

# HIGHLIGHTS

**Rainfall Prediction**



• Very High rainfall (>100mm) is predicted in total for Ratnapura; more than 50mm for parts of Galle and Kalutara districts. Drier conditions are predicted for north & east of the country.

**Monitored Rainfalls**



• During the last week, the average daily rainfall over Sri Lanka was 2.8 mm and hydro catchment areas have received 10.8 mm on average.

**Monitored Wind**



• From 30<sup>th</sup> May - 5<sup>th</sup> June, up to 15 m/s of south-westerly winds were experienced over the island.

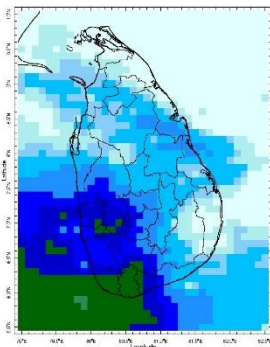
**Monitored Sea & Land Temp**



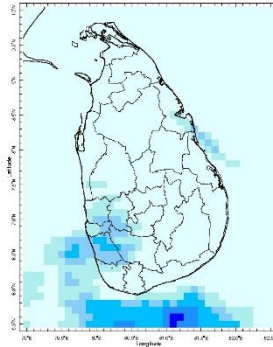
• Sea surface temperature was observed to be above average of 0.5°C to the east of the island. Land surface temperature remained near normal.

## Monitoring Rainfall

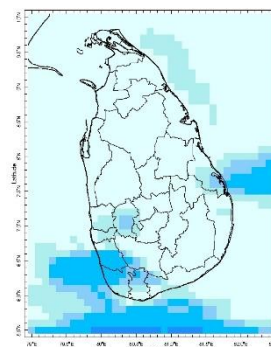
### Daily Estimates for Rainfall from 31<sup>st</sup> May – 7<sup>th</sup> June 2022



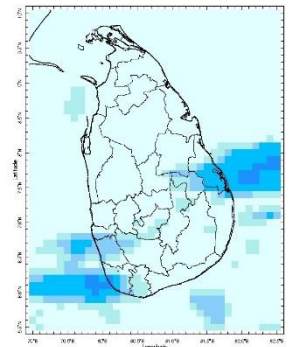
31 May



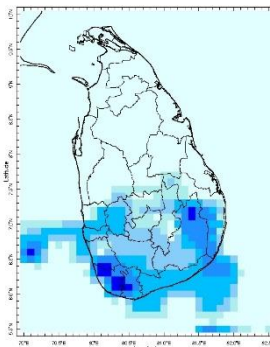
1 June



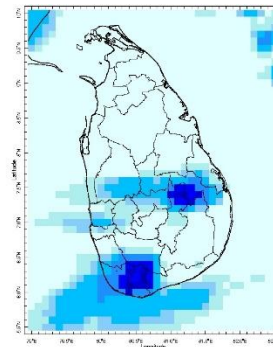
2 June



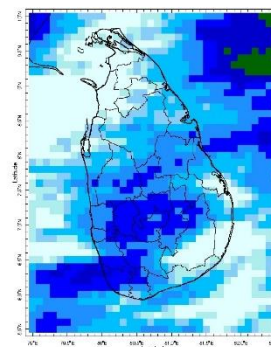
3 June



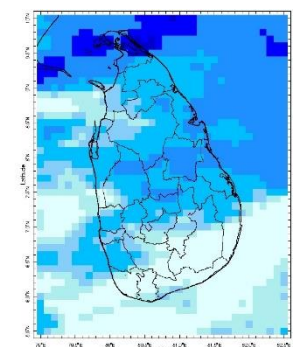
4 June



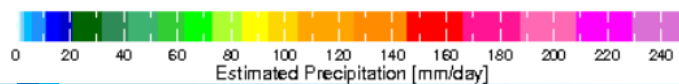
5 June



6 June



7 June



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](http://www.fect.lk)

E mail: [info@fect.lk](mailto:info@fect.lk)

LI: [www.linkedin.com/in/fectlk](https://www.linkedin.com/in/fectlk)

FB: [www.facebook.com/fectlk](https://www.facebook.com/fectlk)

TW: [www.twitter.com/fectlk](https://www.twitter.com/fectlk)

## Ocean State *(Text Courtesy IRI)*

### **Pacific sea state: June 1, 2022**

Equatorial sea surface temperatures (SSTs) are below average across most of the Pacific Ocean in early-June. The tropical Pacific atmosphere is consistent with La Niña. A large majority of the models indicate, though La Niña is favored to continue, the odds for La Niña decrease into the late Northern Hemisphere summer before slightly increasing through the Northern Hemisphere fall and early winter 2022.

### **Indian Ocean State**

Sea surface temperature was observed to be above average of 0.5°C to the east of the island.

## Predictions

### Rainfall

#### **14-day prediction: NOAA NCEP models**

**From 8<sup>th</sup> – 14<sup>th</sup> June:**

Total rainfall by Provinces:

Rainfall	Provinces
105 mm	Sabaragamuwa
95 mm	Western
85 mm	Southern
45 mm	North-western
35 mm	Central, Uva
15 mm	North-central

**From 15<sup>th</sup> – 21<sup>st</sup> June:**

Total rainfall by Provinces:

Rainfall	Provinces
135 mm	Sabaragamuwa
125 mm	Western, Southern
75 mm	North Western
65 mm	Central
55 mm	Uva
45 mm	North Central
25 mm	Eastern, Northern,

### MJO based OLR predictions

#### **For the next 15 days:**

MJO shall slightly suppress the rainfall during 8<sup>th</sup> - 12<sup>th</sup> June; near neutral during 13<sup>th</sup> – 17<sup>th</sup> June; and moderately enhance the rainfall during 18<sup>th</sup> – 22<sup>nd</sup> June.

## Interpretation

### Monitoring

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

Daily Average Rainfall in the Met stations for previous week of (31<sup>th</sup> May - 7<sup>th</sup> June) = 2.8 mm  
Rmax: 64.7 mm & Rmin: 0.0 mm.

Region	Average rainfall for the Last 8 days
Northern Plains	0.1 mm
Eastern	0.1 mm
Western	7.6 mm
Southern Plains	1.5 mm

The Hydro Catchment Areas recorded 10.8 mm of average rainfall for the last week  
Rmax: 86 mm & Rmin: 0 mm.

**Wind:** South-westerly prevailed in the sea area surrounding the island last week.

**Temperatures:** The temperature anomalies were below normal for the Western, North central and North western, driven by the warm SST's.

## Predictions

**Rainfall:** During the next week (8<sup>th</sup> - 14<sup>th</sup> June) heavy rainfall (>100 mm) is predicted for the *Ratnapura* district; more than 50mm for parts of Galle and Kalutara districts. Drier conditions are predicted for north & east of the country.

**Temperatures:** The temperature remains above normal in the Uva and Eastern province and slightly below normal in the central province during 8<sup>th</sup> - 16<sup>th</sup> June.

**Teleconnections:**

La Niña - Though La Niña is favored to continue, the odds for La Niña decrease into the late Northern Hemisphere summer (August-October 2022).

MJO shall slightly suppress the rainfall during 8<sup>th</sup> - 12<sup>th</sup> June; near neutral during 13<sup>th</sup> - 17<sup>th</sup> June; and moderately enhance the rainfall during 18<sup>th</sup> - 22<sup>nd</sup> June.

**Seasonal Precipitation:**

The precipitation forecast for the June-July-August season shows below-normal precipitation for the southern province and above-normal precipitation to the north province.

### 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

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.



FECT Web

[www.fect.lk](http://www.fect.lk)  
<http://www.climate.lk>  
<http://www.tropicalclimate.org/>



FECT Blog

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



Facebook

[www.facebook.com/fectlk](http://www.facebook.com/fectlk)



Twitter

[www.twitter.com/fectlk](http://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

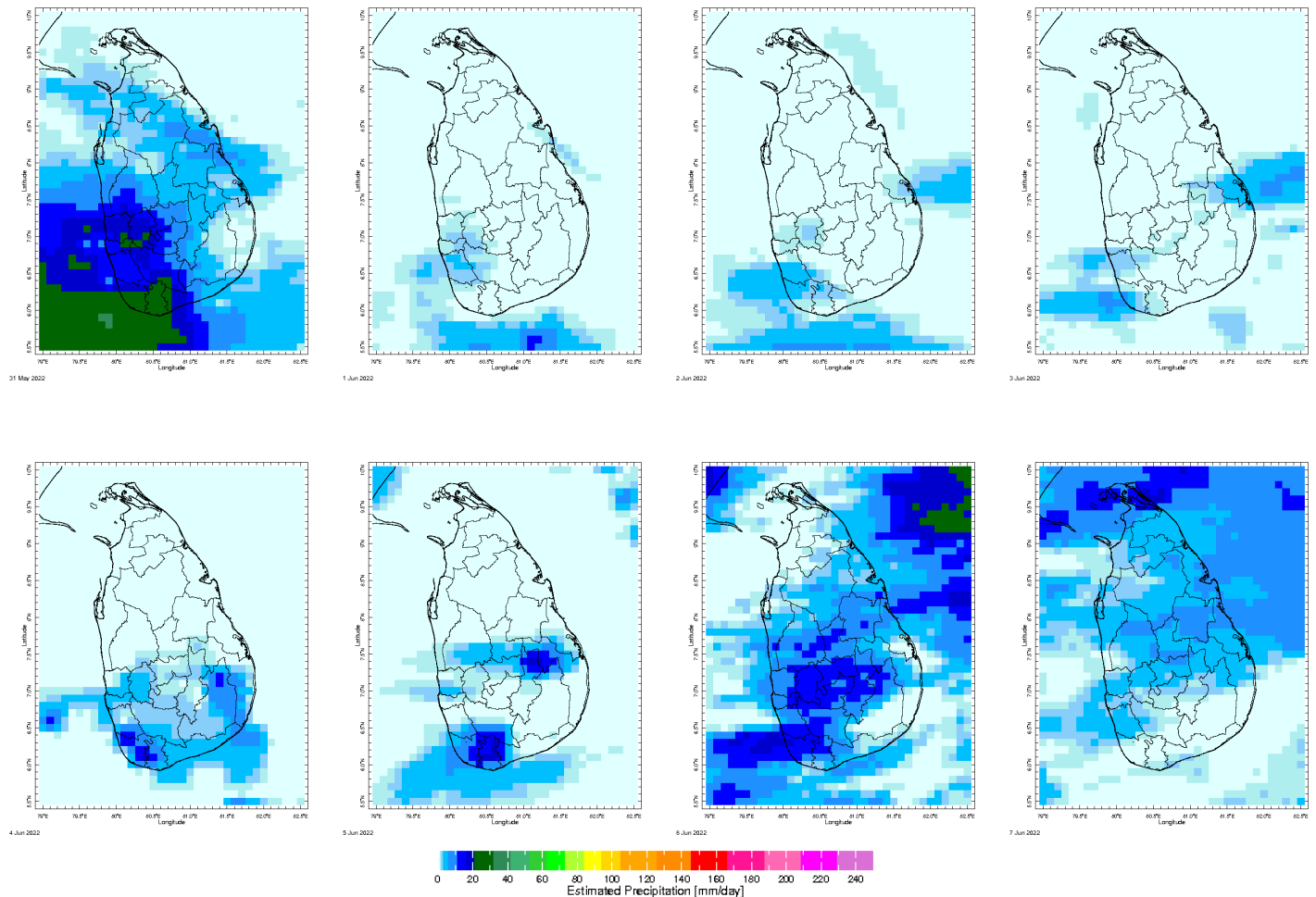
- a. NCEP GFS Ensemble 1-14 day Rainfall Predictions
- b. GFS (T574) Model Rainfall Forecast from RMSC New Delhi
- c. MJO Related OLR Forecast
- d. Weekly Temperature Forecast
- e. Weekly Wind Forecast
- f. Seasonal Predictions from IRI



### MONITORING

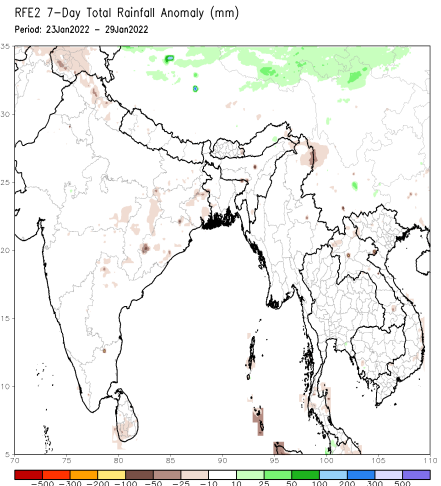
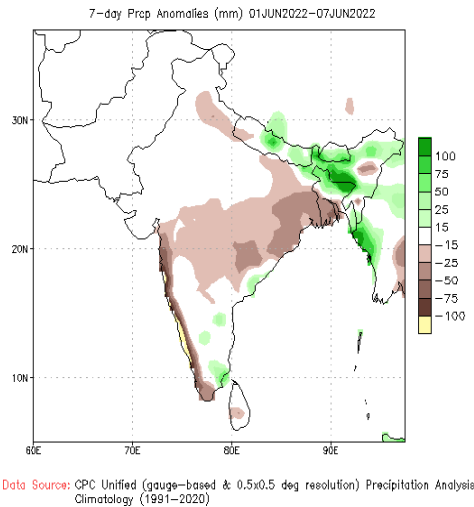
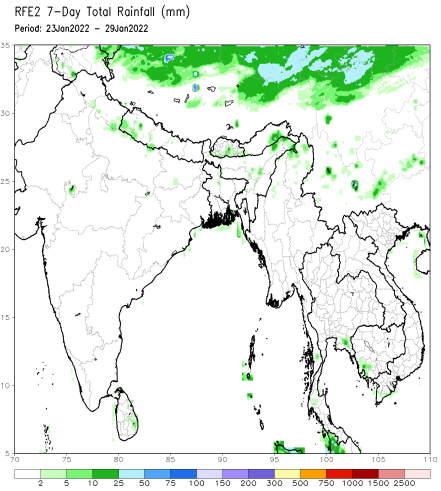
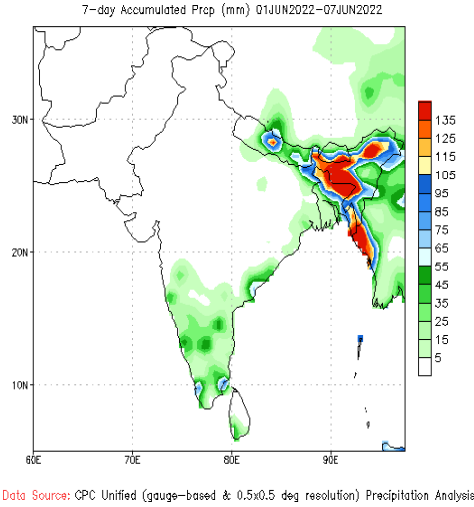
#### Daily Rainfall Monitoring

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



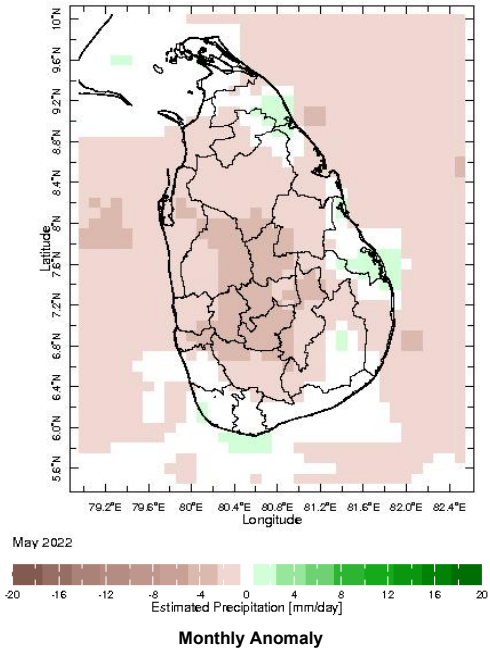
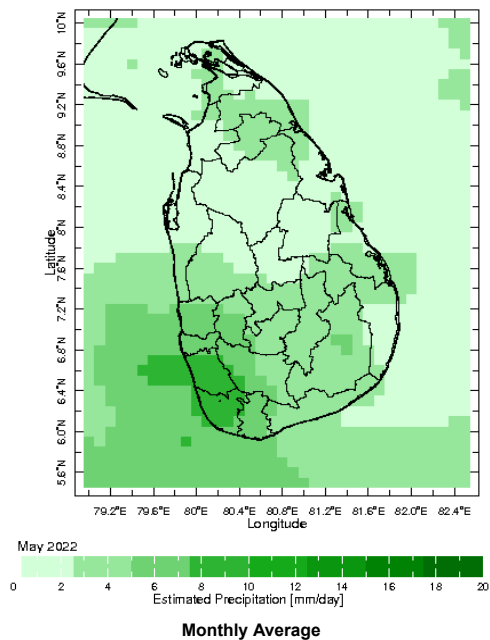
## Weekly Rainfall Monitoring

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.

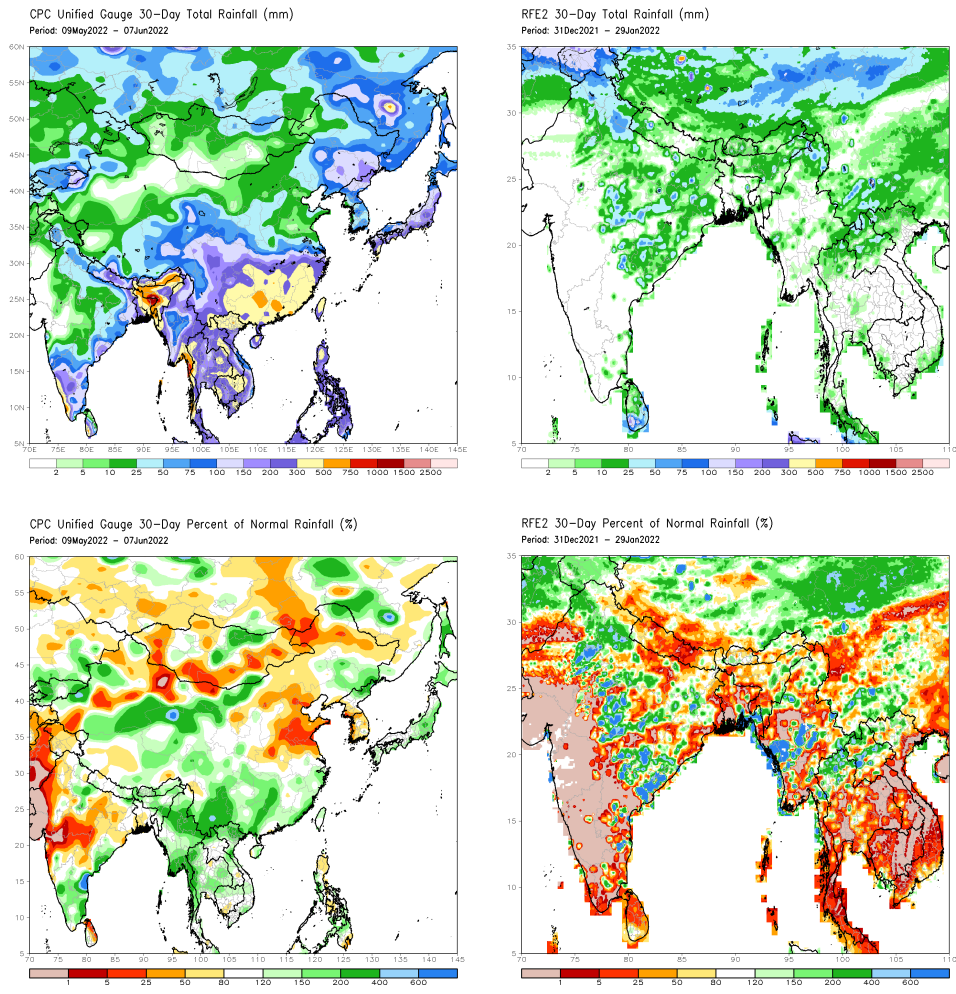


## Monthly Rainfall Monitoring

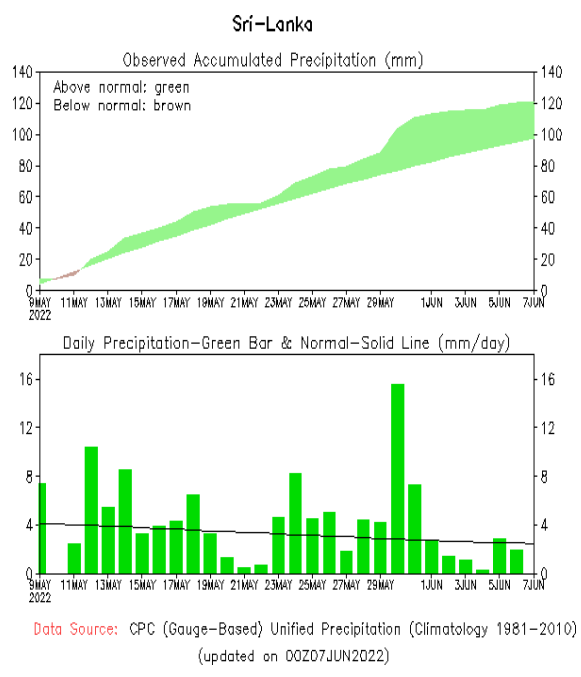
The figure in the left shows the average observed rainfall in the previous month. The rainfall anomaly in the previous month is shown in the figure to the right. The brown color in the anomaly figure shows places which received less rainfall than the historical average while the green color shows places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



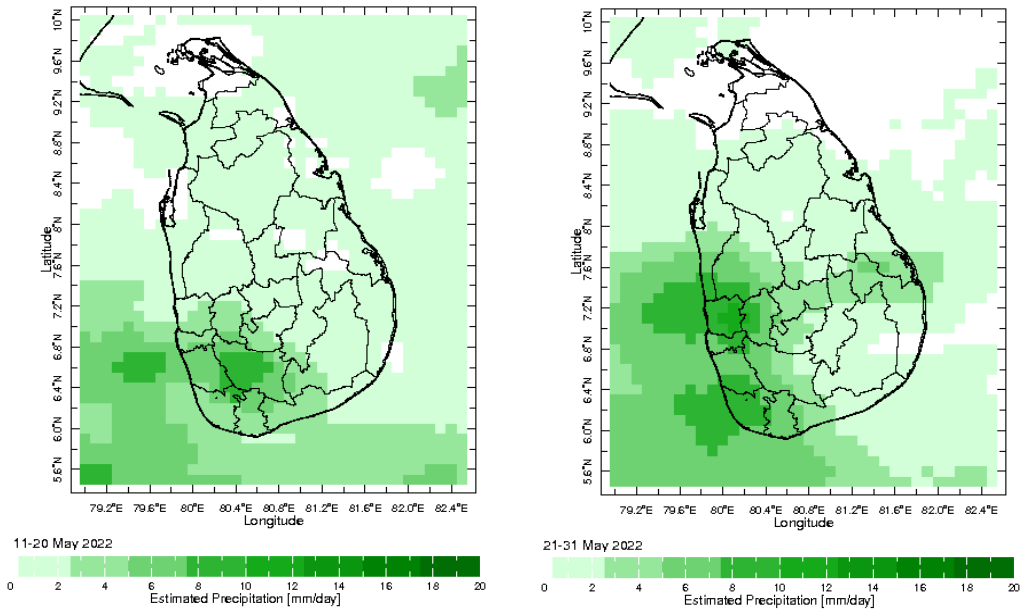
The figure in the top-left shows the total rainfall in the past 30 days from CPC Unified Precipitation Analysis while the figure in the top-right shows the total rainfall for the same period from RFE 2.0 Satellite Rainfall Estimates. The bottom two figures show the percentage of rainfall received in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



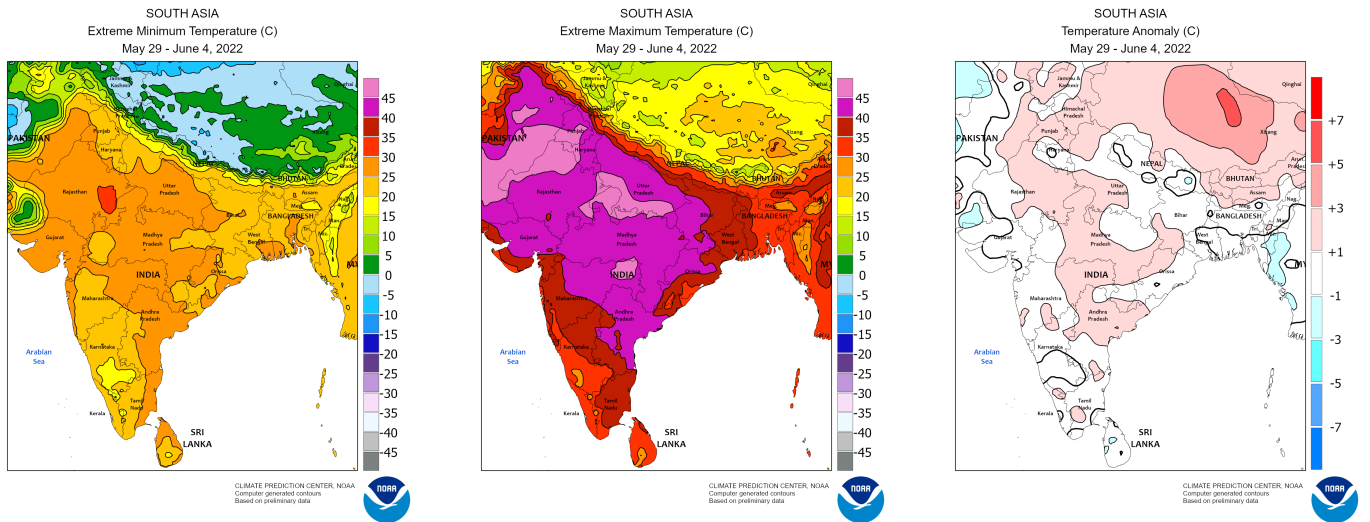
The following figure shows the observed accumulated rainfall (top) and daily observed rainfall (bottom) in Sri Lanka in the last 30 days.



# Dekadal (10 Day) Satellite Derived Rainfall Estimates

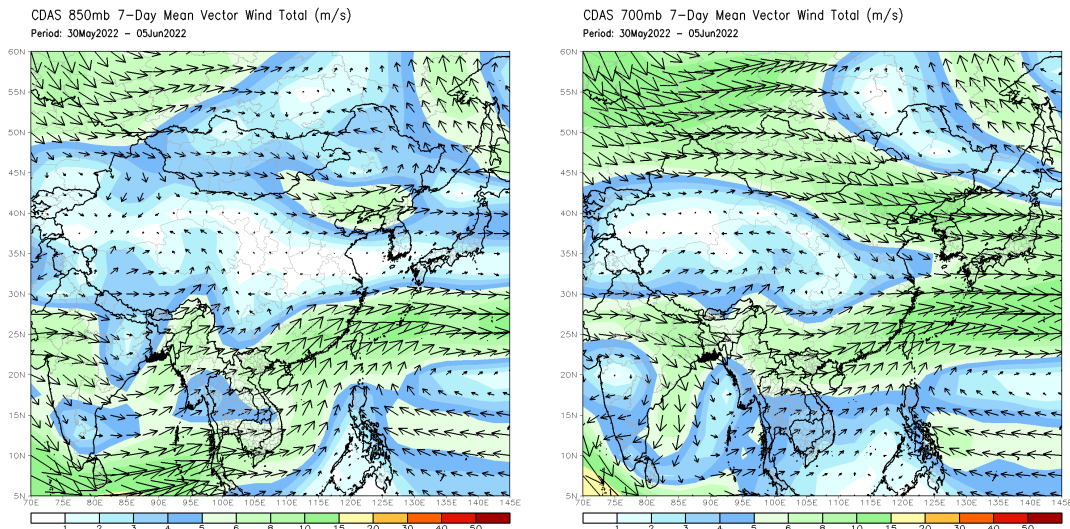


## Weekly Temperature Monitoring



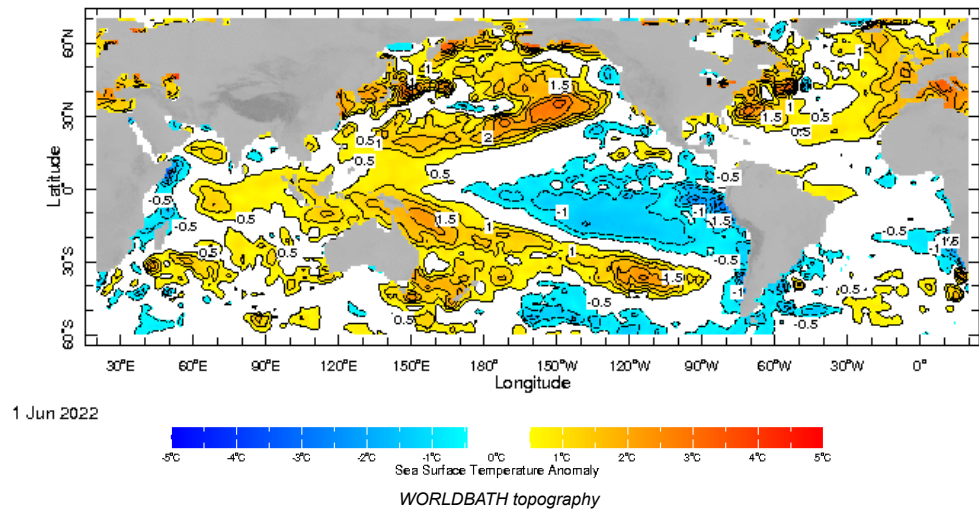
## Weekly Wind Monitoring

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.

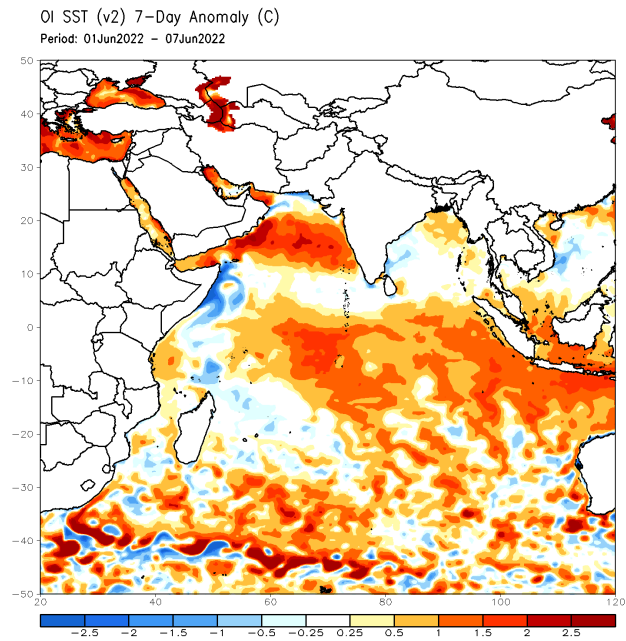


## Weekly Average SST Anomalies

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

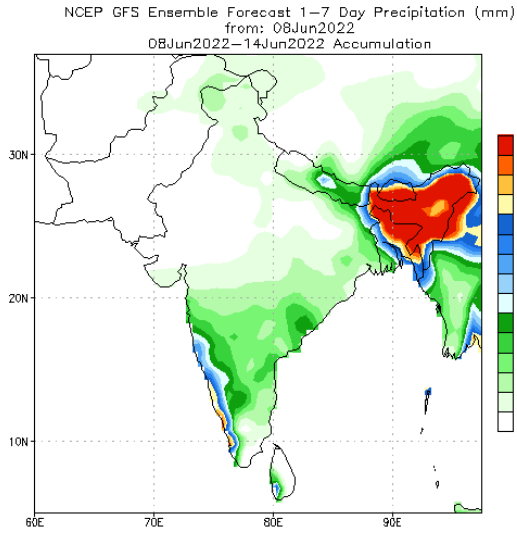


Optimum Interpolated Sea Surface Temperature Anomaly in the Indian Ocean from NOAA CPC

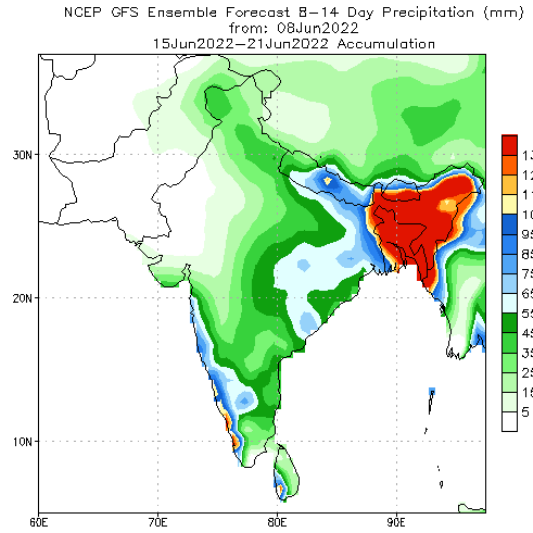




**NCEP GFS 1- 14 Day prediction**

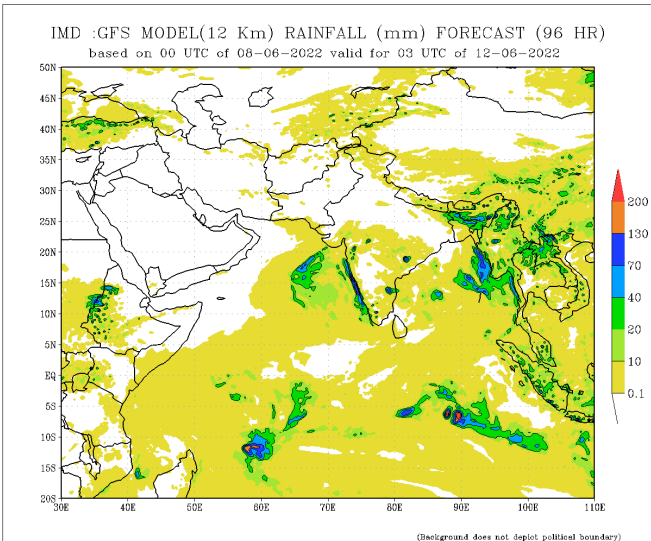
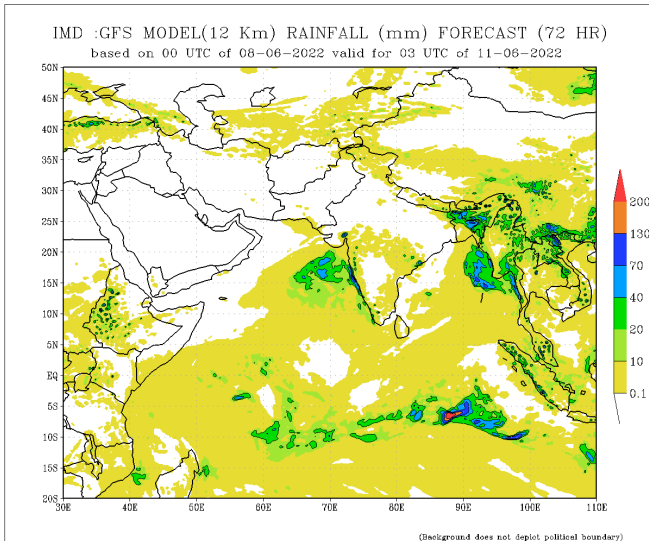
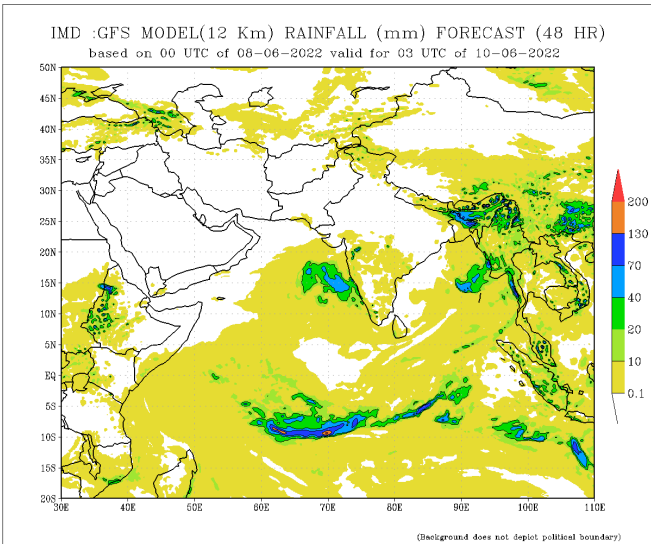
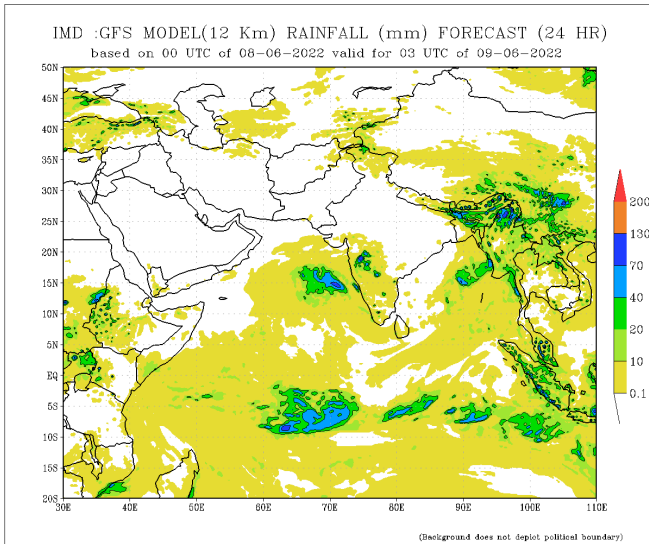


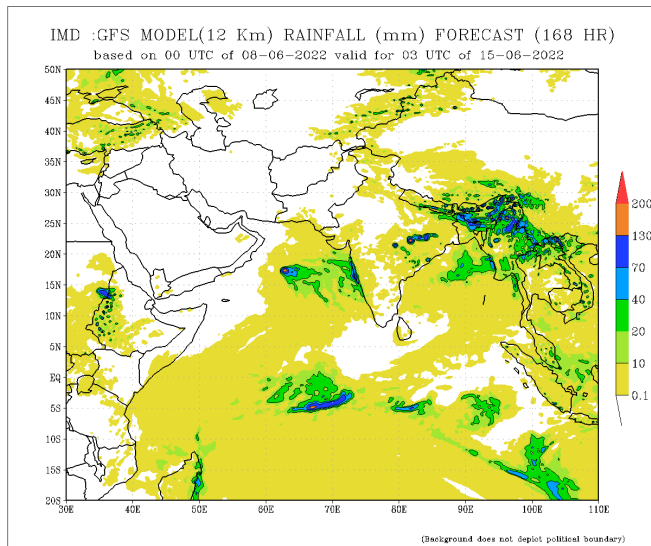
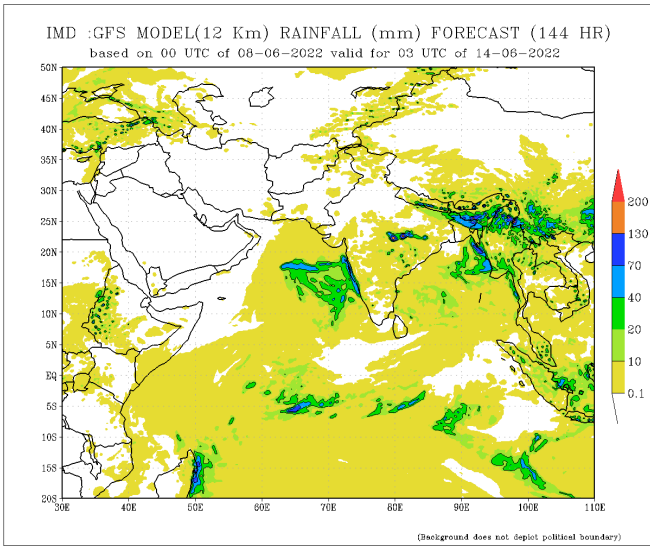
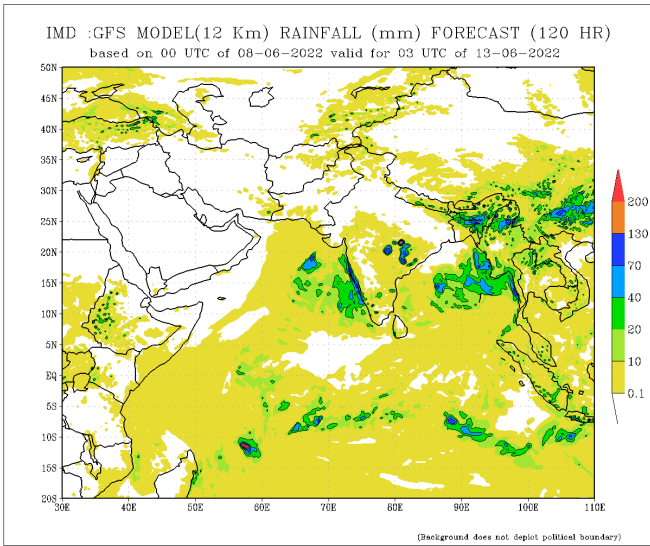
Bias correction based on last 30-day forecast error



Bias correction based on last 30-day forecast error

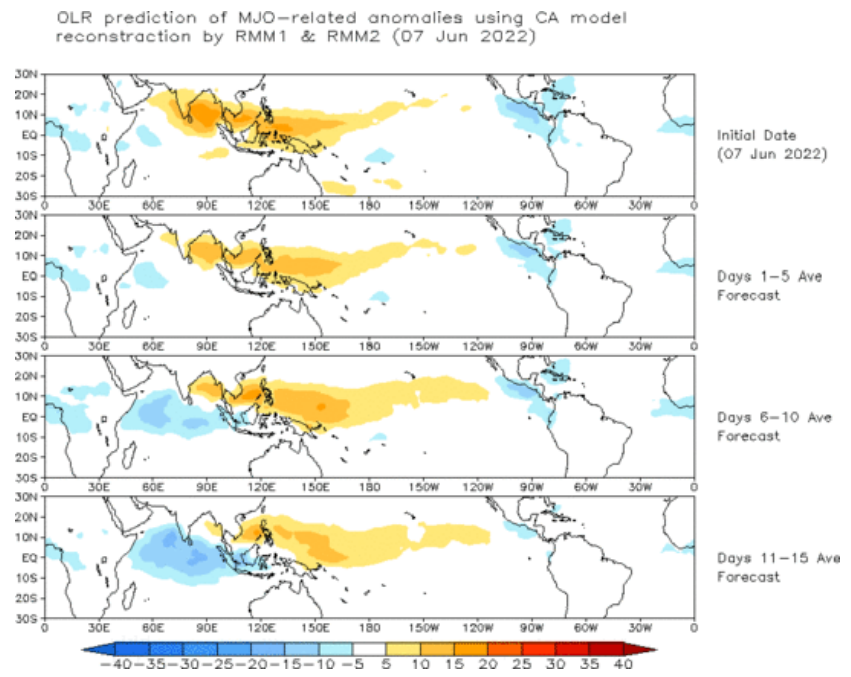
**IMD GFS (T574) Model Rainfall Forecast from RMSC New Delhi, India**





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

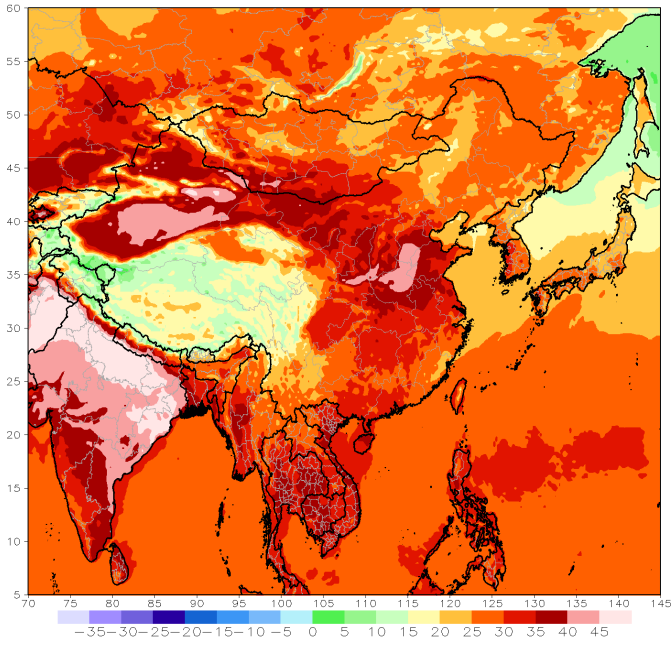
The Outgoing Longwave Radiation (OLR) is a proxy for rainfall. This can be used to identify convective rain clouds based on the MJO phase. Violet and Blue shading indicates enhanced tropical weather and Orange shading indicates suppressed conditions. The following figure shows the forecasts of MJO associated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



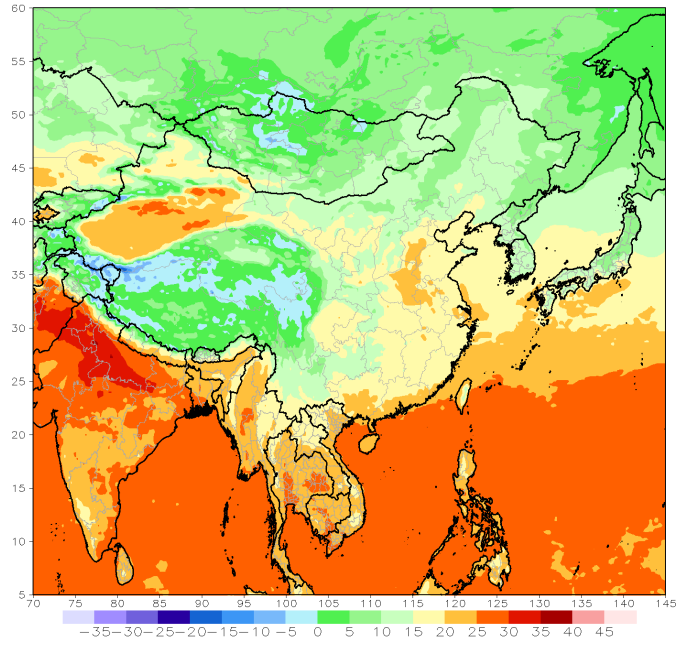
# Weekly Temperature Forecast

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

GFS week1 Temperature Max (C)  
Period: 18z09Jun2022 - 18z15Jun2022



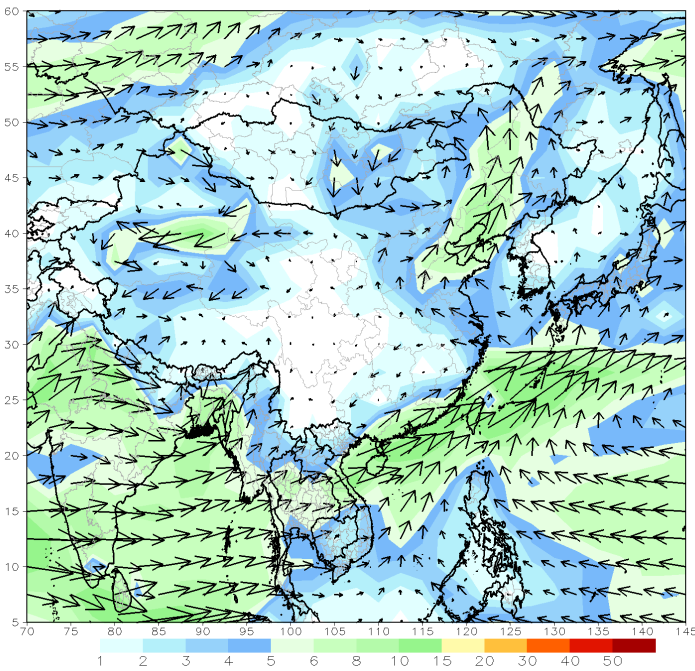
GFS week1 Temperature Min (C)  
Period: 18z09Jun2022 - 18z15Jun2022



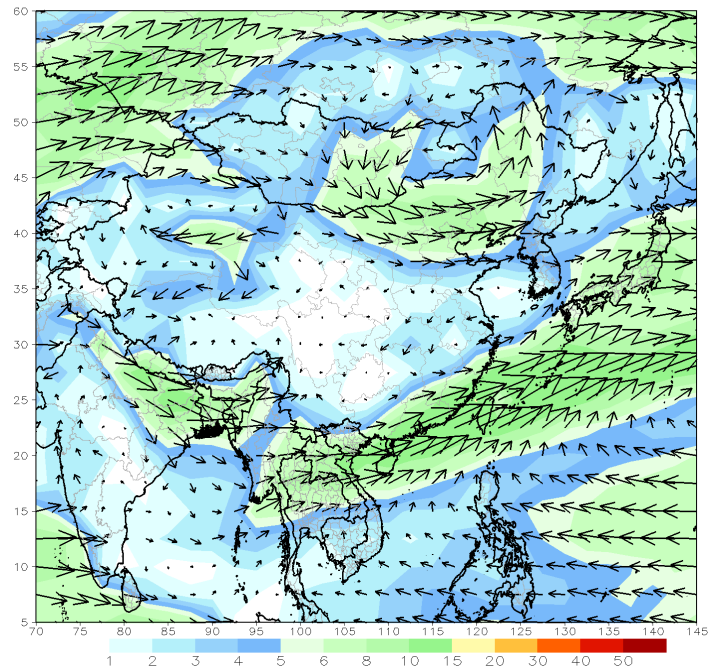
# Weekly Wind Forecast

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: 18z09Jun2022 - 18z15Jun2022



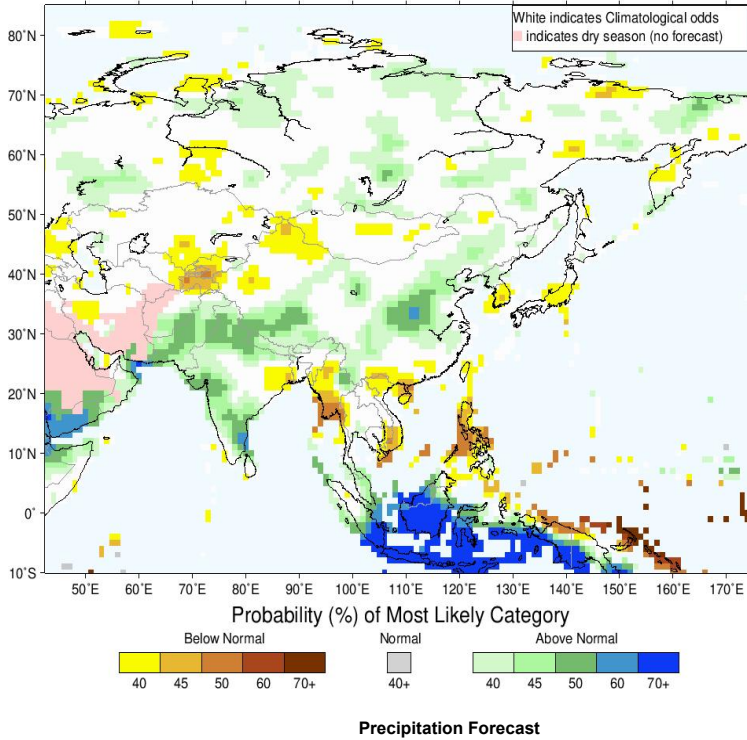
GFS 700mb week1 Mean Vector Wind Total (m/s)  
Period: 18z09Jun2022 - 18z15Jun2022



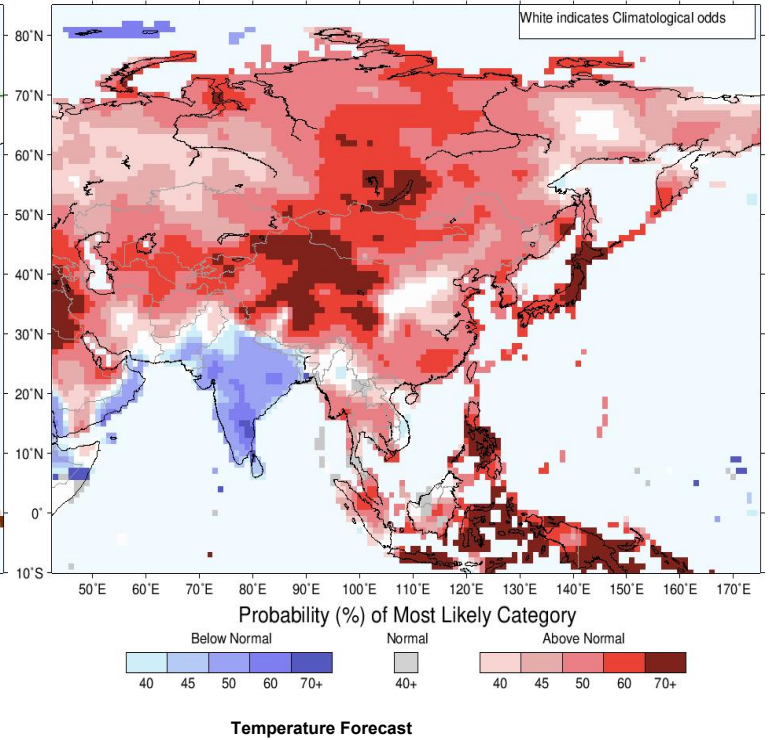
## Seasonal Rainfall and Temperature Forecast

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 June-July-August 2022, Issued May 2022



IRI Multi-Model Probability Forecast for Temperature for June-July-August 2022, Issued May 2022



### 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

Federation for Environment, Climate & Technology  
 Digana Village,  
 Rajawella,  
 KY20180,  
 SRI LANKA  
 email: info@fect.lk  
 phone: (+94) 81 2376746

### Follow us on



Subscribe to our monthly newsletters