

HIGHLIGHTS

Rainfall Prediction



• During 5-11 June, there is a high likelihood of moderate rainfall (25 - 50 mm) predicted for Puttalam town and light rainfall for the Puttalam district and adjacent areas, with no rainfall predicted for the rest.

Monitored Rainfalls



• During 29 May - 5 June, on average, 8.4 mm was received in SL, rainfall was concentrated in the western hills (28 mm) and plains (11 mm).
• 31 May, 1 and 2 June: extreme rainfall (62.5mm, 282mm, 154mm) was recorded in Ratnapura, and floods ensued. The highest daily rainfall (436 mm) was in Eheliyagoda on June 1.

Monitored & Predicted Wind



• From 28 May- 3 June, strong winds at 850mb (1.5 km) north westerly, reaching up to 15m/s.
• From 6-12 June, winds are predicted to be westerly, reaching up to 15m/s.

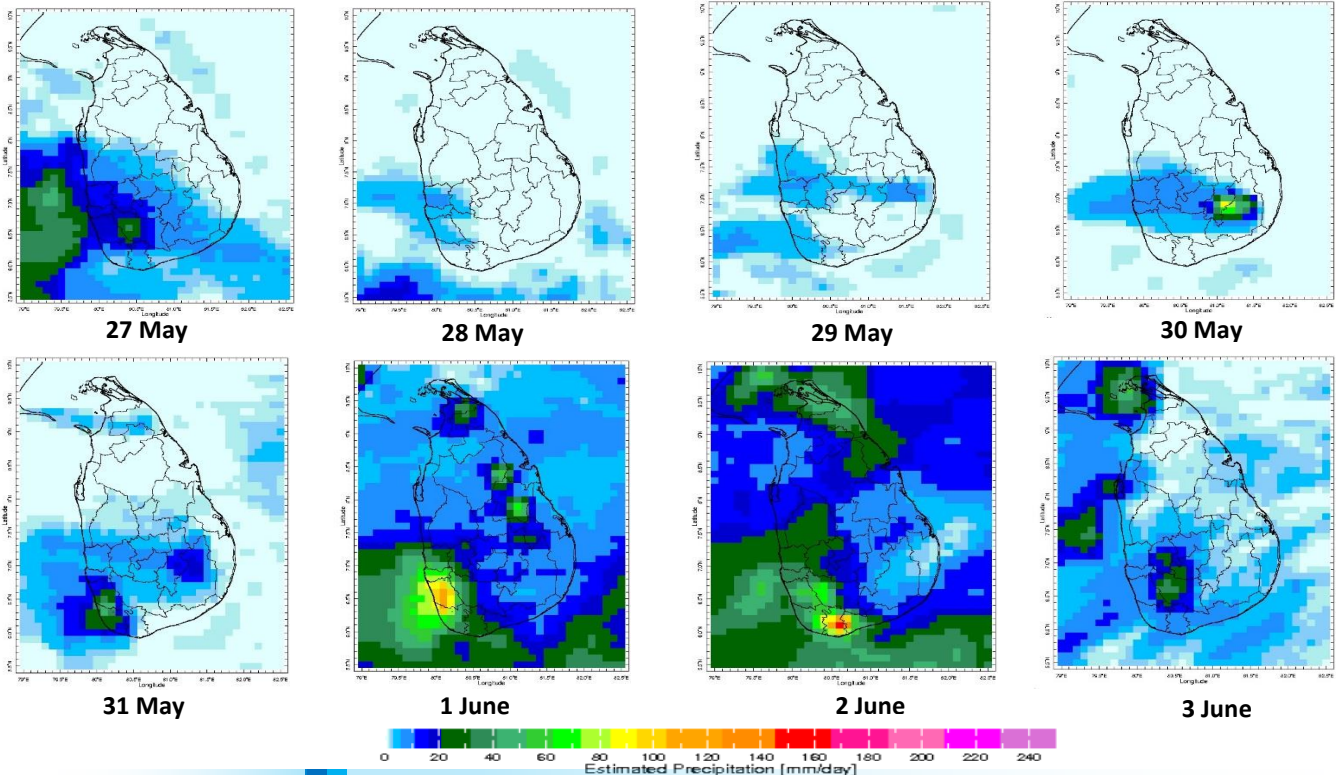
Monitored Sea & Land Temp



• Average maximum land surface temperature was 31.7°C in last week.
• Sea Surface Temperature around Sri Lanka was 0- 0.25°C above normal to the north east and, the south west is cooler .
• Both the EL Nino and Indian ocean dipole patterns transitioned to neutral last week.

Monitoring Rainfall

Daily Estimates for Rainfall from 27th May -3rd June 2024



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Ocean State *(Text Courtesy IRI)*

Pacific sea state: June 3, 2024

El Niño is transitioning toward ENSO-neutral. Equatorial sea surface temperatures (SSTs) are above average in the western and central Pacific Ocean, and below-average SSTs are emerging in east central and eastern Pacific Ocean. La Niña may develop in June-August 2024 (49% chance) or July-September (69% chance).

Indian Ocean State

Sea surface temperature around Sri Lanka was ranging from 1.0°C below normal to 1.0°C above normal for the country in 14th - 20th May 2024.

Predictions

Rainfall

14 - Day prediction: NCEP GFS models

From 5th June - 11th June:

Total rainfall by Provinces:

Rainfall (mm)	Provinces
45	North Western
25	Western
15	North Central, Sabaragamuwa, Central, Northern
≤5	Southern, Eastern, Uva

From 12th June - 18th June:

Total rainfall by Provinces:

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

MJO based OLR predictions

For the next 15 days:

MJO shall slightly suppress the rainfall during 5th June – 19th June.

Interpretation

Monitoring

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

Daily Average Rainfall in the Met stations for previous week of (29th May - 6th June) = 8.4 mm
 Maximum Daily Rainfall: 281.9mm & Minimum Daily Rainfall: 0.0 mm.

Region	Average rainfall for last 8 days (mm)	Average temperature for last 8 days (°C)	
		Maximum	Minimum
Northern plains	3.3	33.0	26.5
Eastern hills	4.3	28.9	20.0
Eastern plains	4.1	34.2	26.0
Western hills	28.6	27.3	20.6
Western plains	11.2	30.8	26.4
Southern plains	4.3	32.4	25.7

Region	Average rainfall for last 8 days (mm)	Daily maximum rainfall for last 8 days (mm)	Daily minimum rainfall for last 8 days (mm)
All SL	8.4	281.9	0.0
Hydro catchment	16.4	264.0	0.0

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

Temperatures: The temperature anomalies were neutral for the Sri Lanka except some part of the Uva province driven by the warm SST's.

Predictions

Rainfall: During the next week (5th June - 11th June), moderate rainfall (25 - 50 mm) is predicted for the Western, and North Western, provinces and light to moderate rainfall (12.5 - 25 mm) is predicted for the North Central, Sabaragamuwa, Central, Northern Provinces and light shower is predicted for the rest.

Temperatures: The temperature will remain above normal for some parts of the Northern, Eastern, North central and Uva provinces during 6th June 12th June.

Teleconnections: MJO shall slightly suppress the rainfall during 5th June – 19th June.

Seasonal Precipitation: The precipitation forecast for the June-July-August, 2024 season shows a 50% or more tendency toward above 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

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.



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Weekly Climate Bulletin for Sri Lanka

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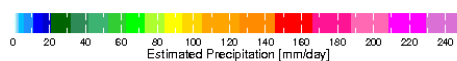
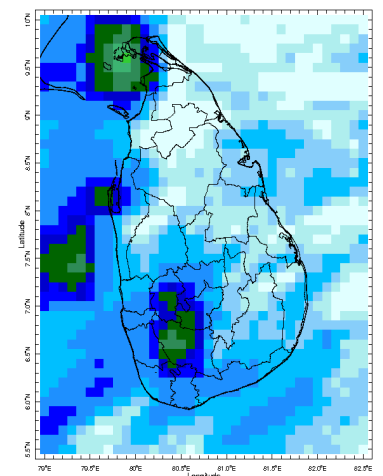
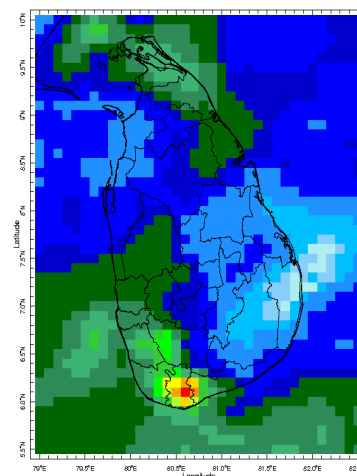
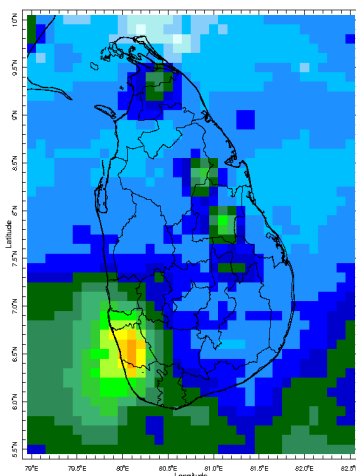
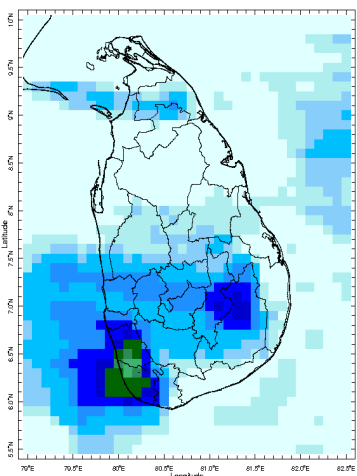
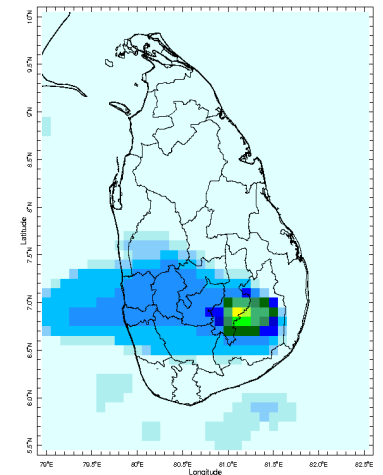
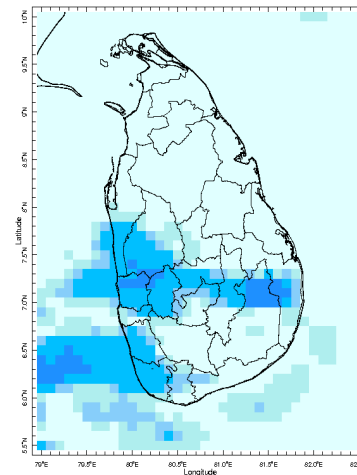
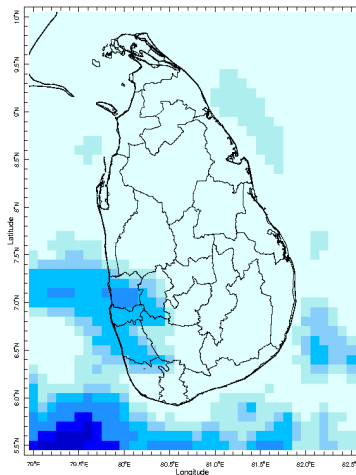
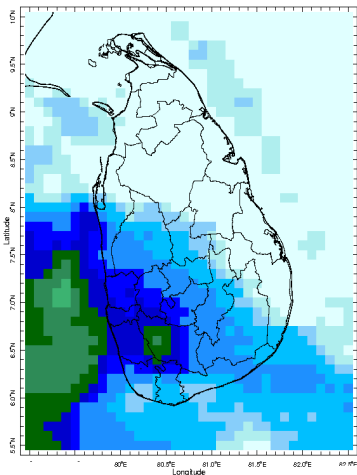
2. Predictions

- 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

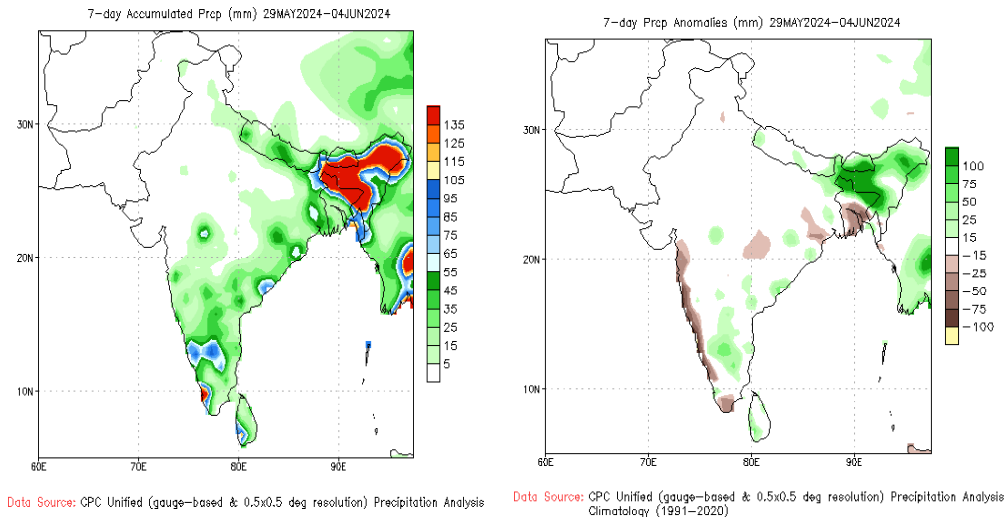
Daily Rainfall Monitoring

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



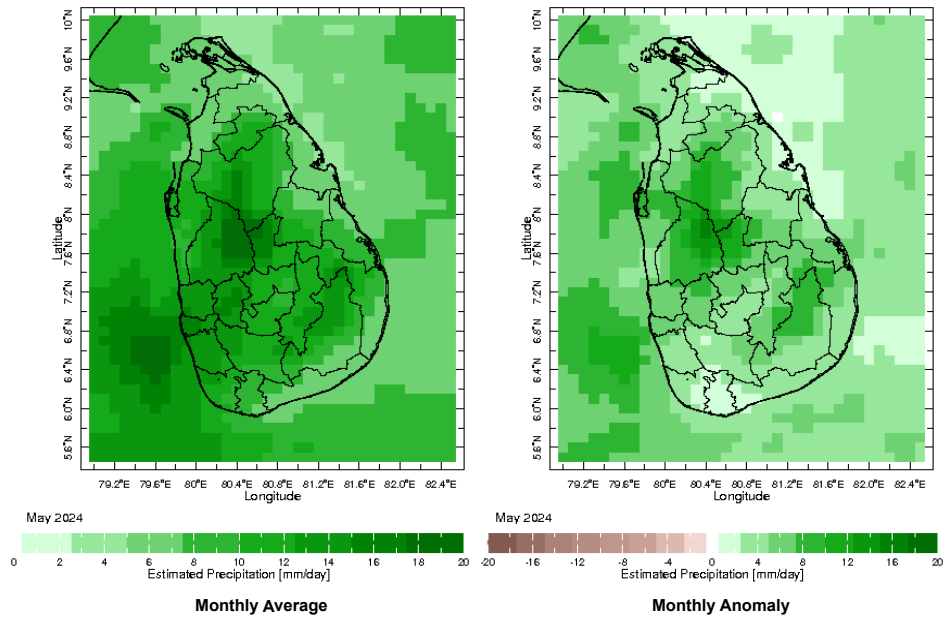
Weekly Rainfall Monitoring

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.

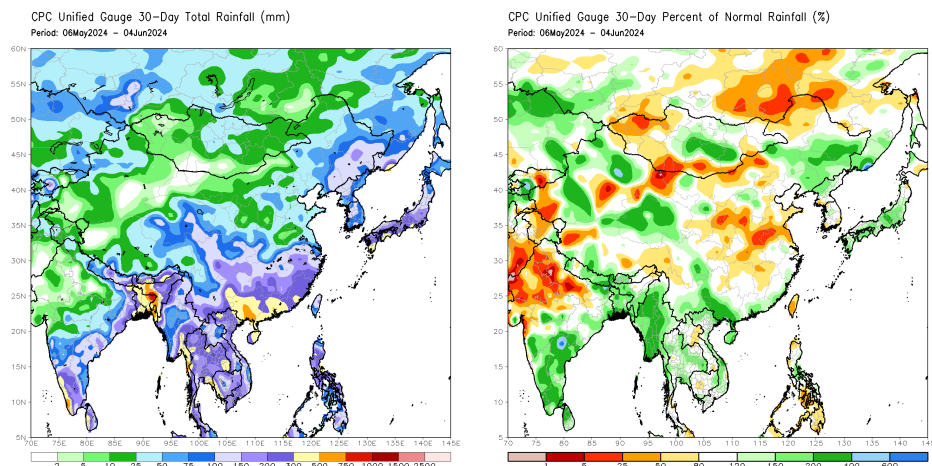


Monthly Rainfall Monitoring

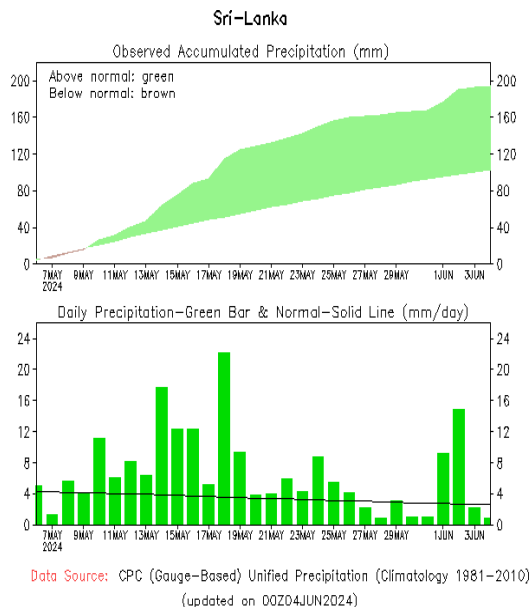
The figure in the left shows the average observed rainfall in the previous month. The rainfall anomaly in the previous month is shown in the figure to the right. The brown color in the anomaly figure shows places which received less rainfall than the historical average while the green color shows places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



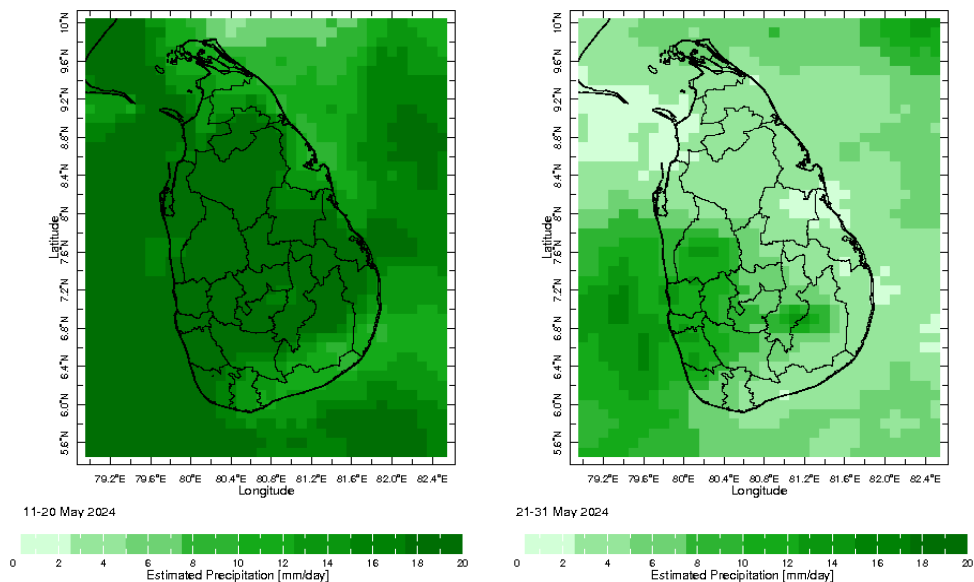
The figure in the top-left shows the total rainfall in the past 30 days from CPC Unified Precipitation Analysis while the figure in the top-right shows the total rainfall for the same period from RFE 2.0 Satellite Rainfall Estimates. The bottom two figures show the percentage of rainfall received in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



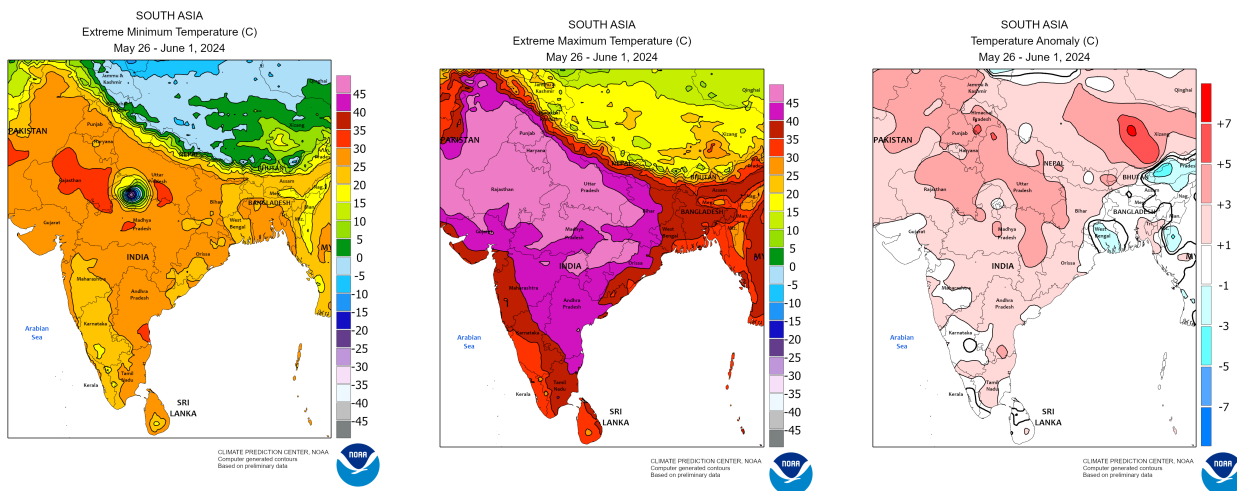
The following figure shows the observed accumulated rainfall (top) and daily observed rainfall (bottom) in Sri Lanka in the last 30 days.



Dekadal (10 Day) Satellite Derived Rainfall Estimates

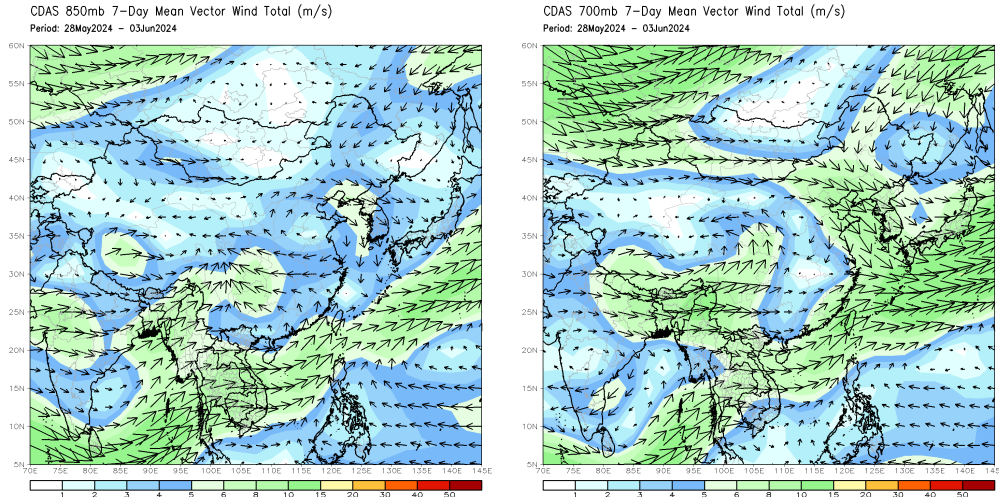


Weekly Temperature Monitoring



Weekly Wind Monitoring

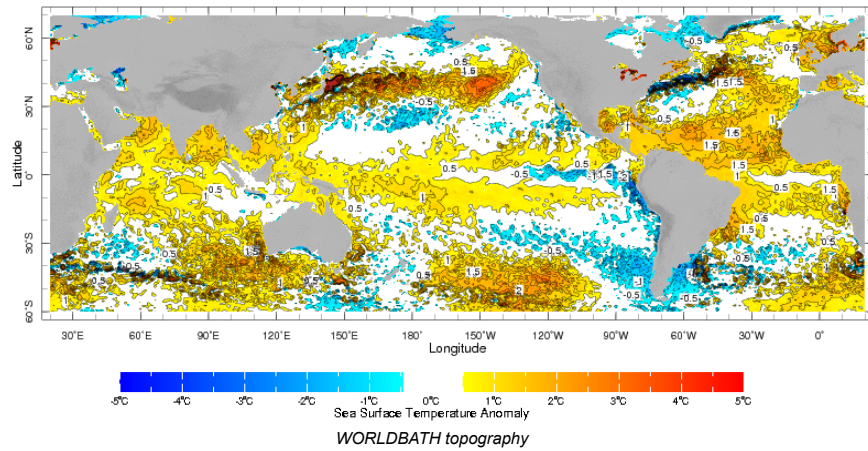
The following figures show the mean vector wind total of the past 7 days near Sri Lanka at two levels. The figure on the left shows 850 mb (~1500 m) level and the figure on the right shows 700 mb (~3000 m) level.



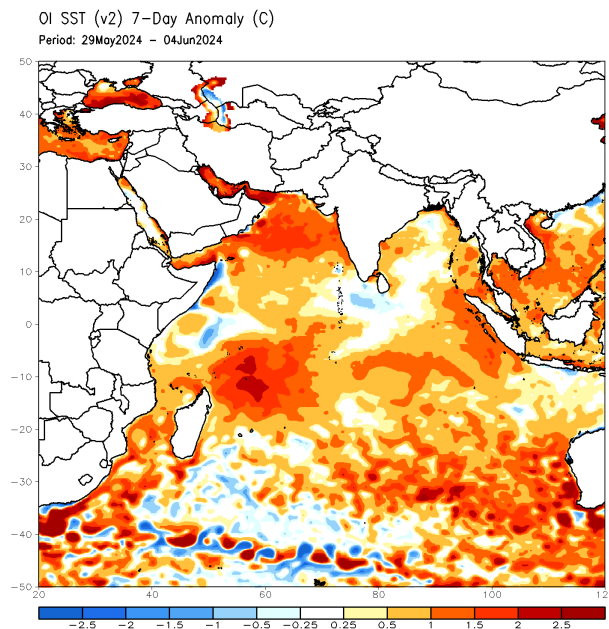
Weekly Average SST Anomalies

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

zlev 0.0 meters Time 14-20 May 2024

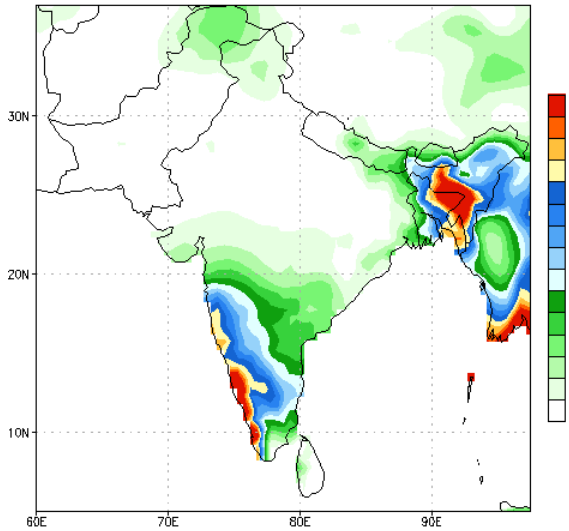


Optimum Interpolated Sea Surface Temperature Anomaly in the Indian Ocean from NOAA CPC



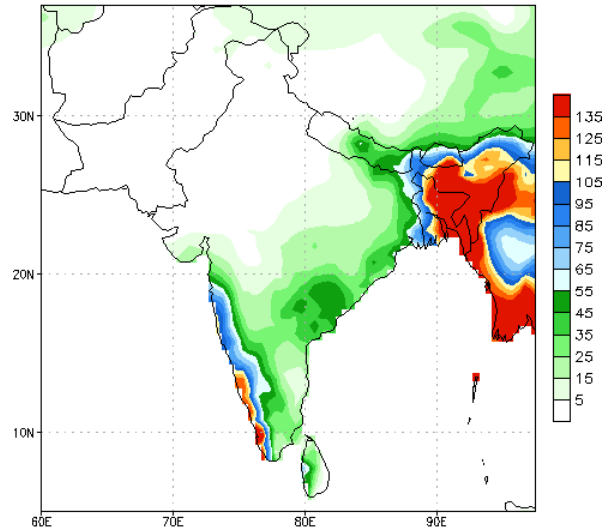
NCEP GFS 1- 14 Day prediction

NCEP GFS Ensemble Forecast 1-7 Day Precipitation (mm)
from: 05Jun2024
05Jun2024-11Jun2024 Accumulation



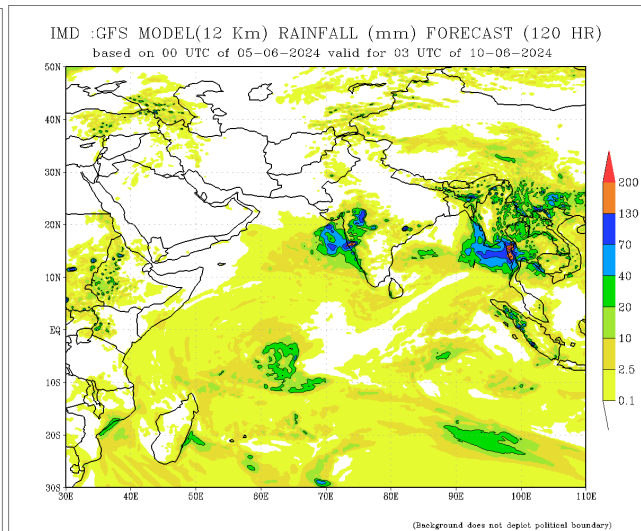
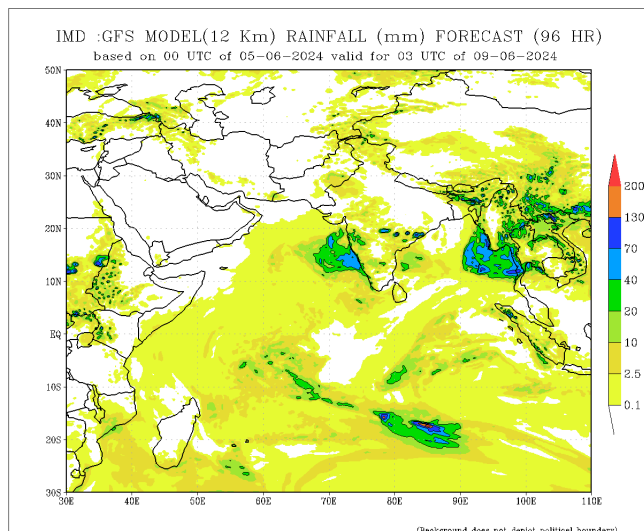
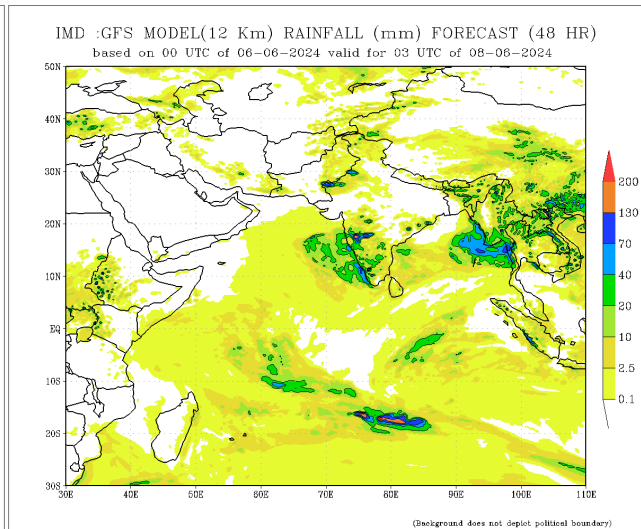
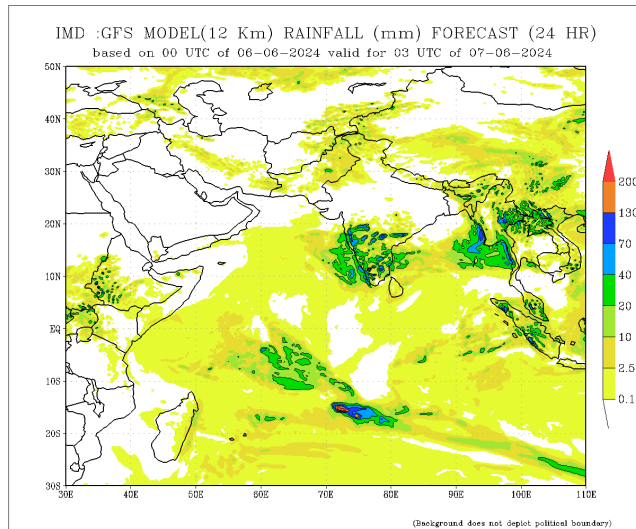
Bias correction based on last 30-day forecast error

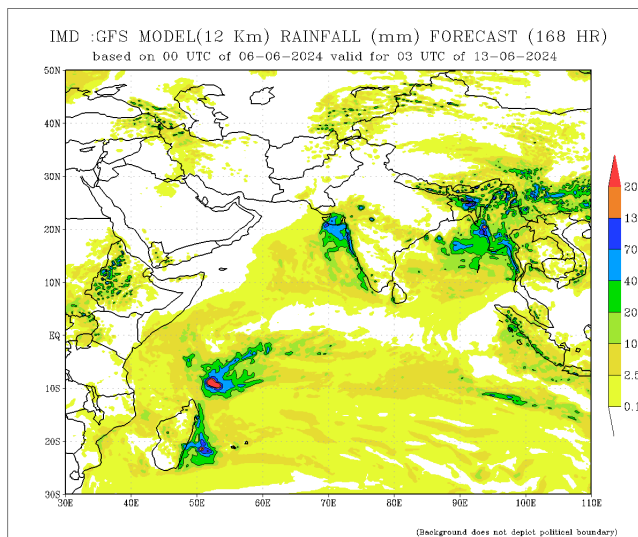
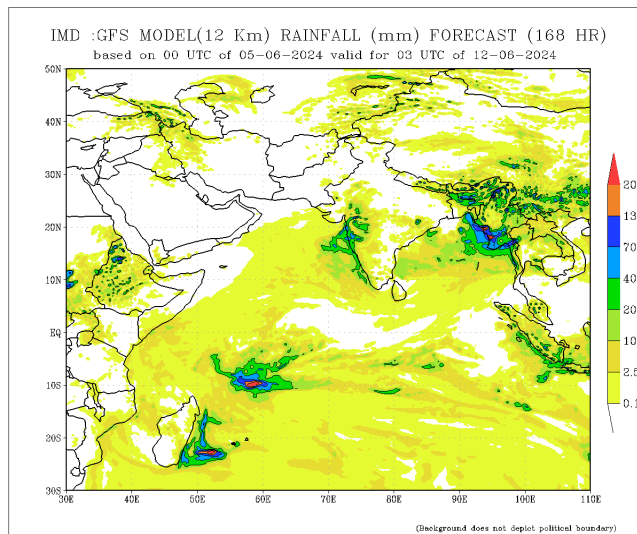
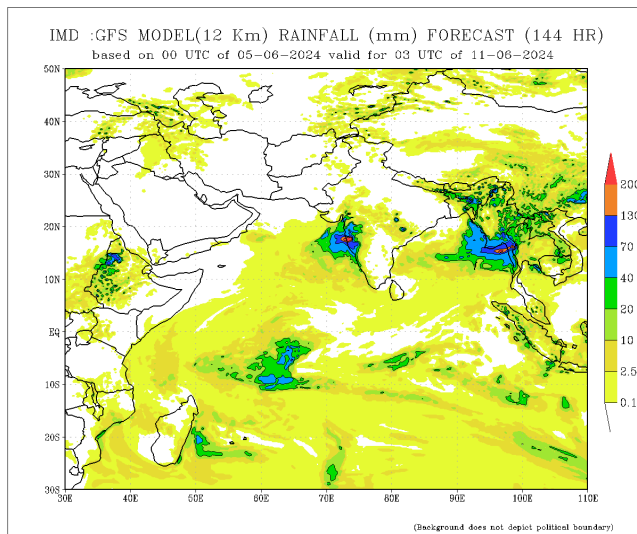
NCEP GFS Ensemble Forecast 8-14 Day Precipitation (mm)
from: 05Jun2024
12Jun2024-18Jun2024 Accumulation



Bias correction based on last 30-day forecast error

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

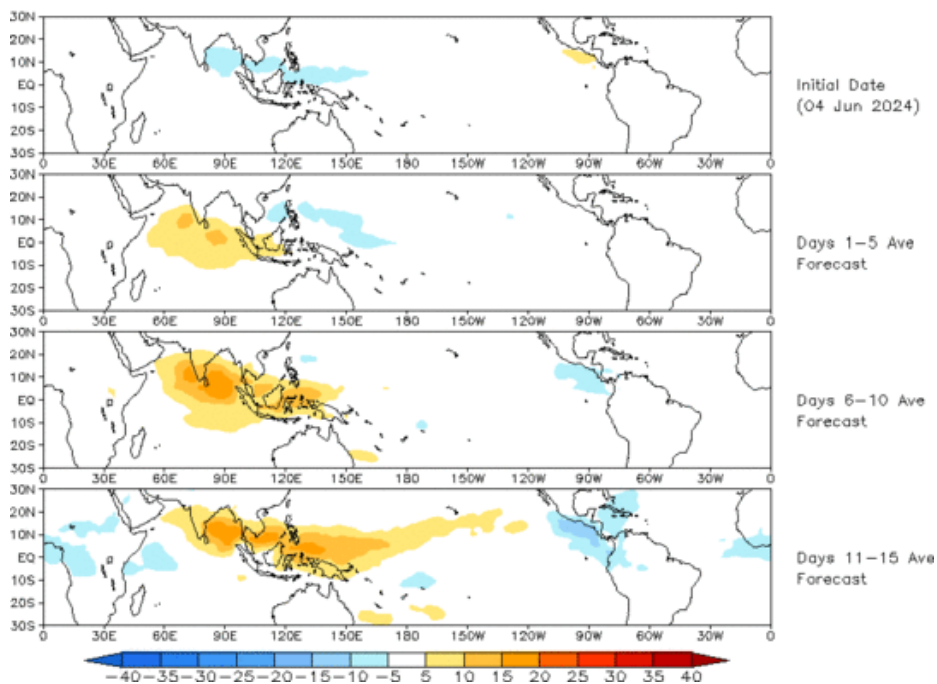




Madden Julian Oscillation (MJO) related Outgoing Longwave Radiation (OLR) Forecast

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.

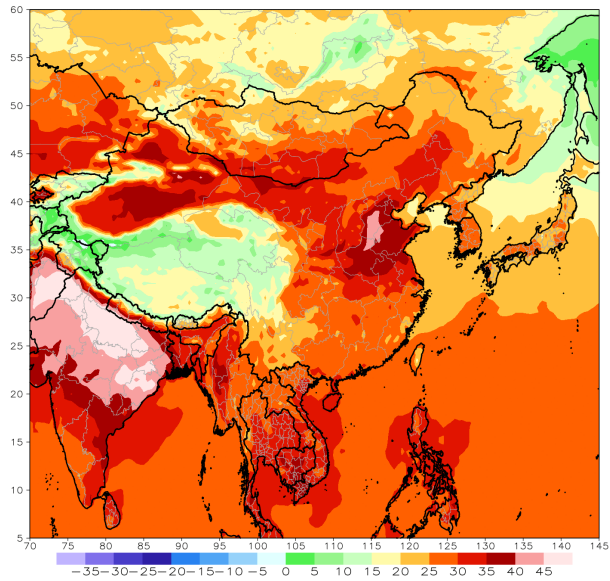
OLR prediction of MJO-related anomalies using CA model reconstruction by RMM1 & RMM2 (04 Jun 2024)



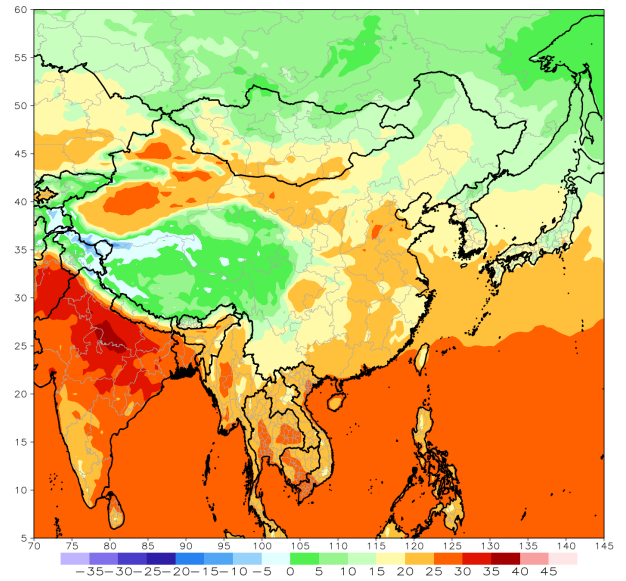
Weekly Temperature Forecast

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

GFS week1 Temperature Max (C)
Period: 12z06Jun2024 – 12z12Jun2024



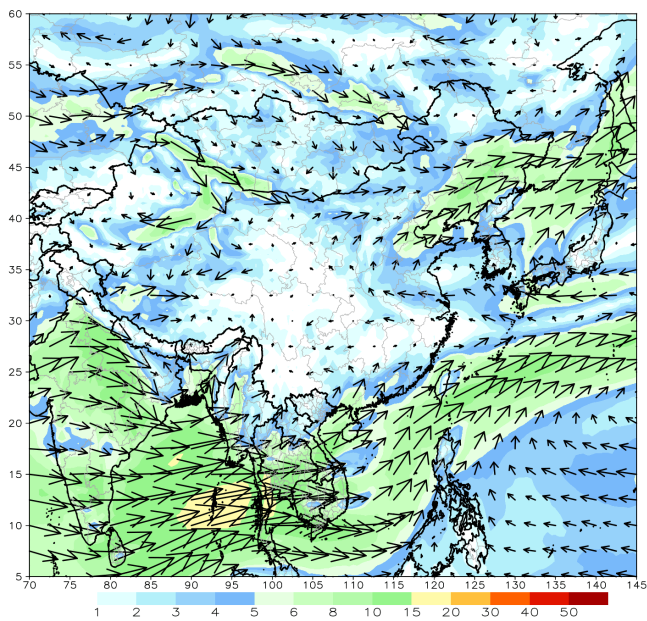
GFS week1 Temperature Min (C)
Period: 12z06Jun2024 – 12z12Jun2024



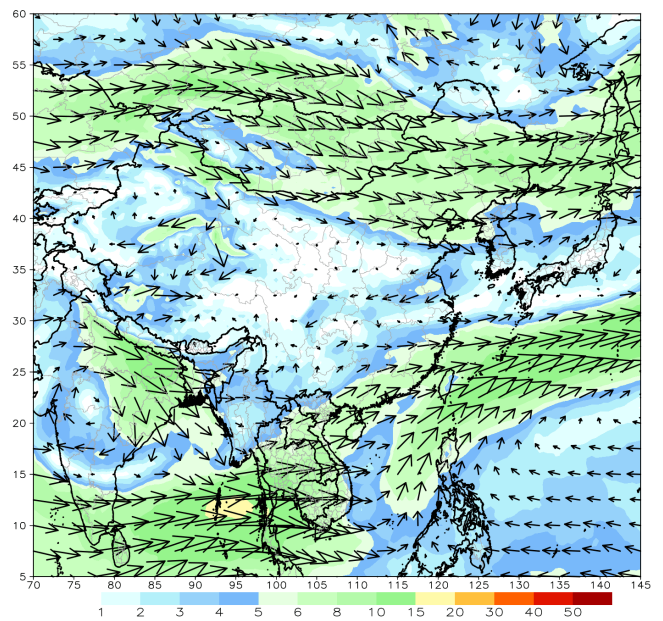
Weekly Wind Forecast

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: 12z06Jun2024 – 12z12Jun2024



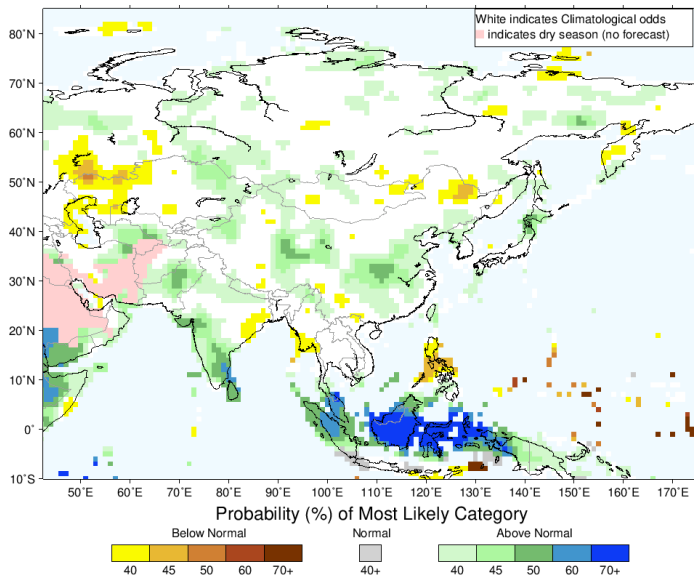
GFS 700mb week1 Mean Vector Wind Total (m/s)
Period: 12z06Jun2024 – 12z12Jun2024



Seasonal Rainfall and Temperature Forecast

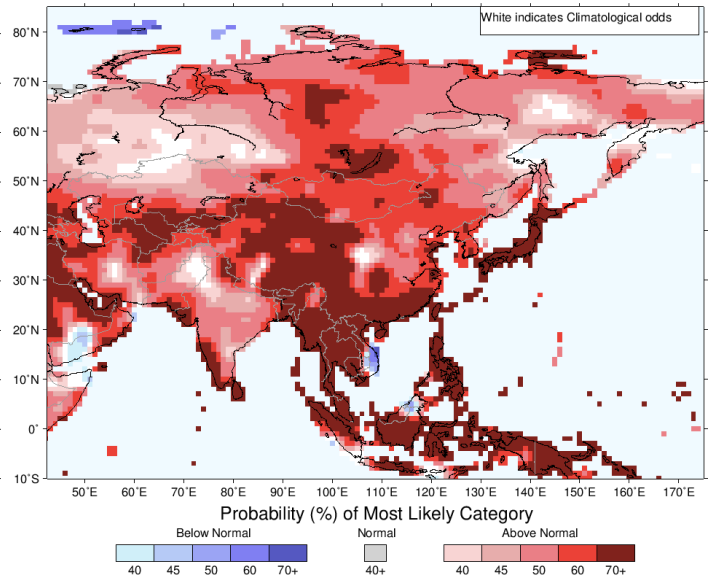
Following is the latest seasonal precipitation and temperature prediction for the next 3 months by the IRI. The color shading indicates the probability of the most dominant tercile -- that is, the tercile having the highest forecast probability. The color bar alongside the map defines these dominant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



Precipitation Forecast

IRI Multi-Model Probability Forecast for Temperature for June–July–August 2024, Issued May 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.

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