

HIGHLIGHTS

Rainfall Prediction



- Light showers are predicted for the Sabaragamuwa, Southern, Uva, Western, Central and Northern provinces during 17 - 23 Aug.

Monitored Rainfalls



- During the last week, average daily rainfall over Sri Lanka was 'light' (2.0 mm) and hydro catchment areas received 'light' (2.0 mm) showers.

Monitored & Predicted Wind



- From 8 - 14 Aug, up to 8 m/s of northwest-westerly winds were at 850 mb (1.5 km).
- During 18 - 24 Aug, up to 10 m/s of northwest-southwesterly winds are expected at 850 mb (1.5 km).

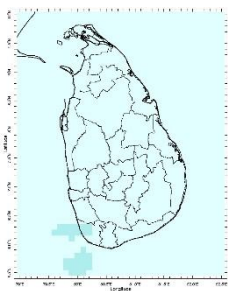
Monitored Sea & Land Temp



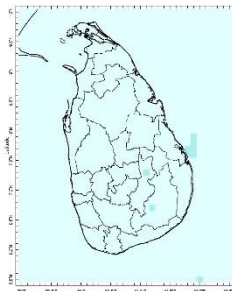
- Sea surface temperature around Sri Lanka was 1 - 1.5°C above normal.
- From 9 - 16 Aug, maximum daily temperature was recorded in Polonnaruwa (38.1°C), Anuradhapura (37.8°C) and Vavuniya (37.7°C).

Monitoring Rainfall

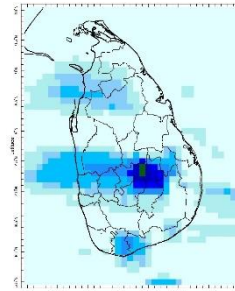
Daily Estimates for Rainfall from 3rd August – 10th August 2023



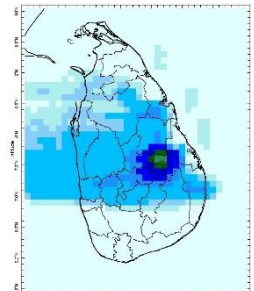
3 August



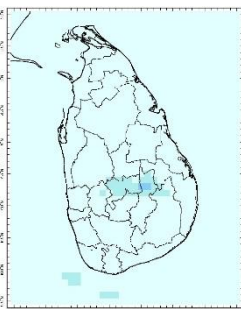
4 August



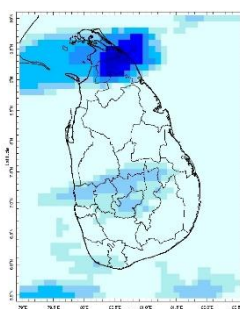
5 August



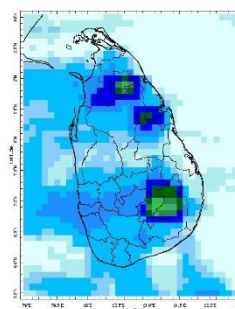
6 August



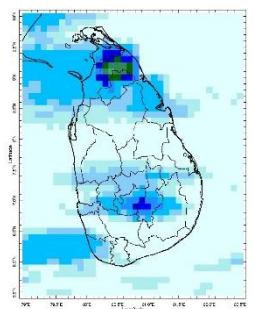
7 August



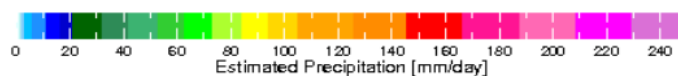
8 August



9 August



10 August



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

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Ocean State *(Text Courtesy IRI)*

Pacific sea state: August 14, 2023

El Nino Mode has set in according to NOAA since 8th of June. Equatorial sea surface temperatures (SSTs) are above average across the central and eastern Pacific Ocean mid-August. El Niño conditions will continue through the Northern Hemisphere winter (with greater than a 95% chance through December 2023-February 2024).

Indian Ocean State

Sea surface temperature around Sri Lanka was 0.5 °C above normal to the Western and Northern half of the country in 18th - 24th July, 2023. A positive Dipole Mode has set in across the Indian Ocean since 8th of June.

Predictions

Rainfall

7 - day prediction: NOAA NCEP models

From 17th August - 23rd August:

Total rainfall by Provinces:

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

MJO based OLR predictions

For the next 15 days:

MJO shall slightly suppress the rainfall during 17th - 21st August and near neutral the rainfall during 22nd - 31st August for Sri Lanka.

Interpretation

Monitoring

Rainfall: During the last two weeks, there had been fairly heavy rainfall over the following areas: Monaragala, Mullaittivu, Kandy

Daily Average Rainfall in the Met stations for previous week of (9th August - 16th August) = 2.0 mm
Maximum Daily Rainfall: 63.7 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	1.7	34.1	25.9
Eastern hills	5.1	29.2	17.6
Eastern plains	1.9	35.4	24.9
Western hills	1.3	29.2	19.1

Western plains	1.7	31.8	26.4
Southern plains	0.0	33.6	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	2.0	48.0	0.0

Wind: Northwest-westerly winds prevailed in the sea area and around the island last week.

Temperatures: The temperature anomalies were above normal for the Sabaragamuwa, Central, North Central, Western, and North Western provinces and some parts of the Southern, Eastern, Uva, and Northern provinces of the country driven by the warm SST's.

Predictions

Rainfall: During the next week (17th August - 23rd August), light showers (15 mm) are predicted for the Southern, Sabaragamuwa, Uva, Western, Central, and Northern provinces and less rainfall is predicted for the rest of the country.

Temperatures: The temperature will remain above normal for some parts of the Eastern, Uva, Northern, North Central, Southern, and Central provinces during 18th August - 24th August.

Teleconnections: A positive Dipole Mode has set in across the Indian Ocean since 8th of June. MJO shall slightly suppress the rainfall during 17th - 21st August and near neutral the rainfall during 22nd - 31st August for Sri Lanka.

Seasonal Precipitation: The precipitation forecast for the September-October-November, 2023 season shows above normal precipitation for the country.

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, 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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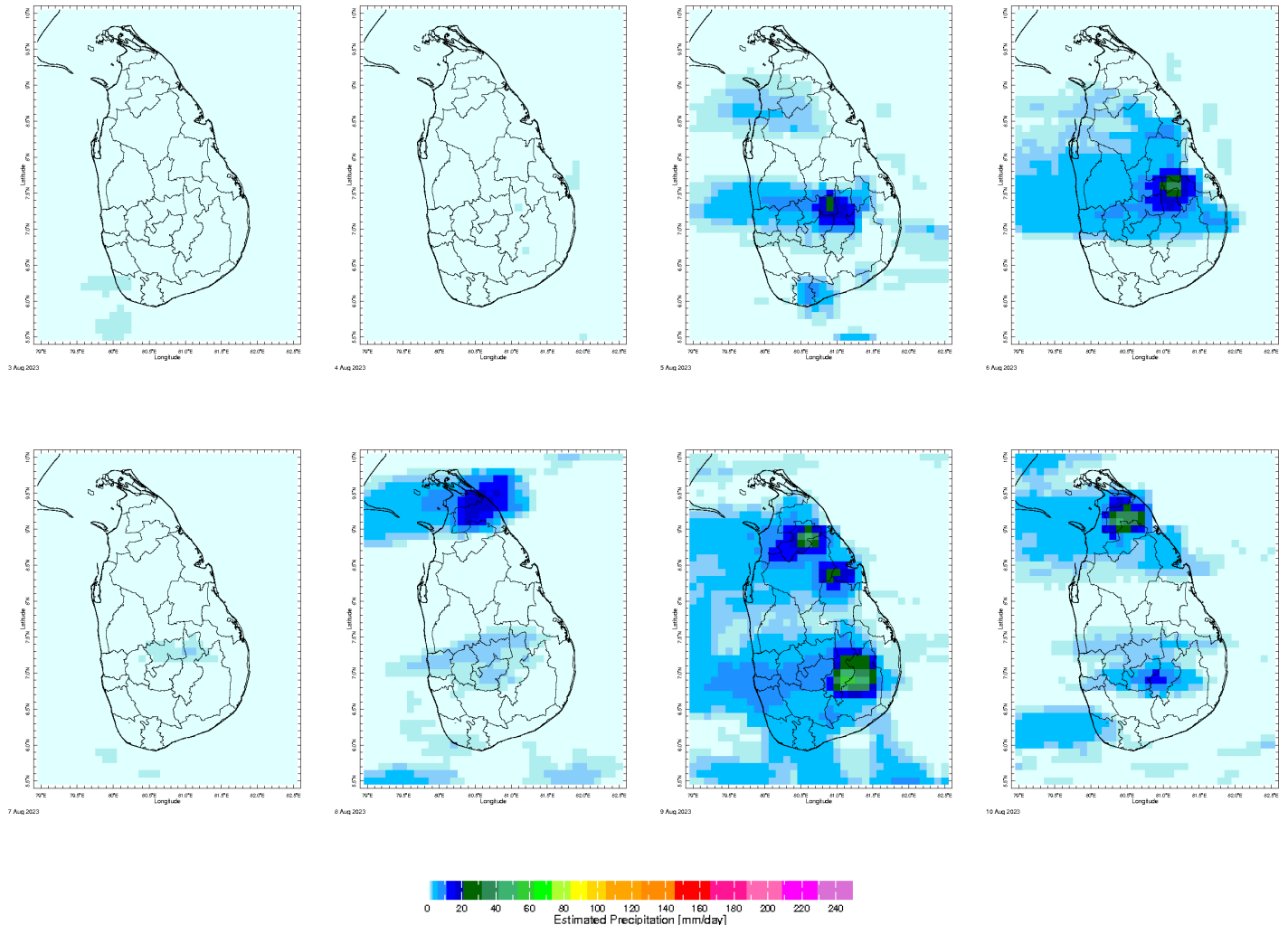
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MONITORING

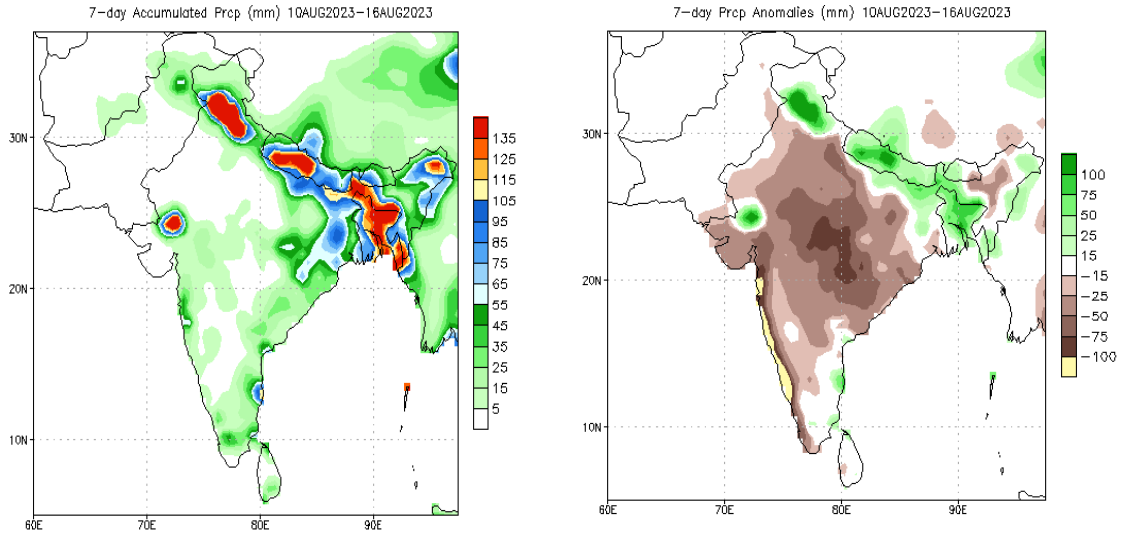
Daily Rainfall Monitoring

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



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.

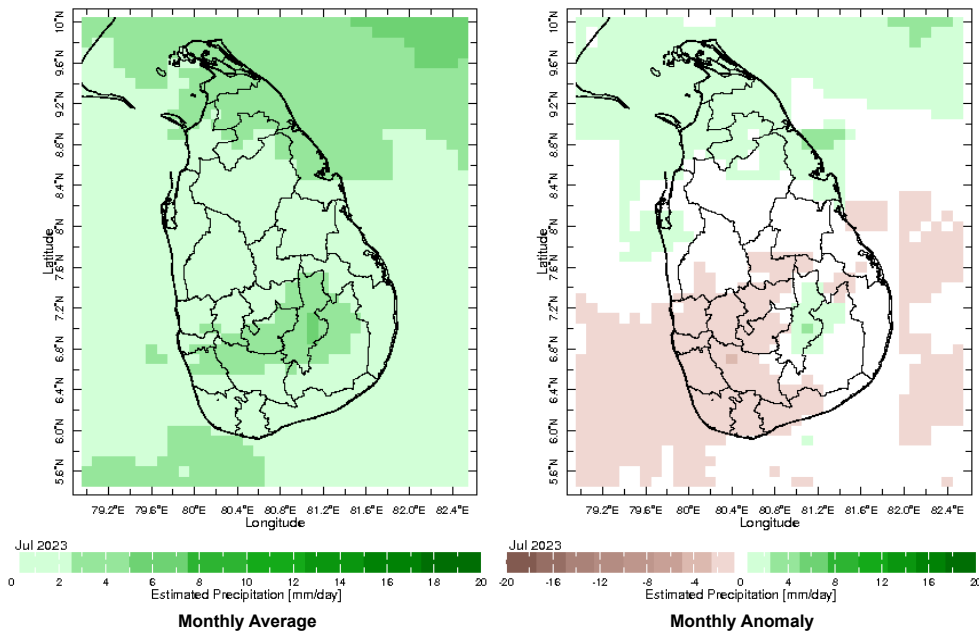


Data Source: CPC Unified (gauge-based & 0.5x0.5 deg resolution) Precipitation Analysis

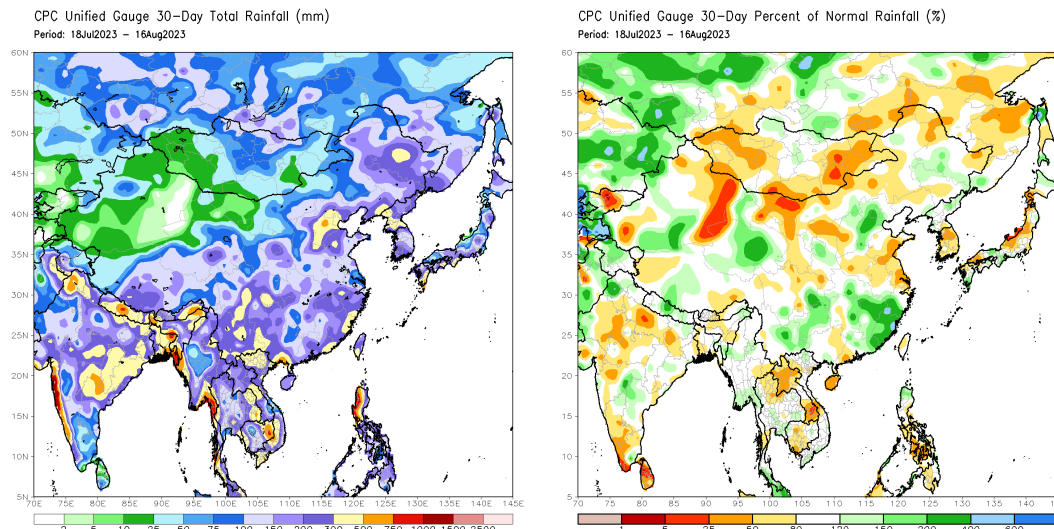
Data Source: CPC Unified (gauge-based & 0.5x0.5 deg resolution) Precipitation Analysis Climatology (1991–2020)

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

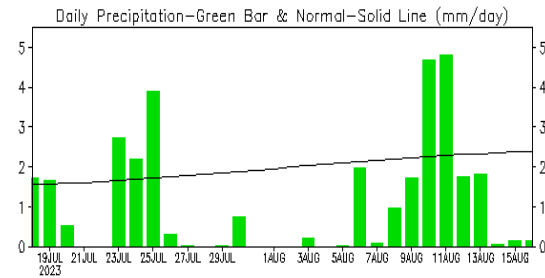
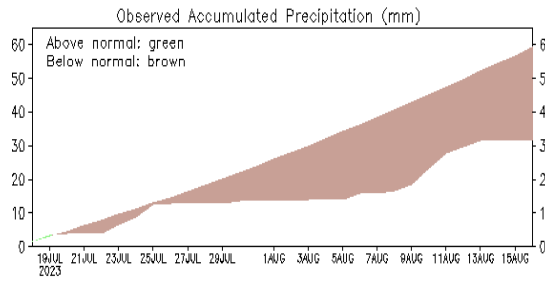


The figure in the top-left shows the total rainfall in the past 30 days from CPC Unified Precipitation Analysis while the figure in the top-right shows the total rainfall for the same period from RFE 2.0 Satellite Rainfall Estimates. The bottom two figures show the percentage of rainfall received in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



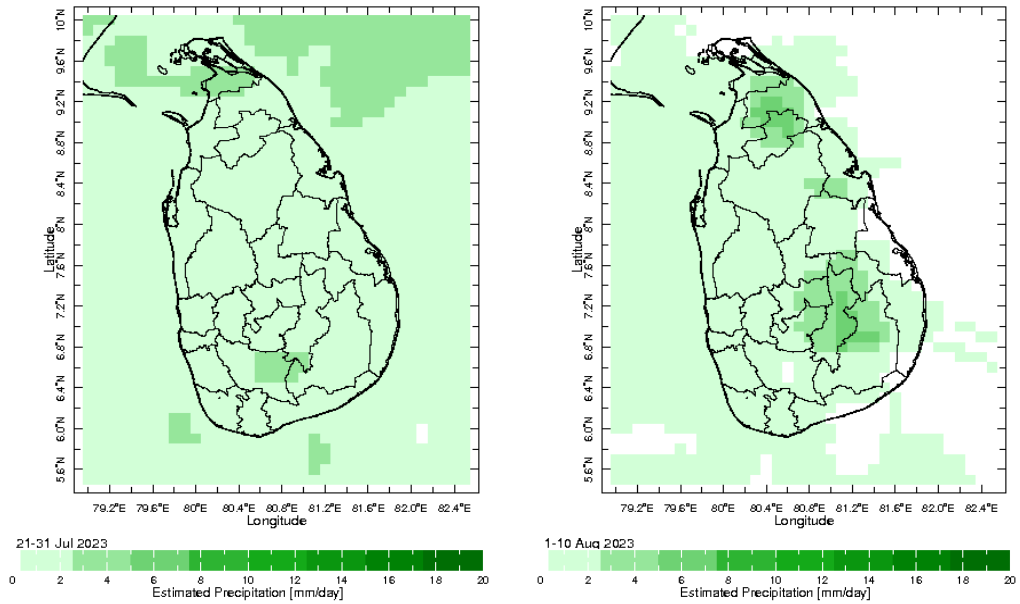
The following figure shows the observed accumulated rainfall (top) and daily observed rainfall (bottom) in Sri Lanka in the last 30 days.

Sri-Lanka

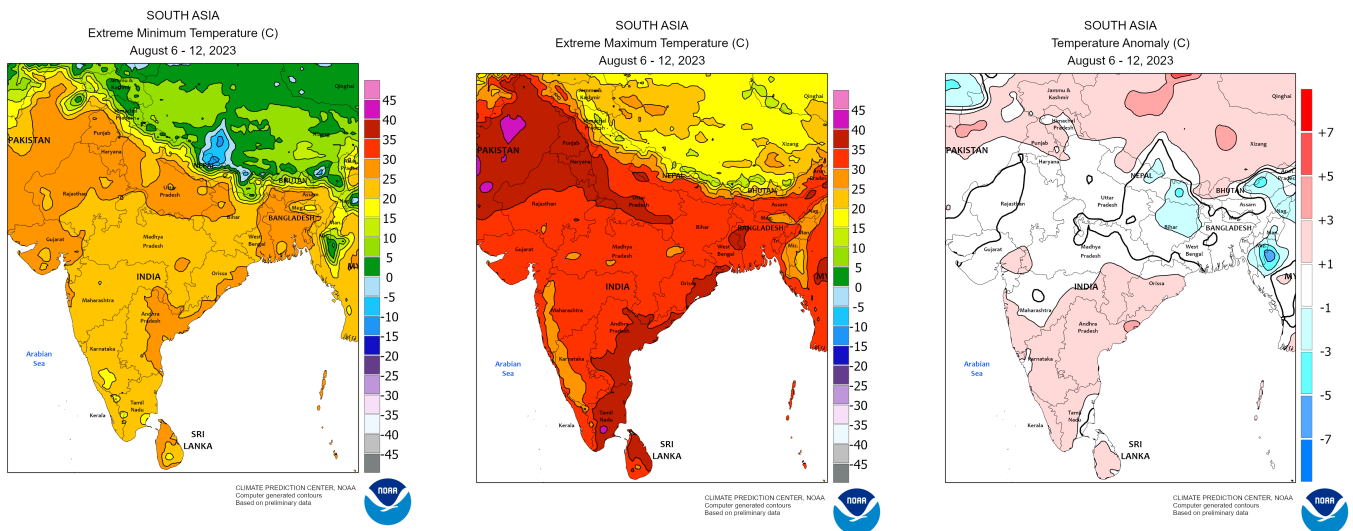


Data Source: CPC (Gauge-Based) Unified Precipitation (Climatology 1981–2010)
(updated on 00Z16AUG2023)

Dekadal (10 Day) Satellite Derived Rainfall Estimates

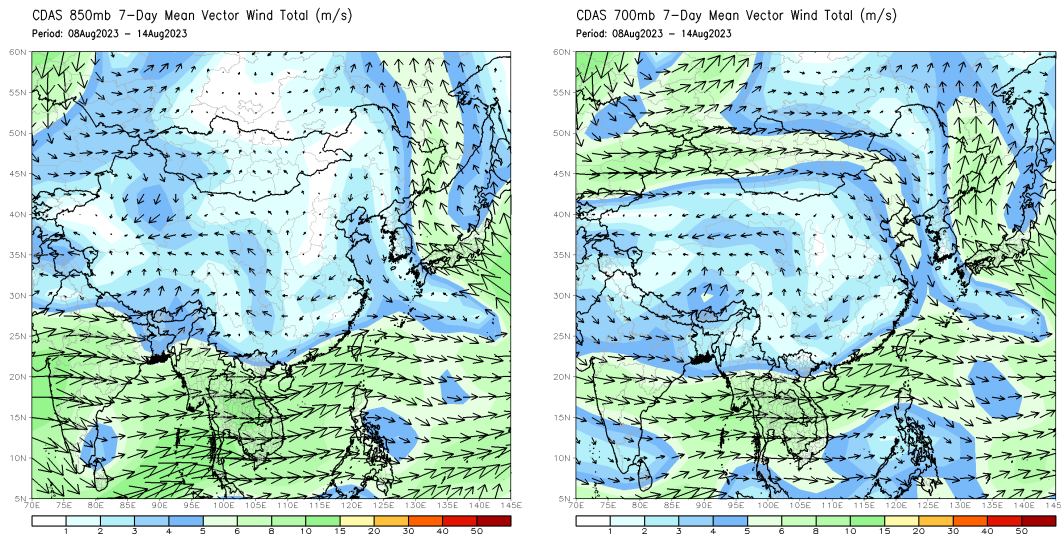


Weekly Temperature Monitoring



Weekly Wind Monitoring

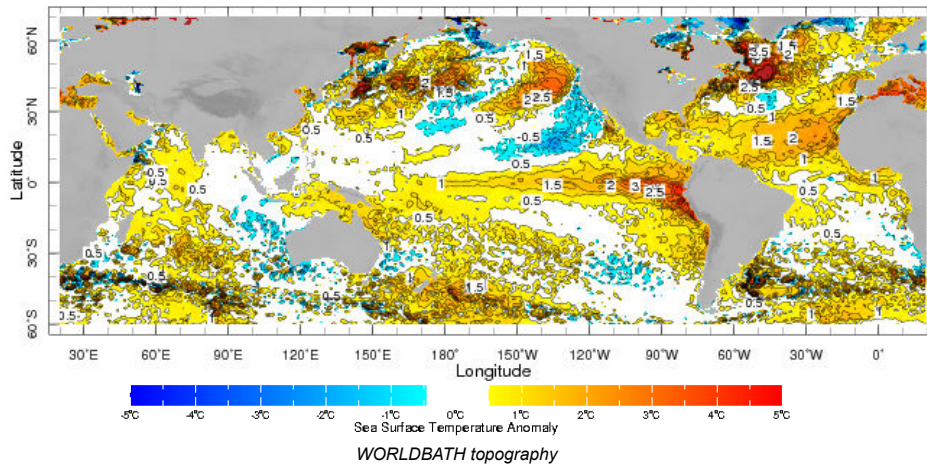
The following figures show the mean vector wind total of the past 7 days near Sri Lanka at two levels. The figure on the left shows 850 mb (~1500 m) level and the figure on the right shows 700 mb (~3000 m) level.



Weekly Average SST Anomalies

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

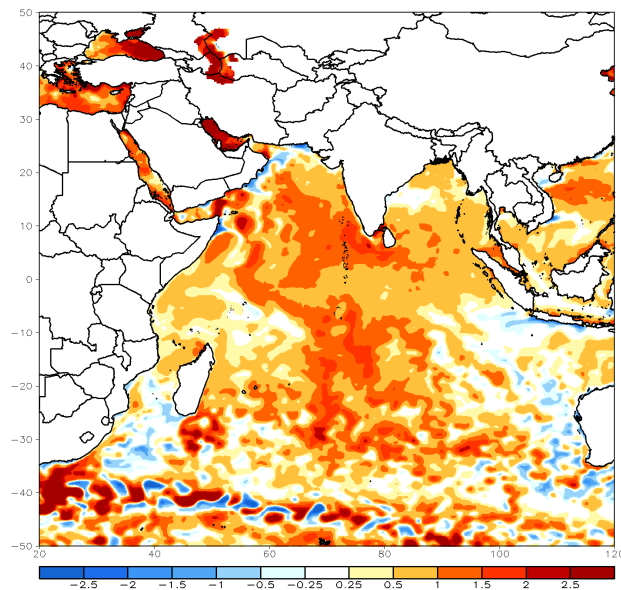
zlev 0.0 meters Time 18-24 Jul 2023



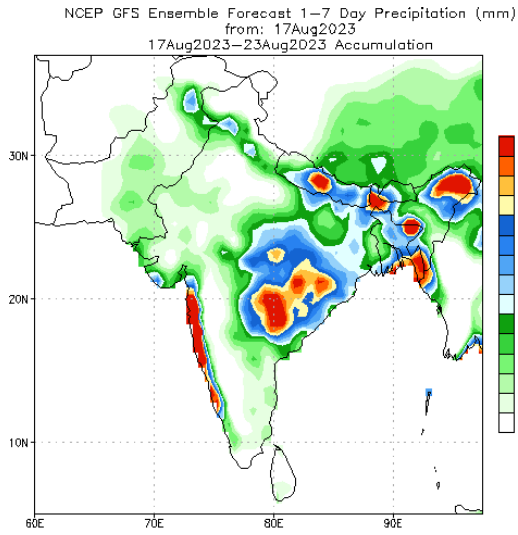
Optimum Interpolated Sea Surface Temperature Anomaly in the Indian Ocean from NOAA CPC

OI SST (v2) 7-Day Anomaly (C)

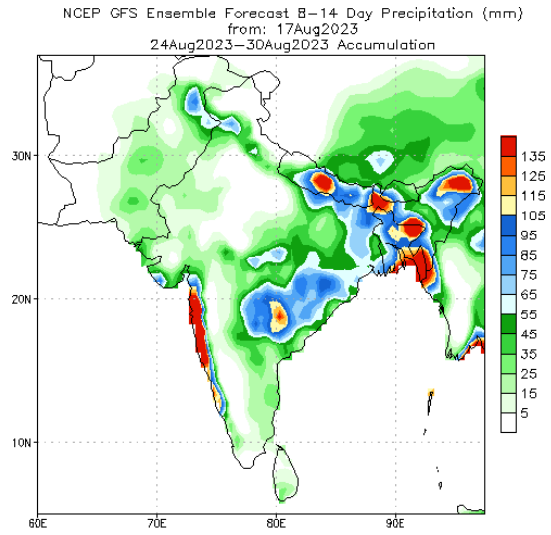
Period: 10Aug2023 - 16Aug2023



NCEP GFS 1- 14 Day prediction

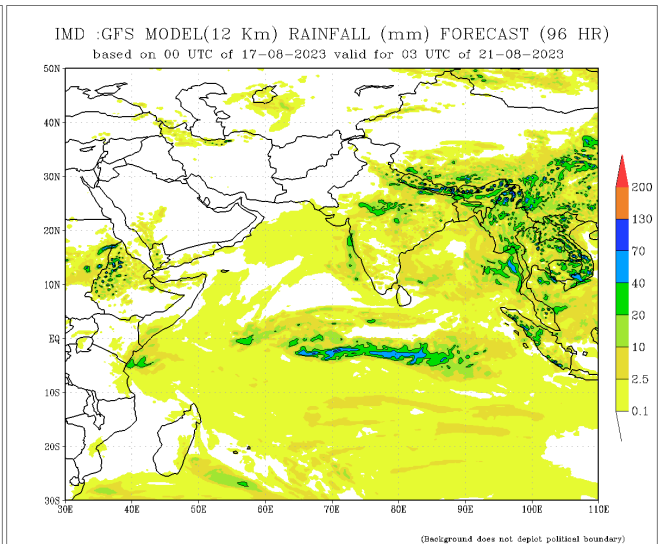
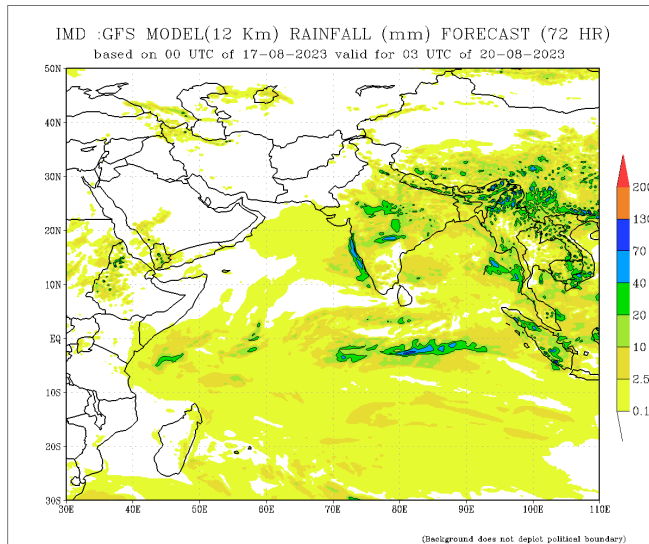
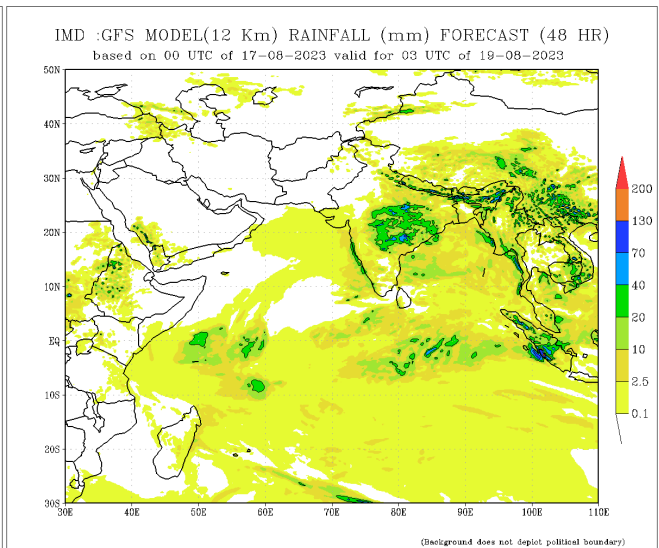
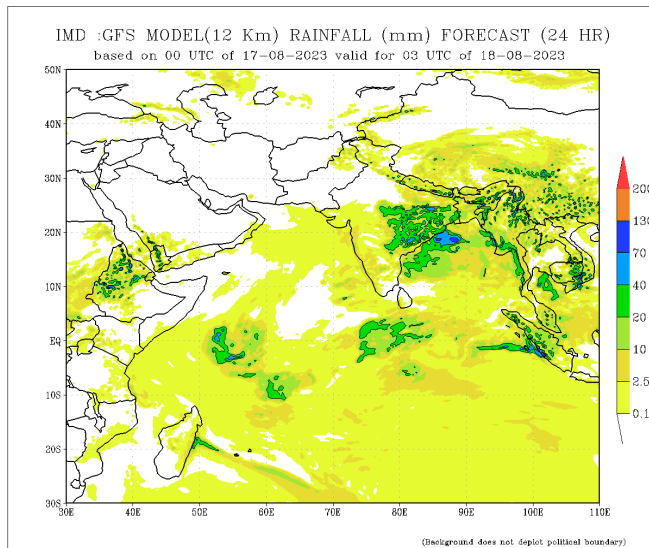


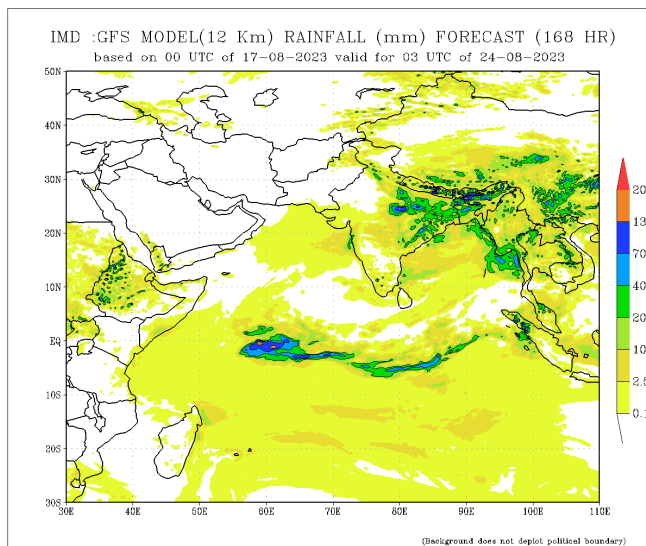
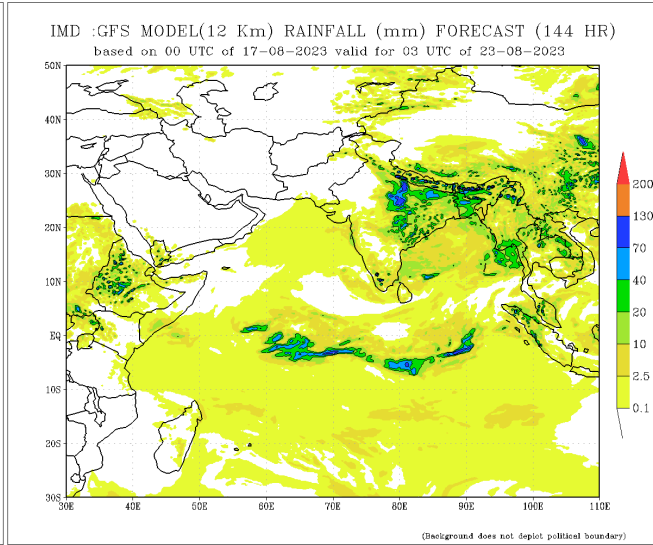
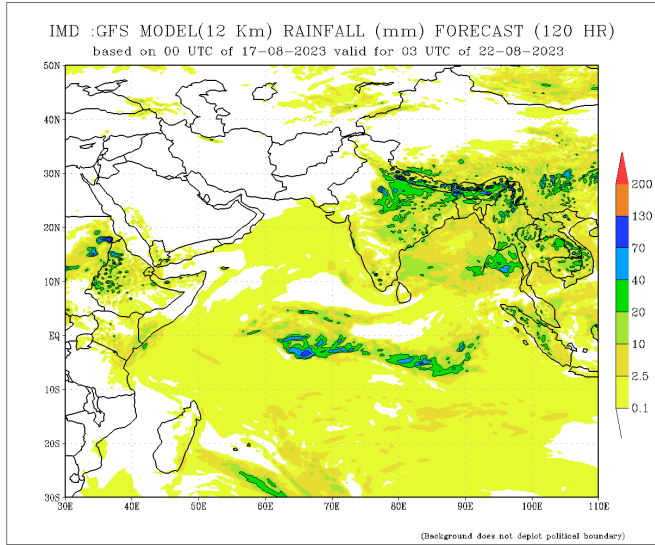
Bias correction based on last 30-day forecast error



Bias correction based on last 30-day forecast error

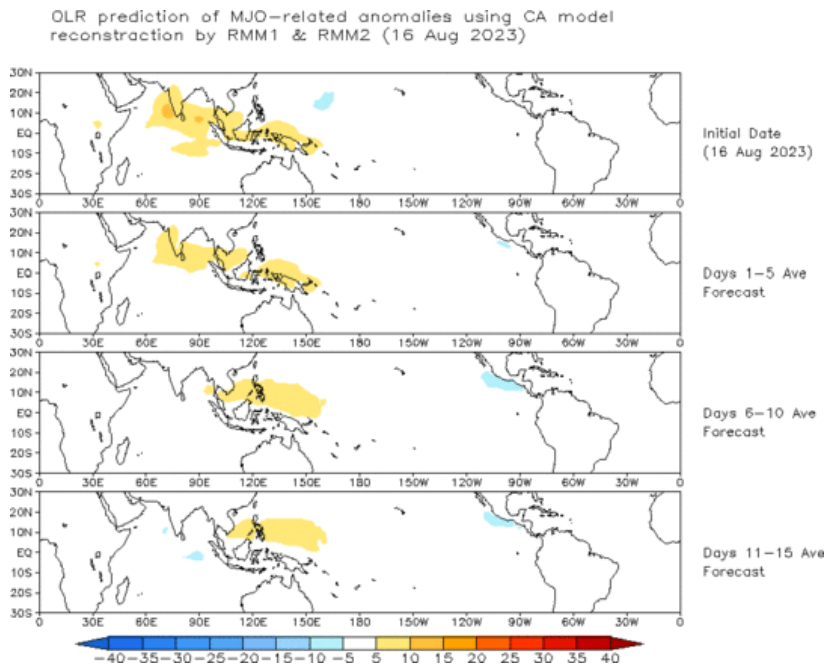
IMD GFS (T574) Model Rainfall Forecast from RMSC New Delhi, India





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

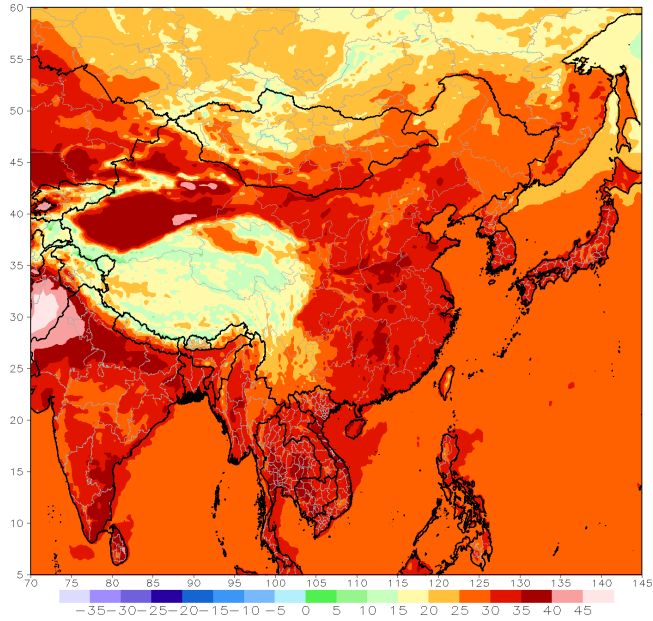
The Outgoing Longwave Radiation (OLR) is a proxy for rainfall. This can be used to identify convective rain clouds based on the MJO phase. Violet and Blue shading indicates enhanced tropical weather and Orange shading indicates suppressed conditions. The following figure shows the forecasts of MJO associated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



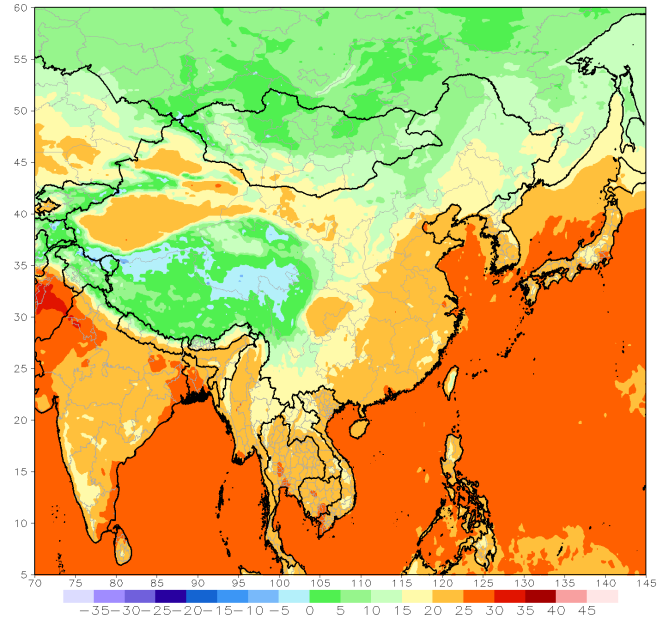
Weekly Temperature Forecast

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

GFS week1 Temperature Max (C)
Period: 18z18Aug2023 - 18z24Aug2023



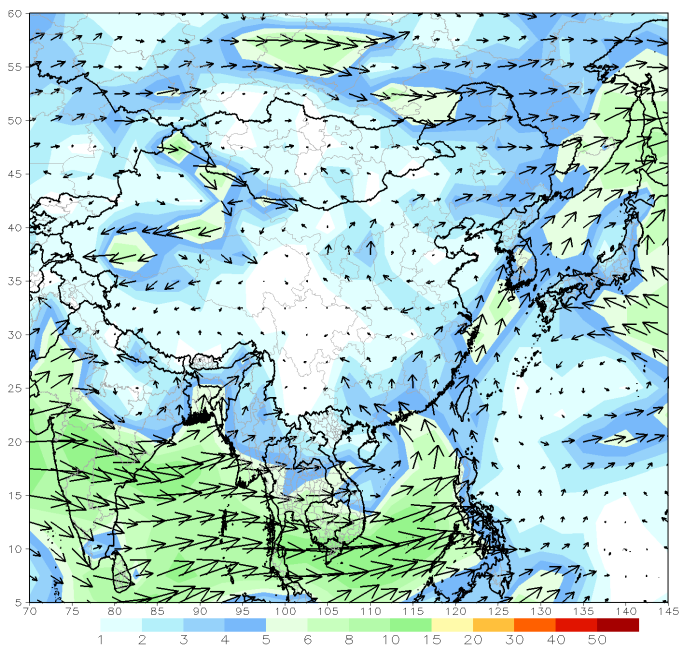
GFS week1 Temperature Min (C)
Period: 18z18Aug2023 - 18z24Aug2023



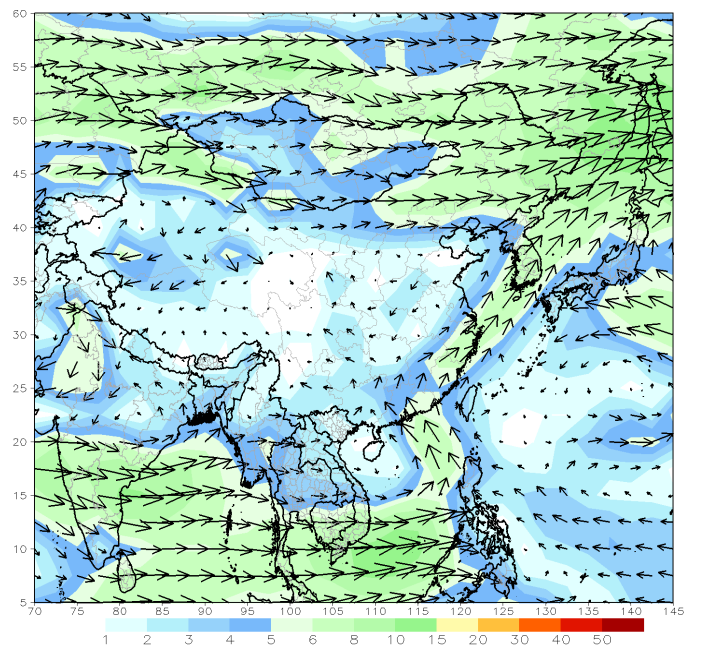
Weekly Wind Forecast

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: 18z18Aug2023 - 18z24Aug2023



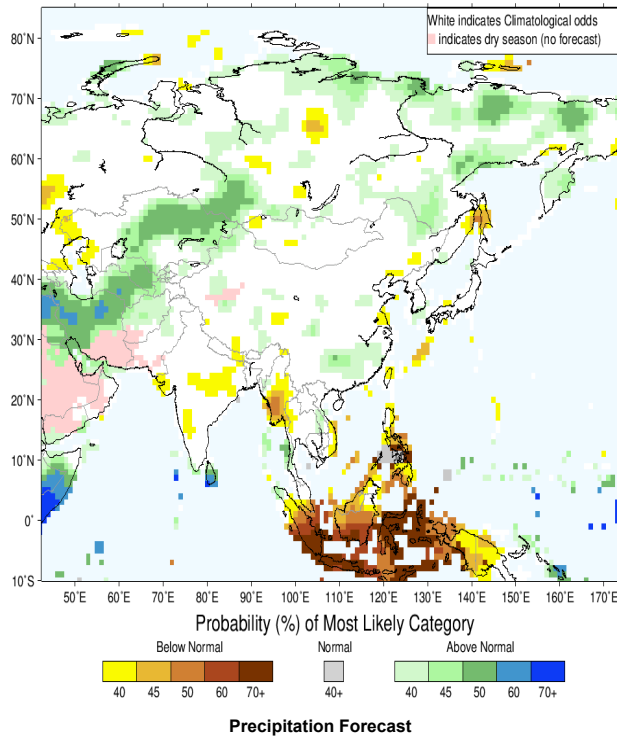
GFS 700mb week1 Mean Vector Wind Total (m/s)
Period: 18z18Aug2023 - 18z24Aug2023



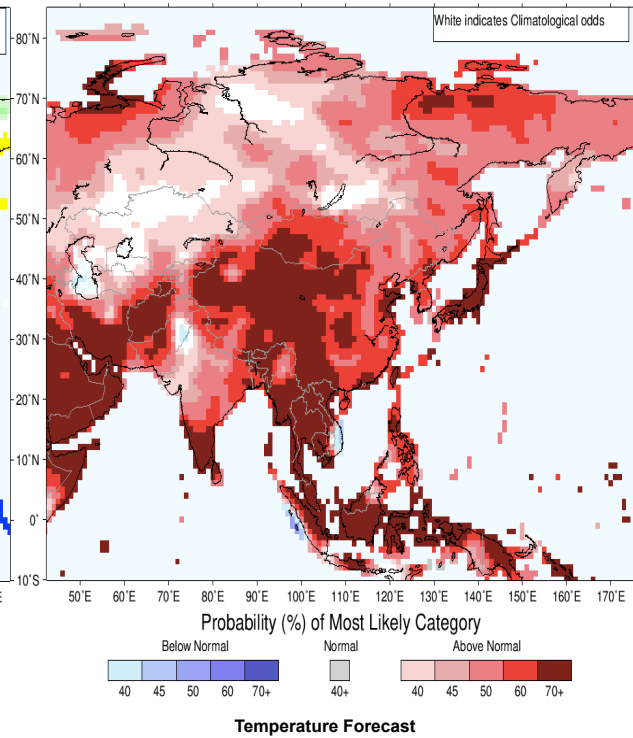
Seasonal Rainfall and Temperature Forecast

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 2023, Issued August 2023



IRI Multi-Model Probability Forecast for Temperature for September–October–November 2023, Issued August 2023



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
 76/2 Matale Road, Akurana
 Kandy
 KY20850
 SRI LANKA

email: info@fect.lk
 phone: (+94) 81 2376746

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