

HIGHLIGHTS

Rainfall Prediction



- High likelihood of heavy rainfall (100 - 150mm) is predicted for the Western, Sabaragamuwa, North Western, Southern provinces and fairly heavy rainfall (50 - 100mm) is predicted for the Central, North Central, and Uva provinces during 21 - 27 May.

Monitored Rainfalls



- For SL, 150 mm rainfall was received during 15 - 20 May.
- Apart from Western region, upto 4 - 12mm deficit of rainfall was observed during April.
- Depression 99B in the BoB is predicted to reach cyclone status and then track away from SL.

Monitored & Predicted Wind



- Winds at 850mb (1.5 km) were north westerly from 12 - 18 May reaching up to 3 m/s.
- Winds at 850mb (1.5 km) are predicted north westerly from 22 - 28 May reaching up to 20 m/s due to depression 99B (JTWC classification).

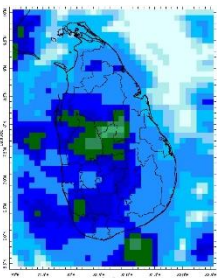
Monitored Sea & Land Temp



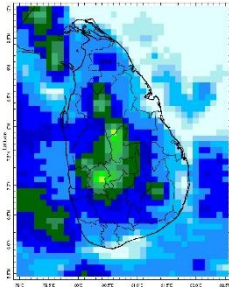
- Average land surface temperature was 30.3°C in the last week with warmer anomalies of +1-3°C.
- Sea surface temperature around Sri Lanka was 0.5 - 2.0°C above normal.
- The temperature has dropped slightly.

Monitoring Rainfall

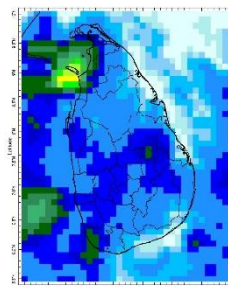
Daily Estimates for Rainfall from 10th May - 17th May 2024



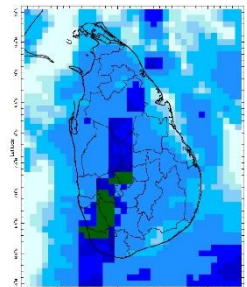
10 May



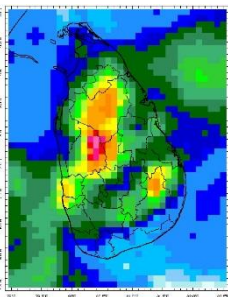
11 May



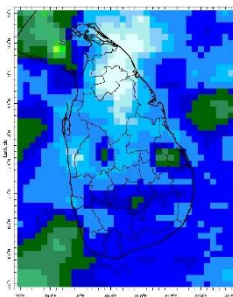
12 May



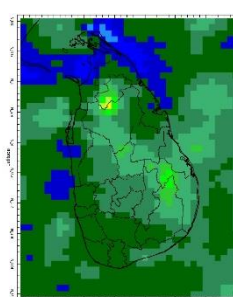
13 May



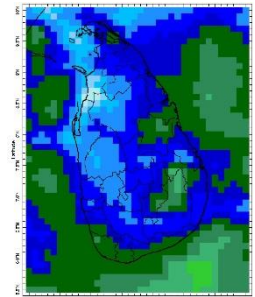
14 May



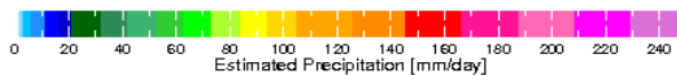
15 May



16 May



17 May



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

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Pacific sea state: May 20, 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 1.5°C above normal for the country in 30th April - 6th May 2024.

Cyclone 'Remal'

IMD predicts that the cyclonic storm in Bay of Bengal shall intensify into a cyclone by the 25th and as typically for this season shall steer away from SL. However, if the cyclone stalls there could continue to be severe winds and heavy rainfall in the western slopes of the mountains in SL.

Predictions

Rainfall

14 Day prediction: NCEP GFS models

From 21st May - 27th May:

Total rainfall by Provinces:

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

From 28th May - 3rd June:

Total rainfall by Provinces:

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

MJO based OLR predictions

For the next 15 days:

MJO shall moderately enhance the rainfall during 21st - 25th May, near neutral the rainfall during 26th - 30th May, and moderately suppress the rainfall during 31st May - 4th June for Sri Lanka.

Interpretation

Monitoring

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

Daily Average Rainfall in the Met stations for previous week of (18th May - 21st May) = 23.1 mm
Maximum Daily Rainfall: 214.5 mm & 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	29.0	31.6	25.3
Eastern hills	2.8	27.2	20.5
Eastern plains	11.1	32.8	25.5
Western hills	19.5	26.1	20.3
Western plains	45.4	29.6	24.6
Southern plains	2.2	31.3	25.4

Region	Average rainfall for last 8 days (mm)	Daily maximum rainfall for last 8 days (mm)	Daily minimum rainfall for last 8 days (mm)
Hydro catchment	23.4	88.0	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 the country except some parts of the Northern, Eastern, and Western provinces driven by the warm SST's.

Predictions

Rainfall: During the next week (21st May - 27th May), heavy rainfall (100 - 150 mm) is predicted for the Western, Sabaragamuwa, North Western, and Southern provinces and fairly heavy rainfall (50 - 100 mm) is predicted for the rest.

Temperatures: The temperature will remain below normal for some parts of the Central, Western, North Western, Southern, and Northern provinces and above normal some parts of eastern province during 22nd - 28th May.

Teleconnections: MJO shall moderately enhance the rainfall during 21st - 25th May, near neutral the rainfall during 26th - 30th May, and moderately suppress the rainfall during 31st May - 4th June for Sri Lanka.

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
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.



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Weekly Climate Bulletin for Sri Lanka

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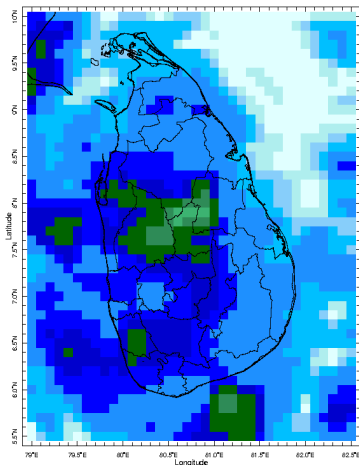
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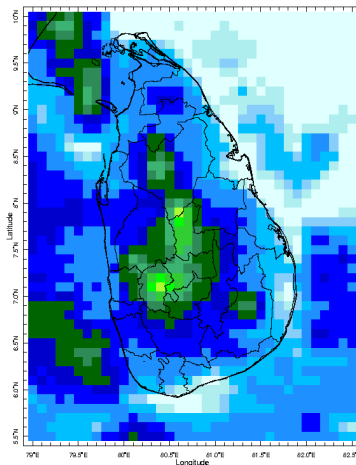
MONITORING

Daily Rainfall Monitoring

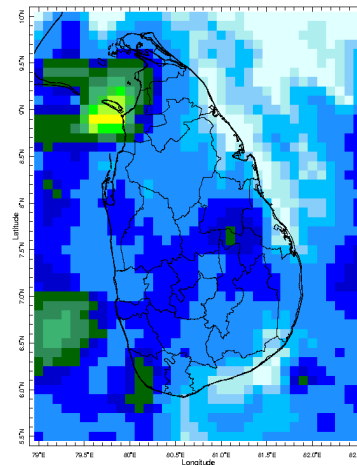
The following figures show the satellite observed rainfall in the last 7 days in Sri Lanka.



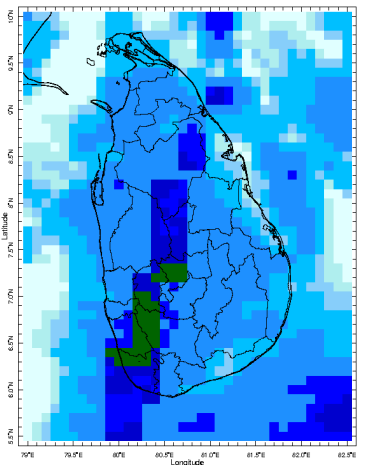
10 May 2024



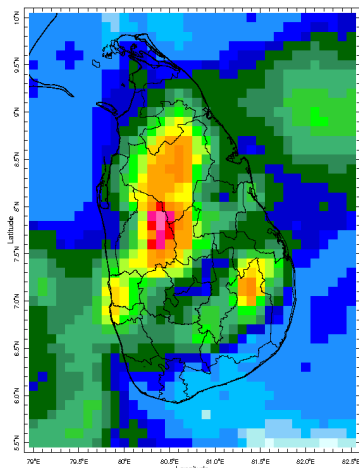
11 May 2024



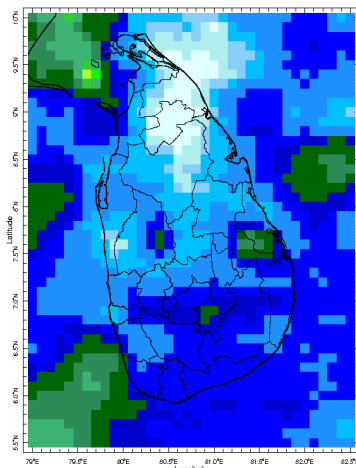
12 May 2024



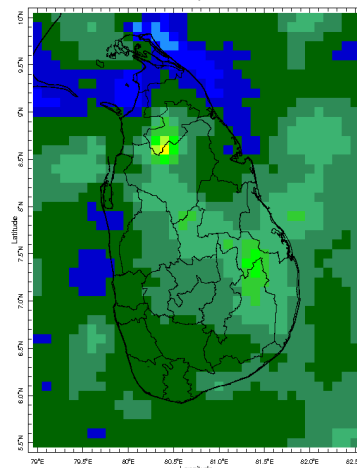
13 May 2024



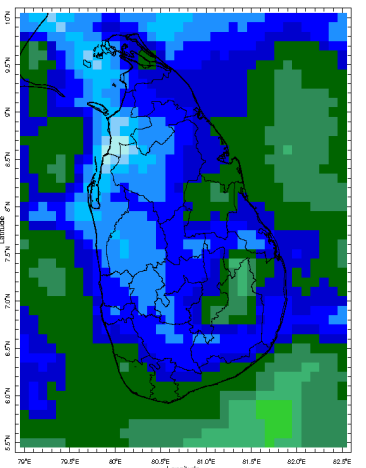
14 May 2024



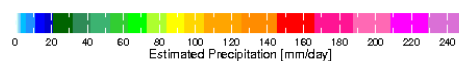
15 May 2024



16 May 2024

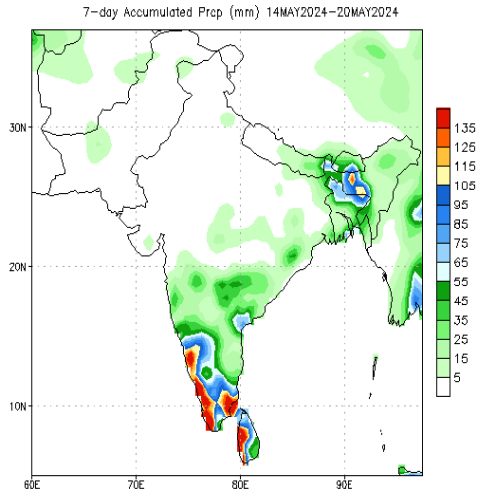


17 May 2024

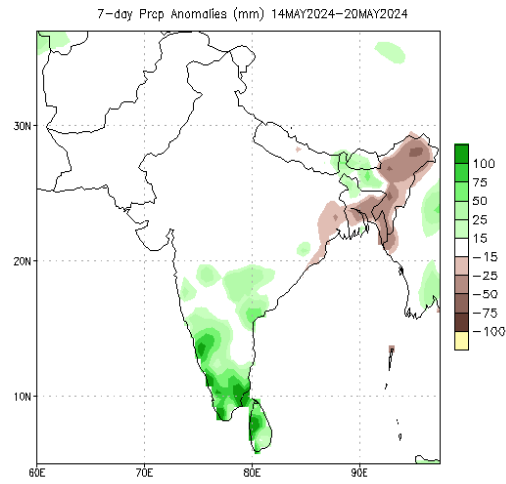


Weekly Rainfall Monitoring

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.



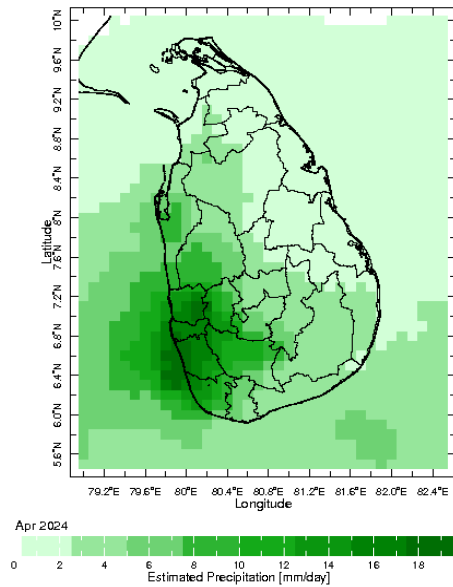
Data Source: CPC Unified (gauge-based & 0.5x0.5 deg resolution) Precipitation Analysis



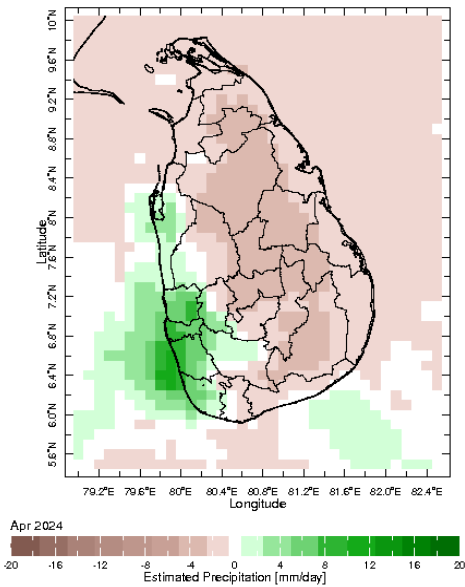
Data Source: CPC Unified (gauge-based & 0.5x0.5 deg resolution) Precipitation Analysis Climatology (1991-2020)

Monthly Rainfall Monitoring

The figure in the left shows the 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

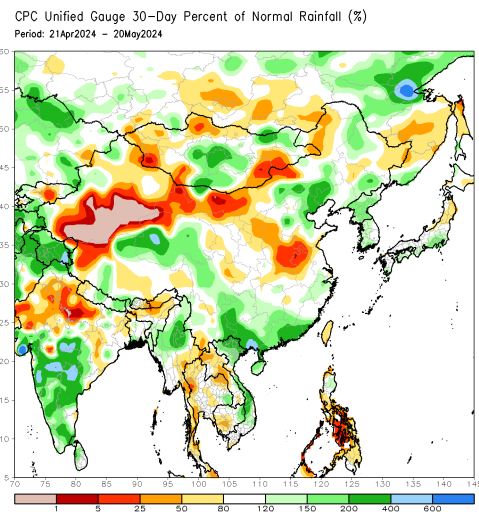
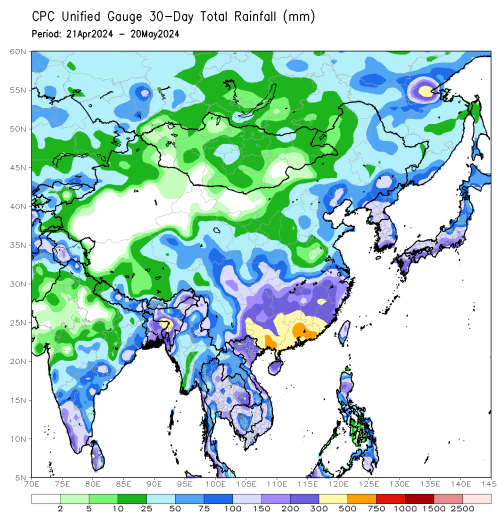


Monthly Average

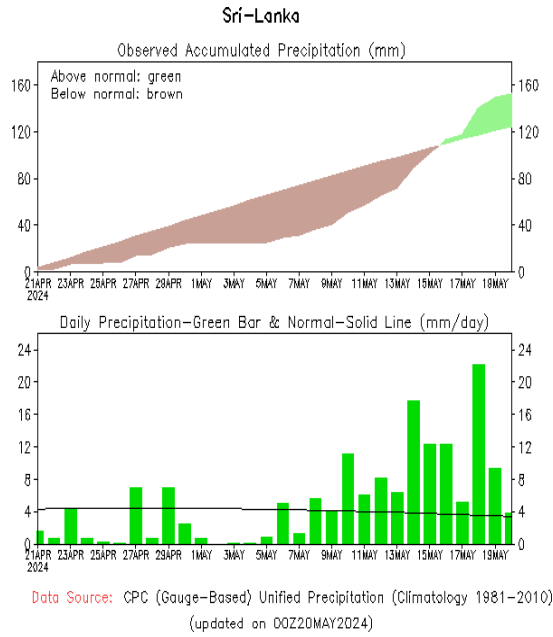


Monthly Anomaly

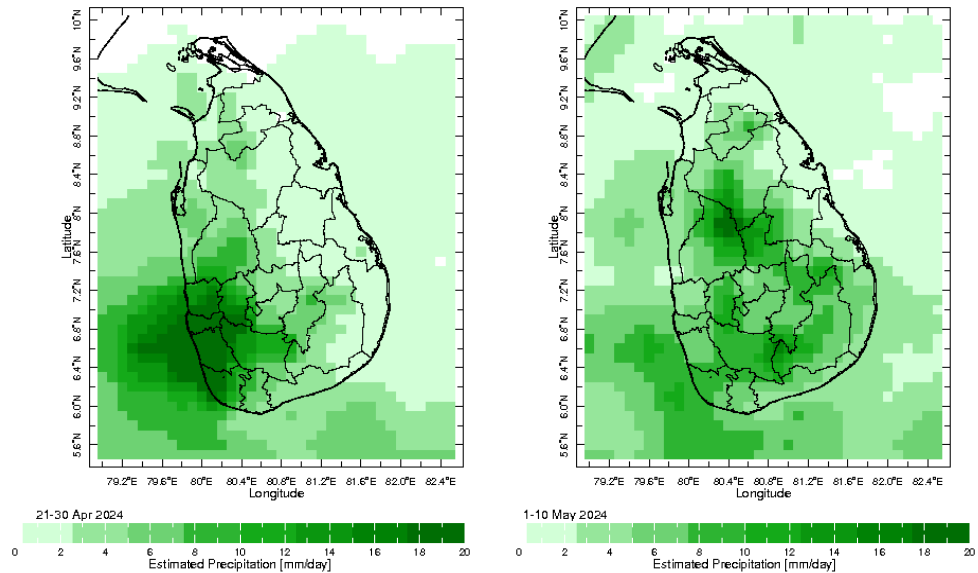
The figure in the top-left shows the total rainfall in the past 30 days from CPC Unified Precipitation Analysis while the figure in the top-right shows the total rainfall for the same period from RFE 2.0 Satellite Rainfall Estimates. The bottom two figures show the percentage of rainfall received in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



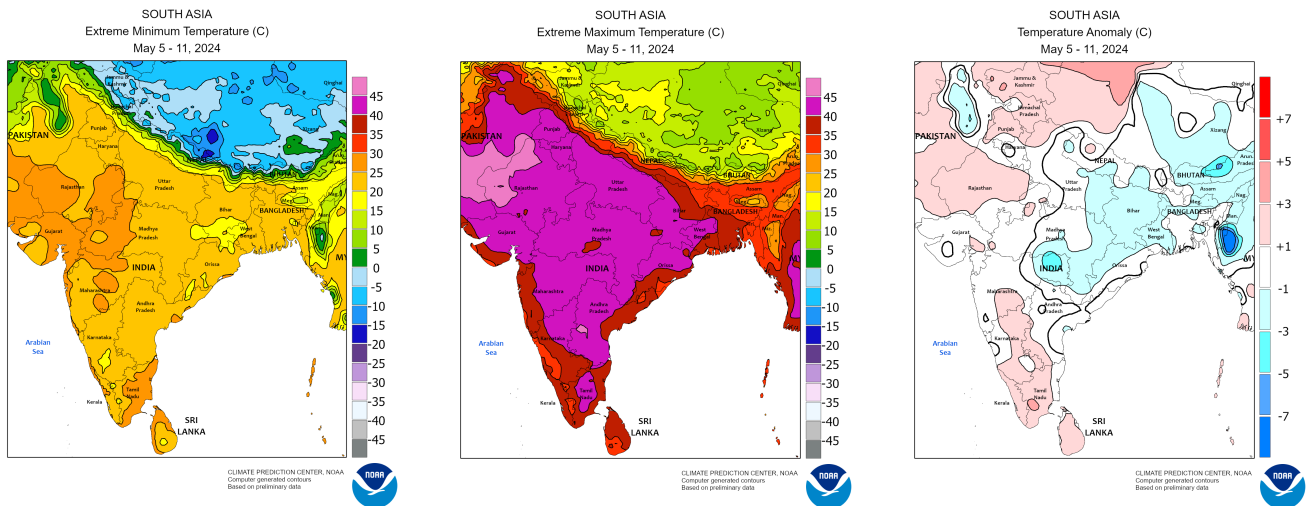
The following figure shows the observed accumulated rainfall (top) and daily observed rainfall (bottom) in Sri Lanka in the last 30 days.



Dekadal (10 Day) Satellite Derived Rainfall Estimates

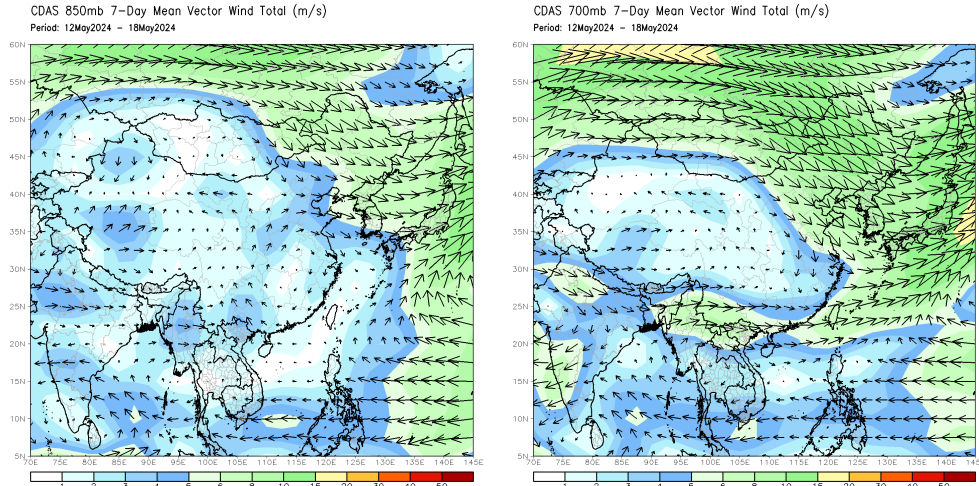


Weekly Temperature Monitoring



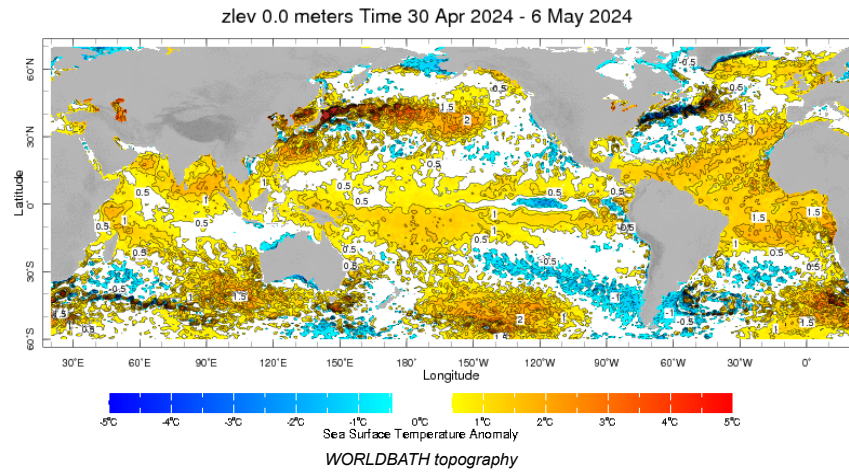
Weekly Wind Monitoring

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.

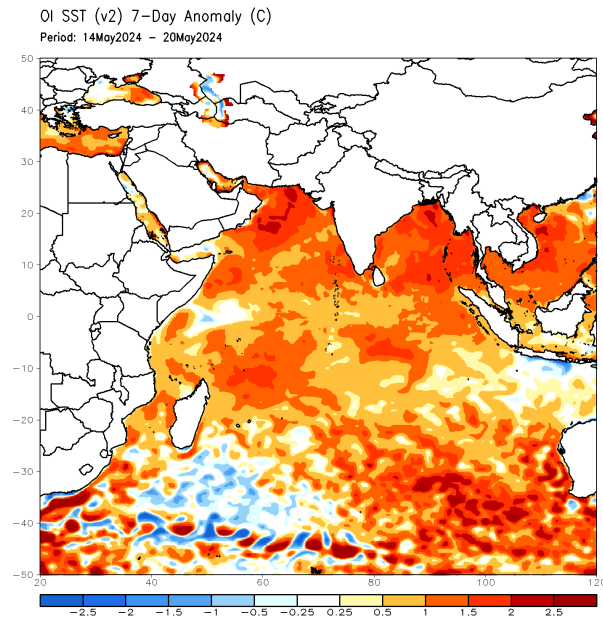


Weekly Average SST Anomalies

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

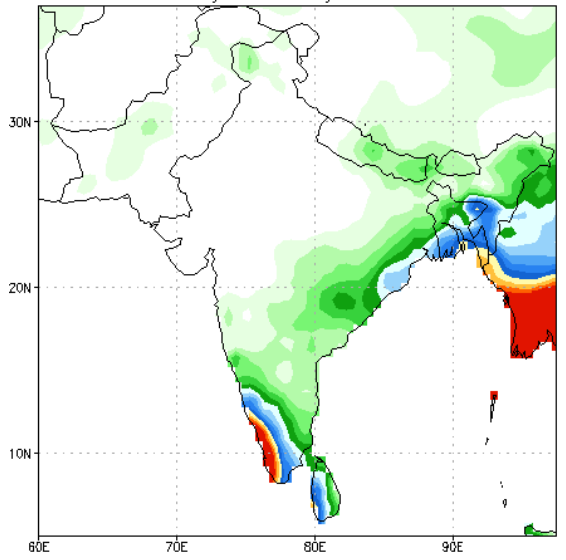


Optimum Interpolated Sea Surface Temperature Anomaly in the Indian Ocean from NOAA CPC



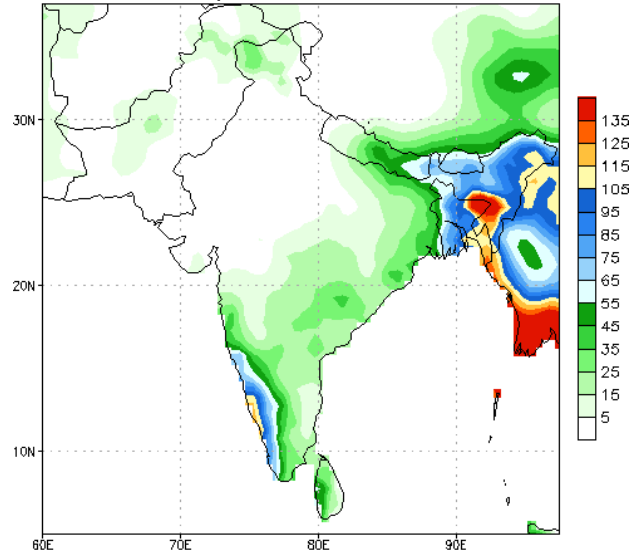
NCEP GFS 1- 14 Day prediction

NCEP GFS Ensemble Forecast 1-7 Day Precipitation (mm)
from: 21May2024
21May2024-27May2024 Accumulation



Bias correction based on last 30-day forecast error

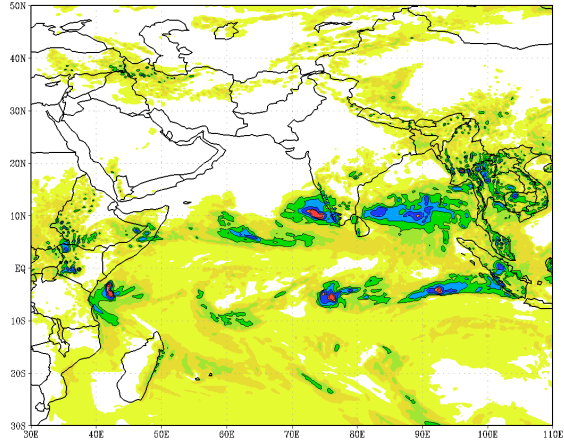
NCEP GFS Ensemble Forecast 8-14 Day Precipitation (mm)
from: 21May2024
28May2024-03Jun2024 Accumulation



Bias correction based on last 30-day forecast error

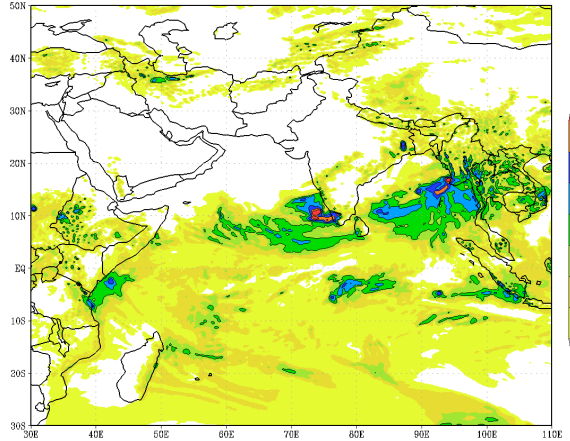
IMD GFS (T574) Model Rainfall Forecast from RMSC New Delhi, India

IMD :GFS MODEL(12 Km) RAINFALL (mm) FORECAST (24 HR)
based on 00 UTC of 21-05-2024 valid for 03 UTC of 22-05-2024



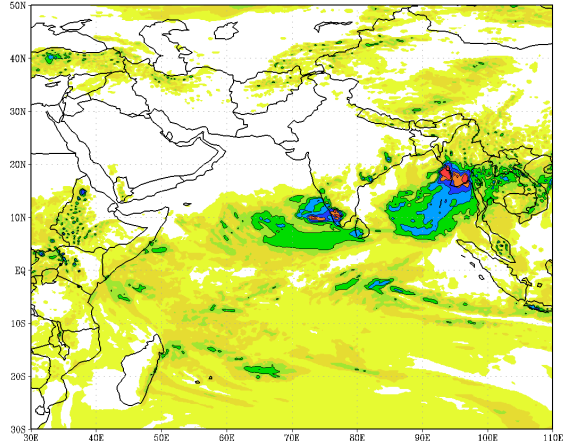
(Background does not depict political boundary)

IMD :GFS MODEL(12 Km) RAINFALL (mm) FORECAST (48 HR)
based on 00 UTC of 21-05-2024 valid for 03 UTC of 23-05-2024



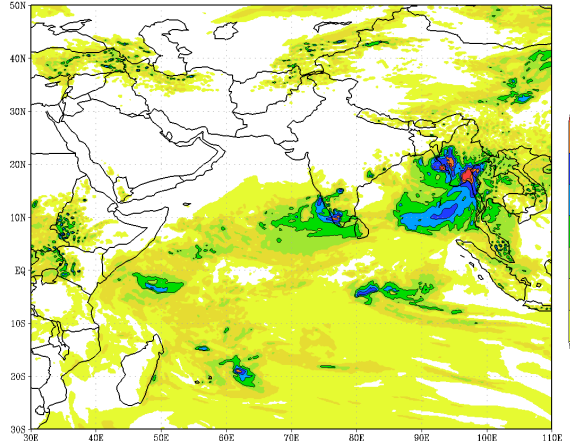
(Background does not depict political boundary)

IMD :GFS MODEL(12 Km) RAINFALL (mm) FORECAST (72 HR)
based on 00 UTC of 21-05-2024 valid for 03 UTC of 24-05-2024

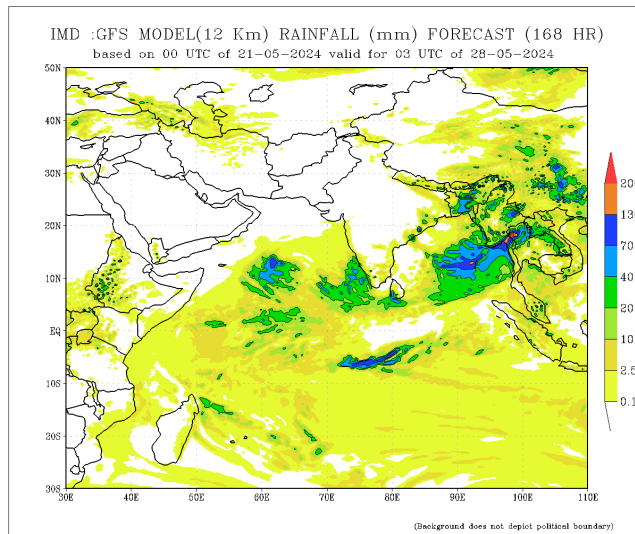
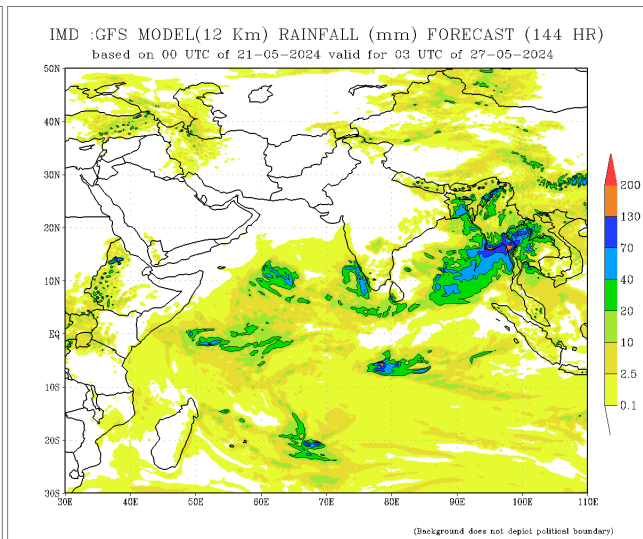
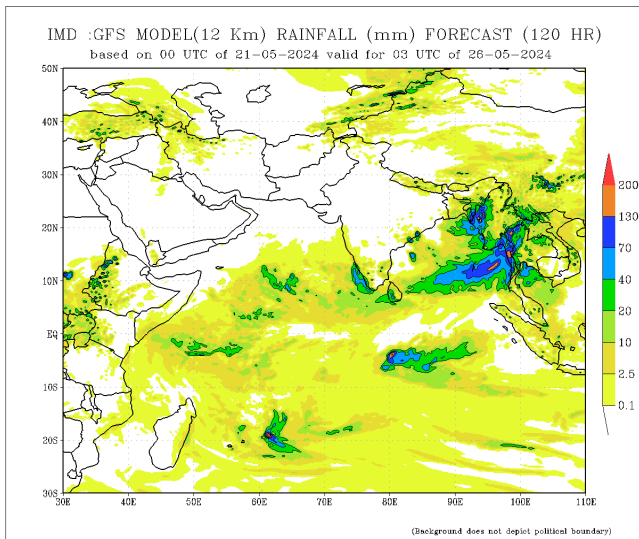


(Background does not depict political boundary)

IMD :GFS MODEL(12 Km) RAINFALL (mm) FORECAST (96 HR)
based on 00 UTC of 21-05-2024 valid for 03 UTC of 25-05-2024

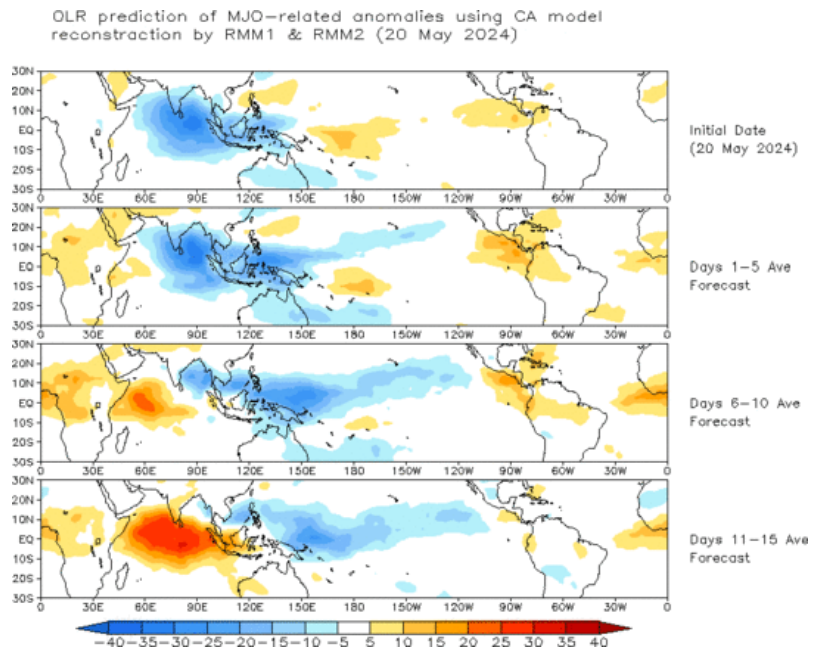


(Background does not depict political boundary)



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

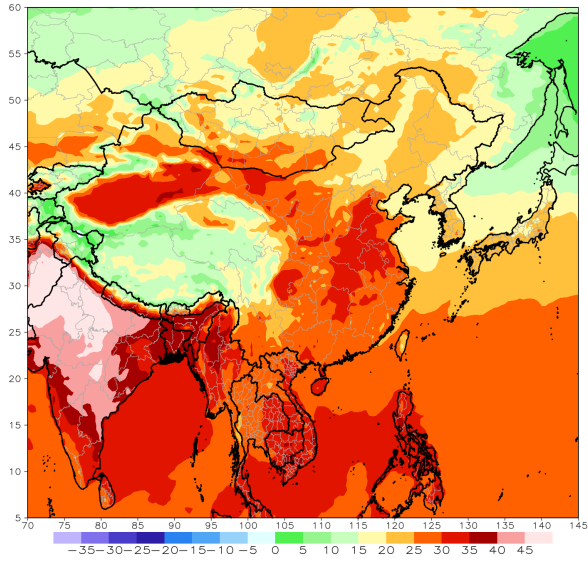
The Outgoing Longwave Radiation (OLR) is a proxy for rainfall. This can be used to identify convective rain clouds based on the MJO phase. Violet and Blue shading indicates enhanced tropical weather and Orange shading indicates suppressed conditions. The following figure shows the forecasts of MJO associated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



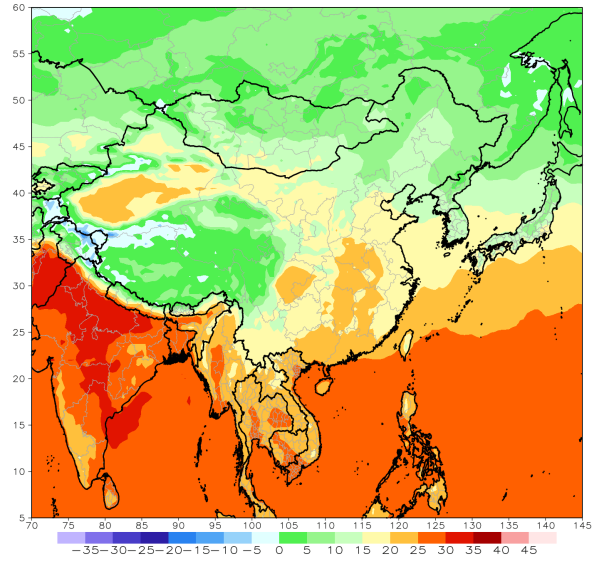
Weekly Temperature Forecast

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

GFS week1 Temperature Max (C)
Period: 18z22May2024 - 18z28May2024



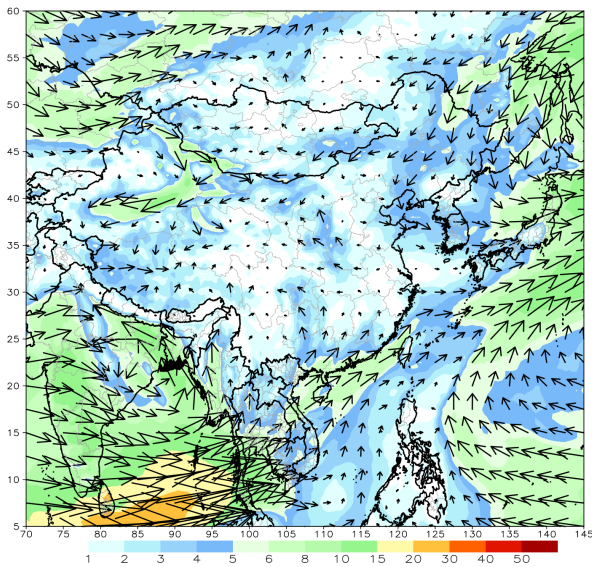
GFS week1 Temperature Min (C)
Period: 18z22May2024 - 18z28May2024



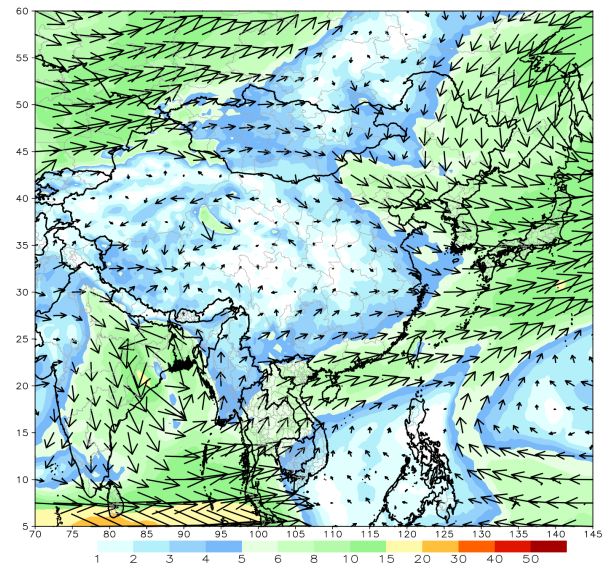
Weekly Wind Forecast

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: 18z22May2024 - 18z28May2024



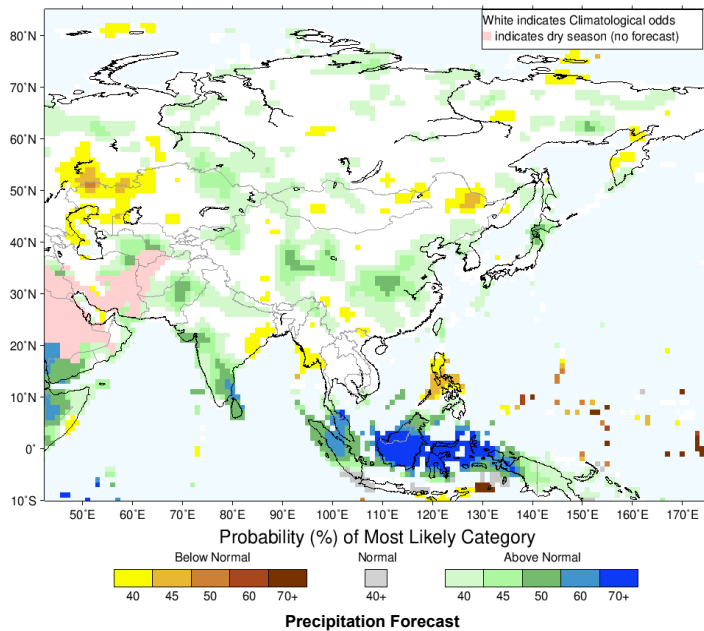
GFS 700mb week1 Mean Vector Wind Total (m/s)
Period: 18z22May2024 - 18z28May2024



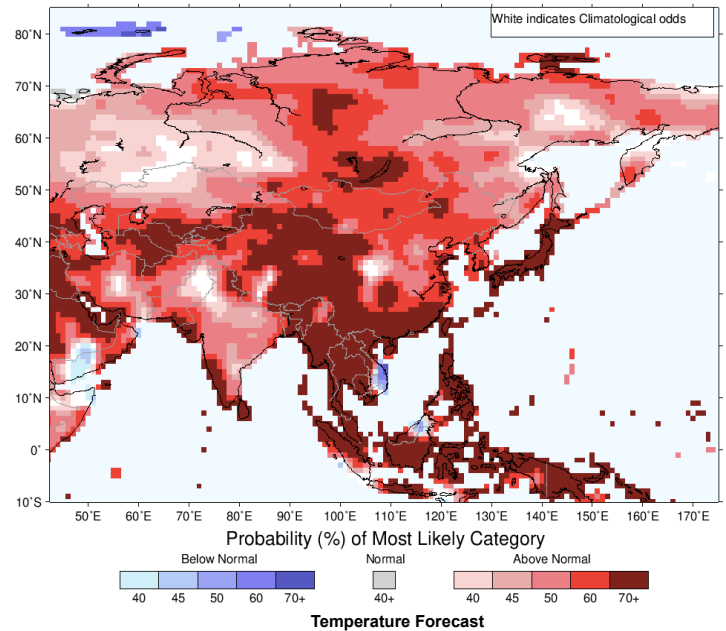
Seasonal Rainfall and Temperature Forecast

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



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



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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.

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

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