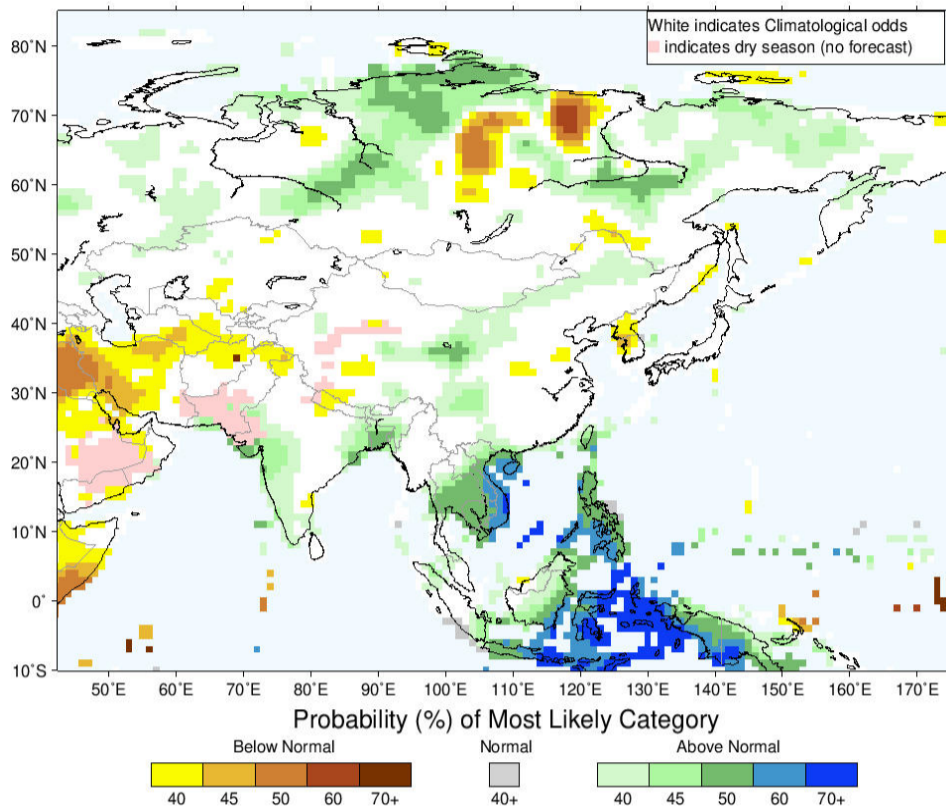
GFS 700mb week1 Mean Vector Wind Total (m/s)  
Period: 18z26Sep2024 - 18z02Oct2024



## Seasonal Rainfall and Temperature Forecast

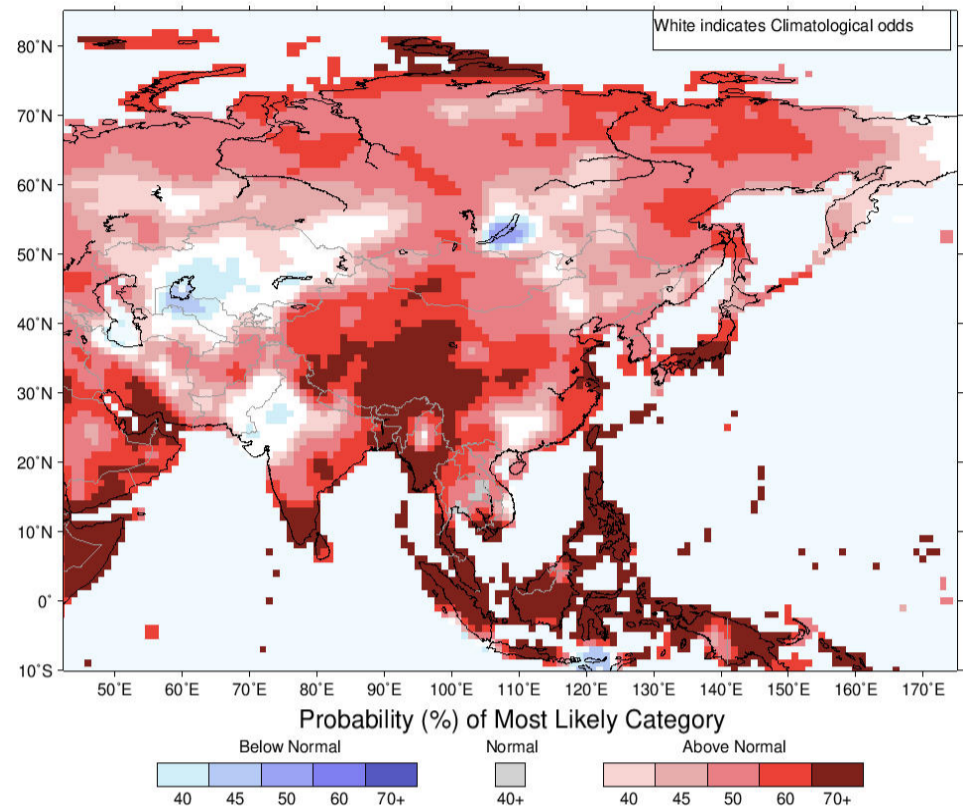
Following is the latest seasonal precipitation and temperature prediction for the next 3 months by the IRI. The color shading indicates the probability of the most dominant tercile -- that is, the tercile having the highest forecast probability. The color bar alongside the map defines these dominant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



Precipitation Forecast

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



Temperature Forecast

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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.

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