17 JUNE 2022

CLIMATE MONITORING AND PREDICTION FOR SRI LANKA

HIGHLIGHTS

Rainfall Prediction

- *Heavy rainfall is predicted for the Western and Sabaragamuwa provinces and Galle and Matara districts. The rest of the country is expected to have less rainfall during 16th-21st June.*

Monitored Rainfalls

- *During the last week, the average daily rainfall over Sri Lanka was 1.4 mm and hydro catchment areas have received 2.9 mm on average.*

Monitored Wind

- *From 6th - 12th June, up to 15 m/s of south-westerly winds were experienced over the island.*

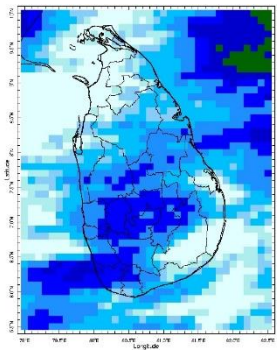
Monitored Sea & Land Temp

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

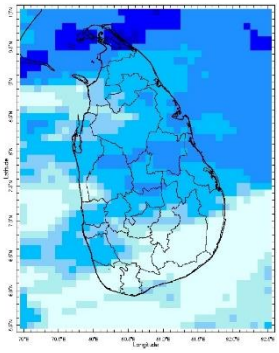
Monitoring

Rainfall

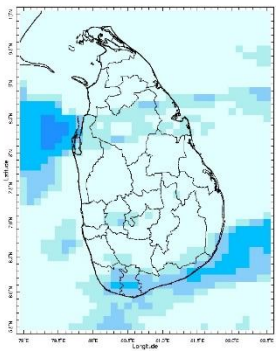
Daily Estimates for Rainfall from 6th – 13th June 2022



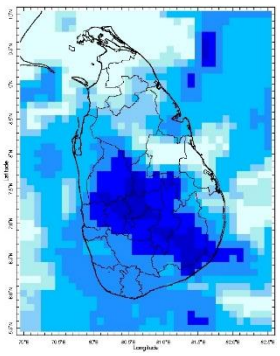
6 June



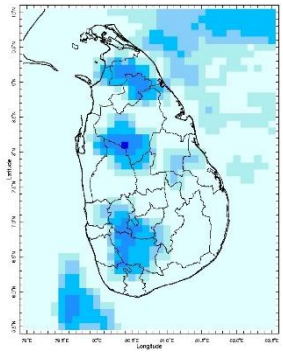
7 June



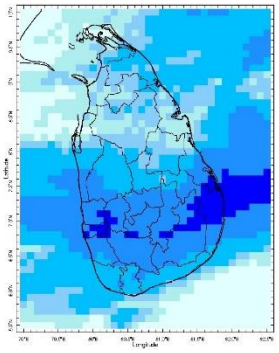
8 June



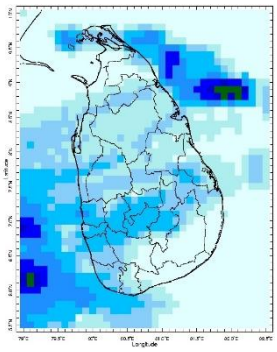
9 June



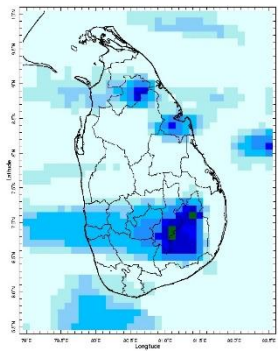
10 June



11 June



12 June



13 June

Federation for Environment, Climate & Technology

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Ocean State *(Text Courtesy IRI)*

Pacific sea state: June 8, 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 and south of the island.

Predictions

Rainfall

14-day prediction: NOAA NCEP models

From 15th – 21st June:

Total rainfall by Provinces:

Rainfall	Provinces
145 mm	Western
125 mm	Sabaragamuwa, Southern
95 mm	North-western
65 mm	Central, Uva
55 mm	Eastern
45 mm	North-central, Northern

From 22nd – 28th June:

Total rainfall by Provinces:

Rainfall	Provinces
115 mm	Western
95 mm	Sabaragamuwa, Southern
75 mm	North-western
45 mm	Uva
35 mm	Central, Eastern
25 mm	North Central, Northern

MJO based OLR predictions

For the next 15 days:

MJO shall slightly enhance the rainfall during 15th - 19th June; and near neutral during 20th – 29th June.

Interpretation

Monitoring

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

Daily Average Rainfall in the Met stations for previous week of (6th - 13th June) = 1.4 mm
Rmax: 37.9 mm & Rmin: 0.0 mm.

Region	Average rainfall for the Last 8 days
Northern Plains	0.2 mm
Eastern	1.0 mm
Western	3.3 mm
Southern Plains	0.2 mm

The Hydro Catchment Areas recorded 2.9 mm of average rainfall for the last week
Rmax: 27.4 mm & Rmin: 0 mm.

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

Temperatures: The temperature anomalies were near-normal, driven by the warm SST's.

Predictions

Rainfall: During the next week (17th - 21st June) heavy rainfall (>100 mm) is predicted for the Western and Sabaragamuwa provinces and Galle and Matara districts. The rest of the country is expected to have less rainfall.

Temperatures: The temperature remains above normal in the Uva and Eastern province and slightly below normal in the central province during 16th – 22nd 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 enhance the rainfall during 15th - 19th June; and near neutral during 20th – 29th June.

Seasonal Precipitation:

The precipitation forecast for the July-August-September season shows above-normal precipitation for the north of 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.

Federation for Environment, Climate & Technology

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Weekly Climate Bulletin for Sri Lanka

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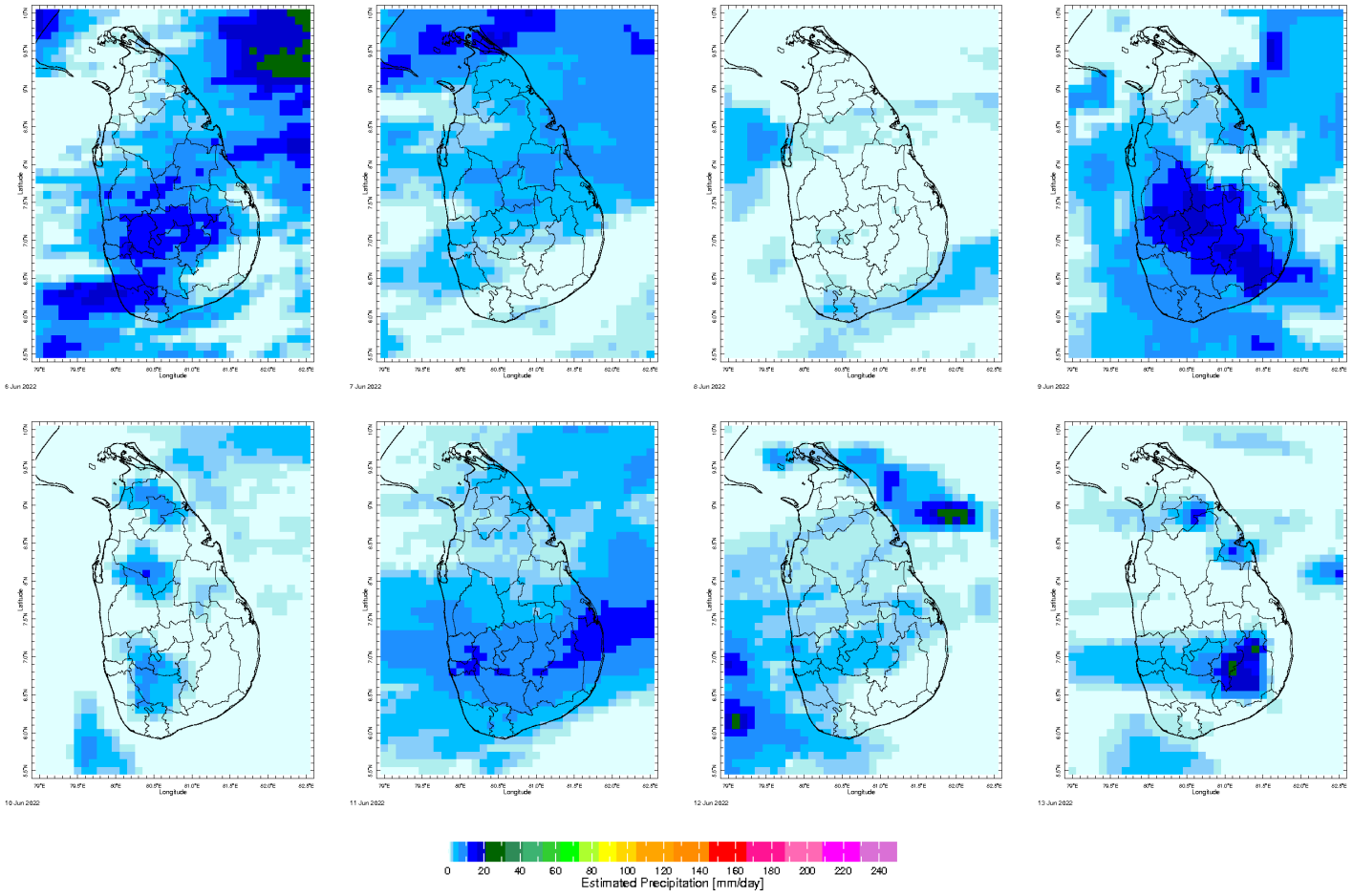
MONITORING

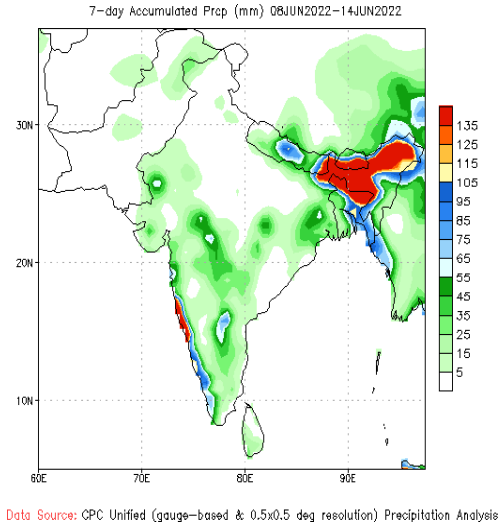
Daily Rainfall Monitoring

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

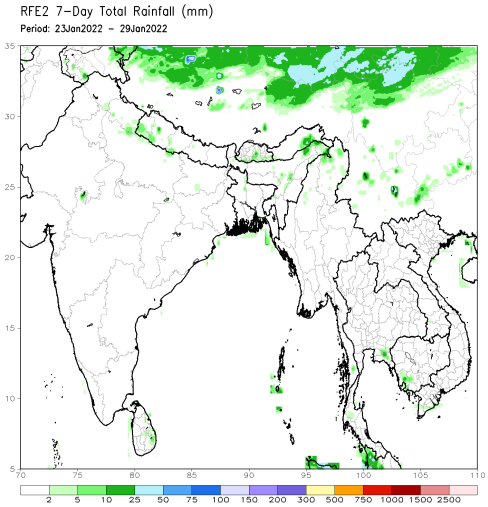


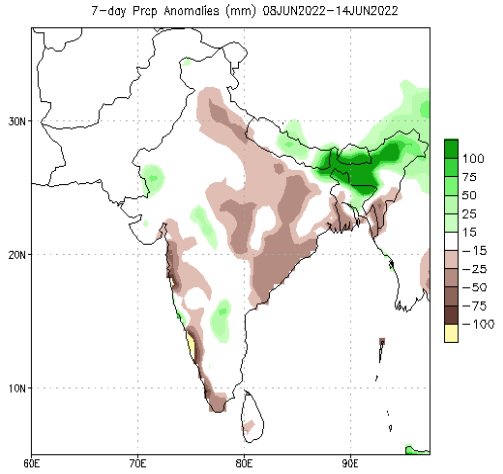
Weekly Rainfall Monitoring

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.

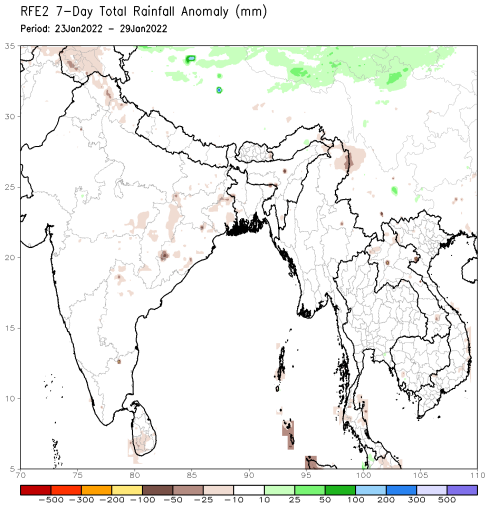


Data Source: CPC Unified (gauge-based & 0.5x0.5 deg resolution) Precipitation Analysis



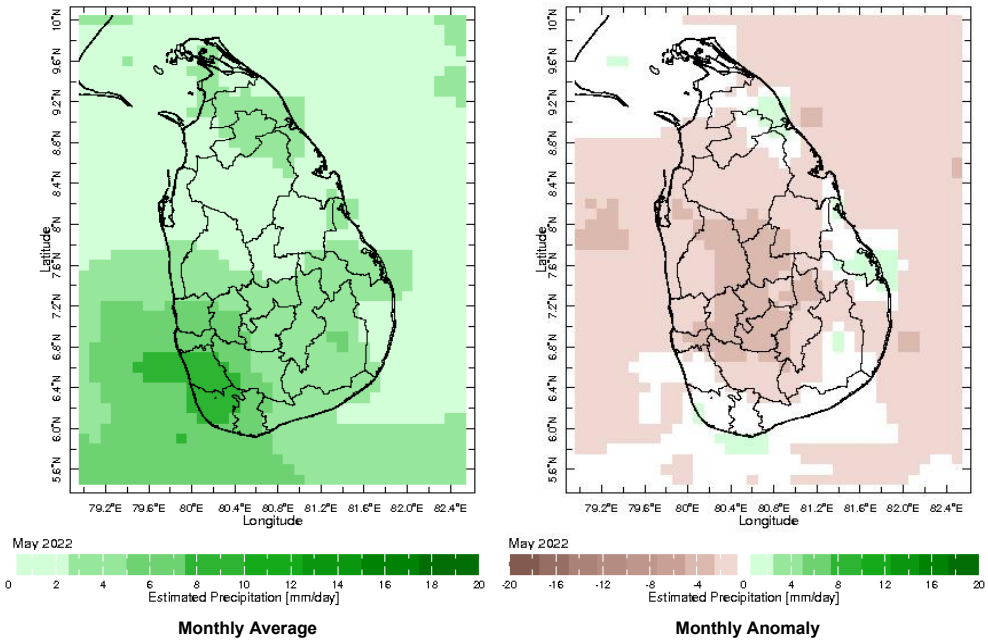


Data Source: CPC Unified (gauge-based & 0.5x0.5 deg resolution) Precipitation Analysis
Climatology (1991-2020)



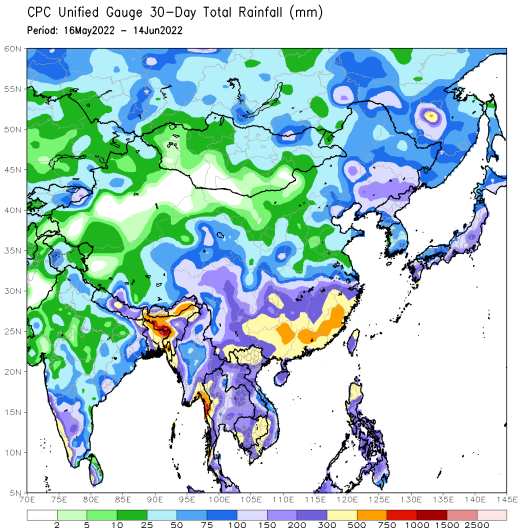
Monthly Rainfall Monitoring

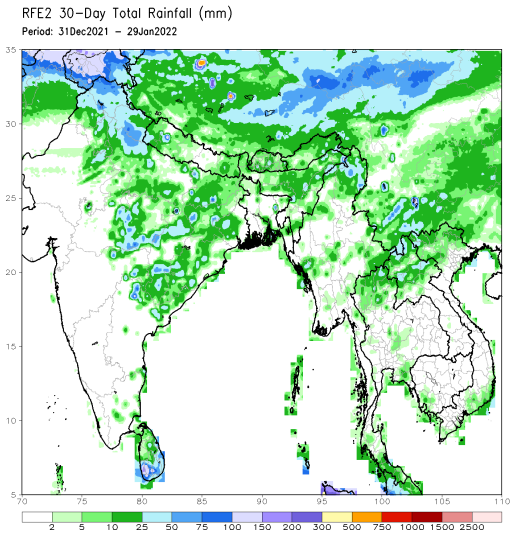
The figure in the left shows the average observed rainfall in the previous month. The rainfall anomaly in the previous month is shown in the figure to the right. The brown color in the anomaly figure shows places which received less rainfall than the historical average while the green color shows places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

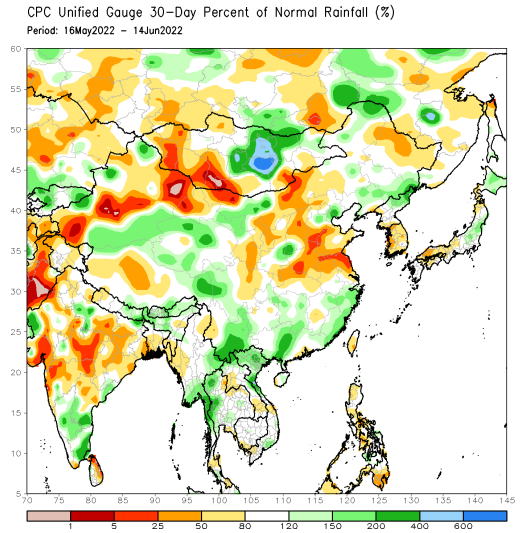


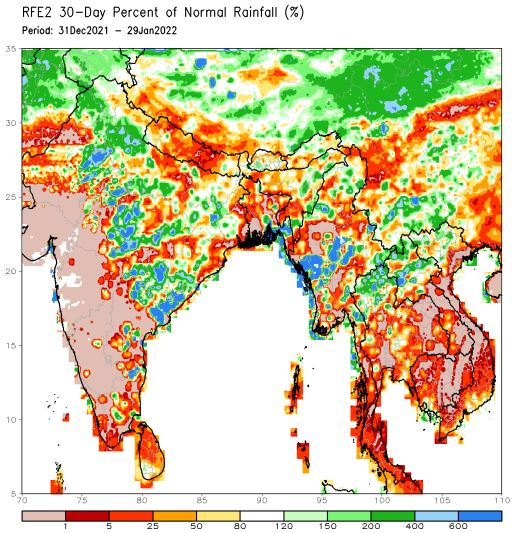
Monthly Average **Monthly Anomaly**

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.

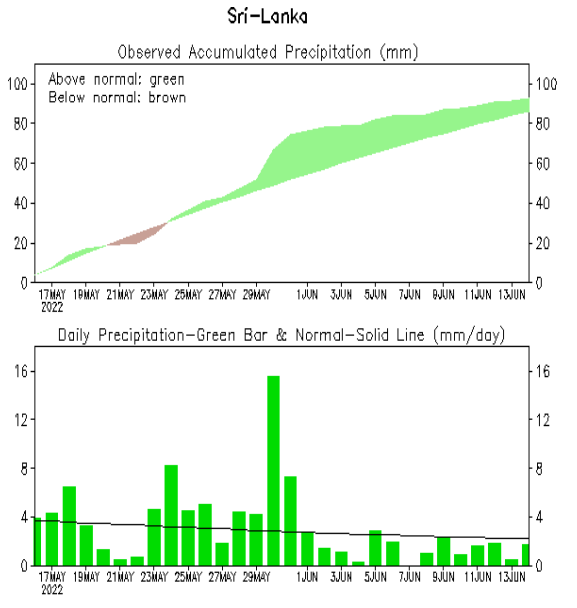




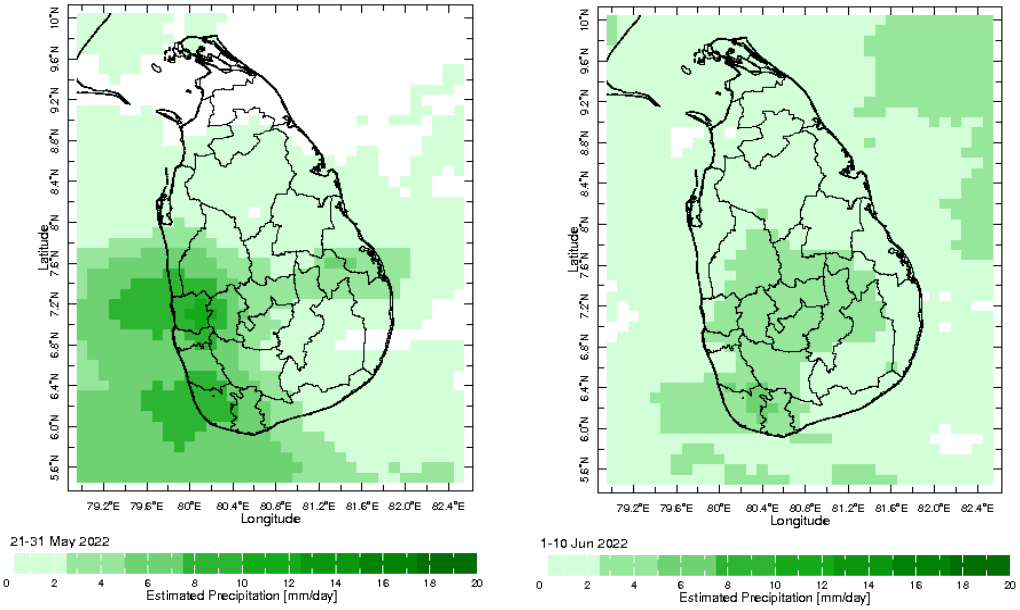




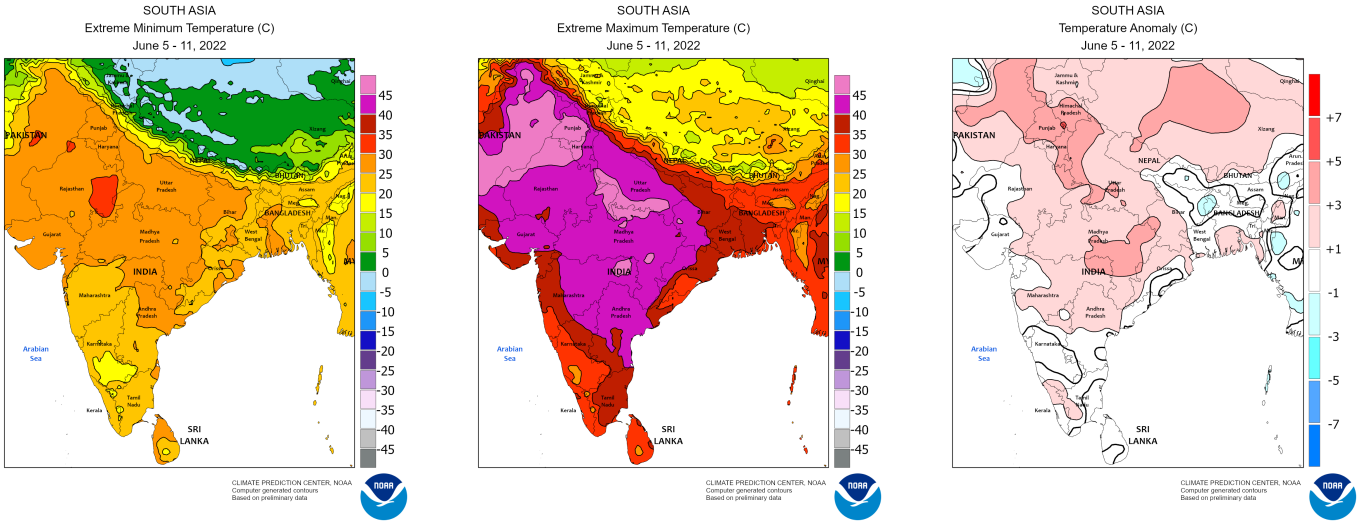
The following figure shows the observed accumulated rainfall (top) and daily observed rainfall (bottom) in Sri Lanka in the last 30 days.



Dekadal (10 Day) Satellite Derived Rainfall Estimates

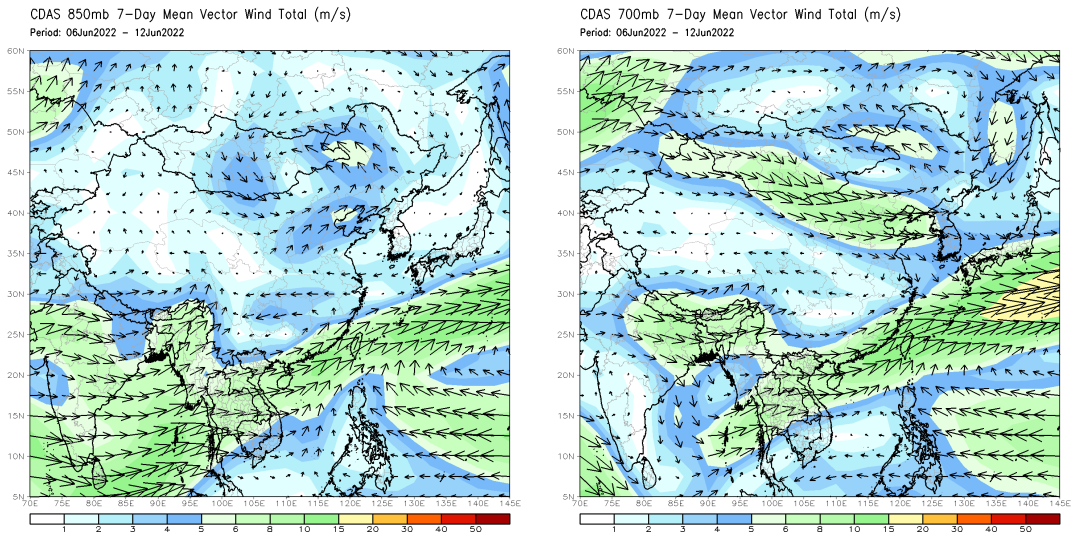


Weekly Temperature Monitoring



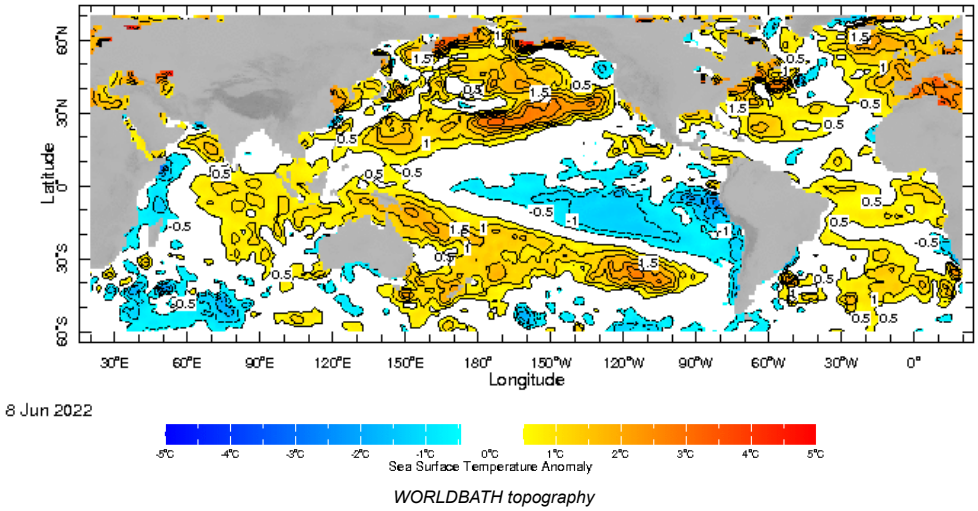
Weekly Wind Monitoring

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.

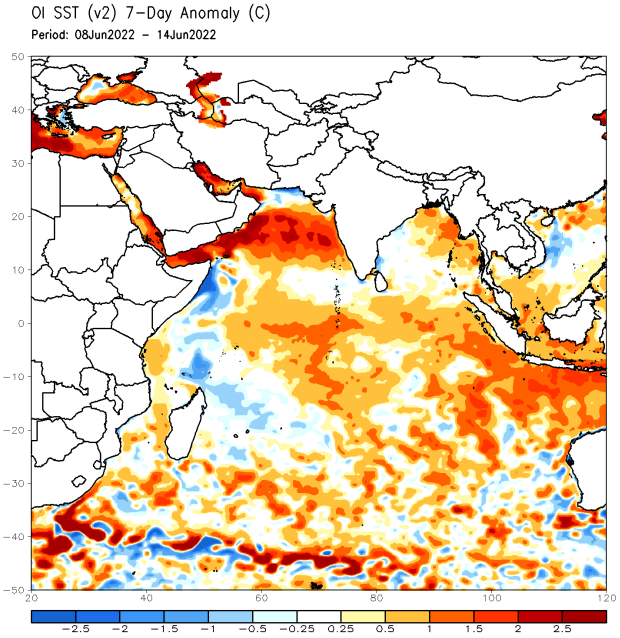


Weekly Average SST Anomalies

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

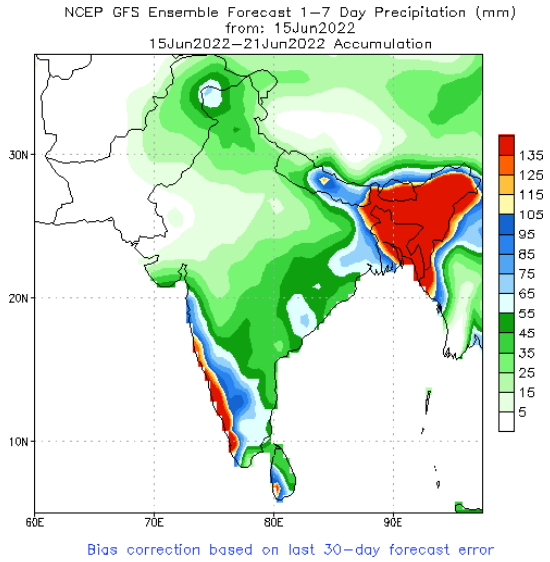


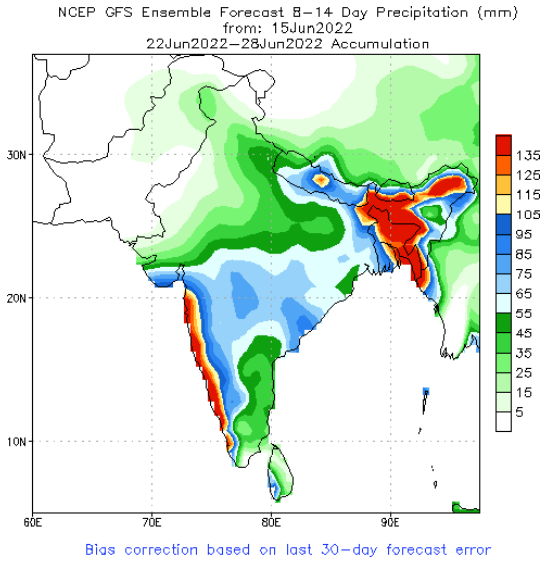
Optimum Interpolated Sea Surface Temperature Anomaly in the Indian Ocean from NOAA CPC



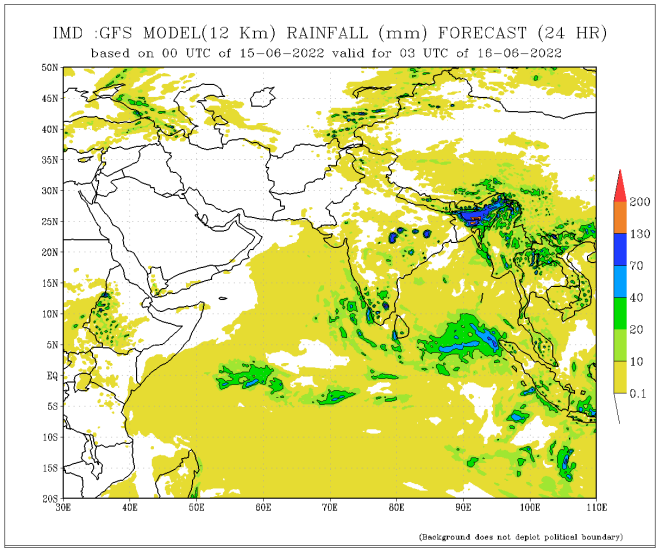
PREDICTIONS

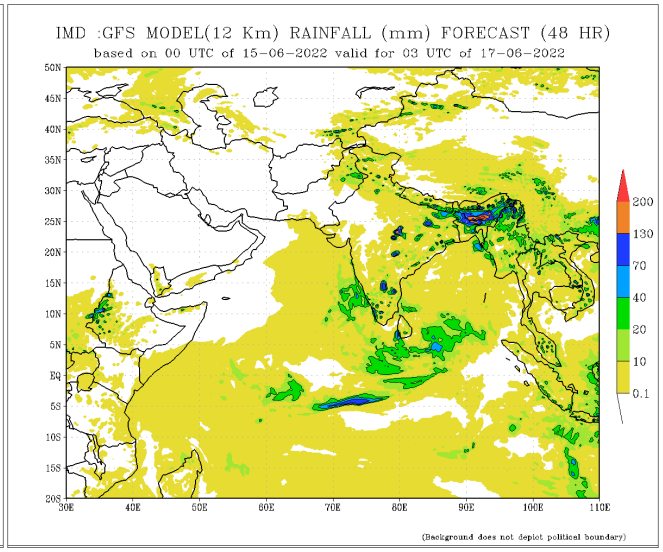
NCEP GFS 1- 14 Day prediction

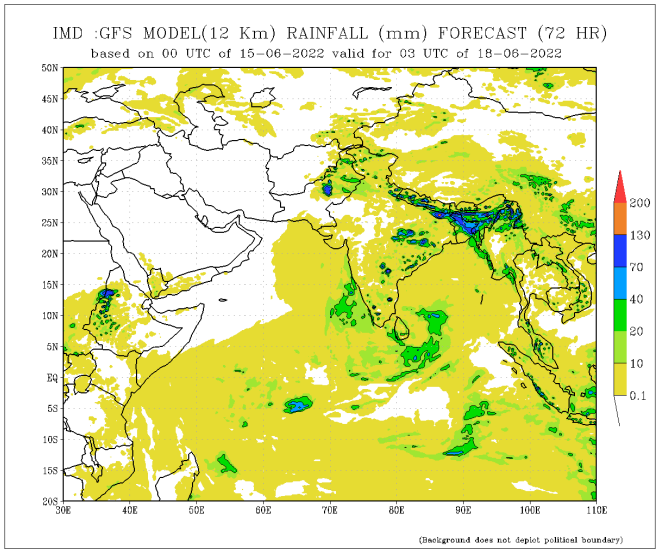


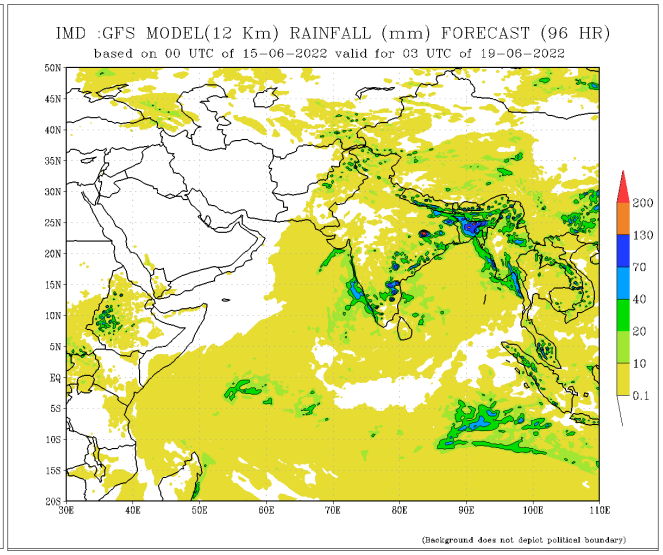


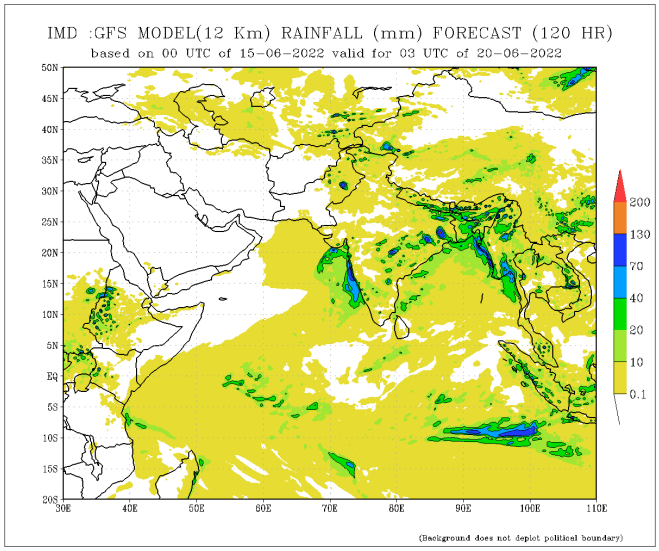
IMD GFS (T574) Model Rainfall Forecast from RMSC New Delhi, India

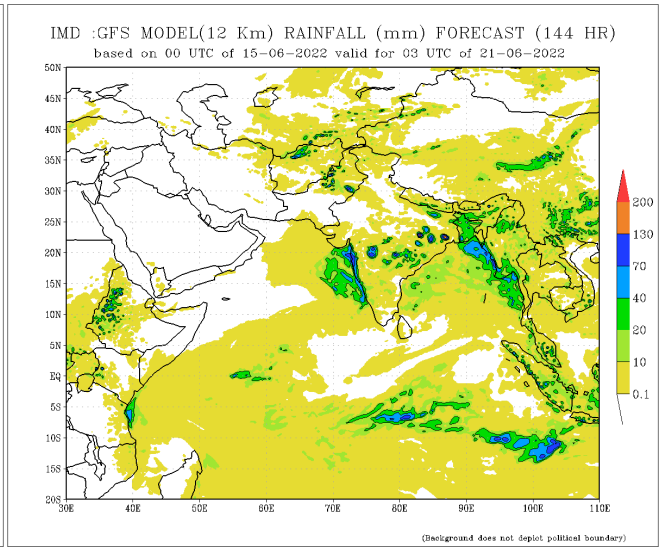


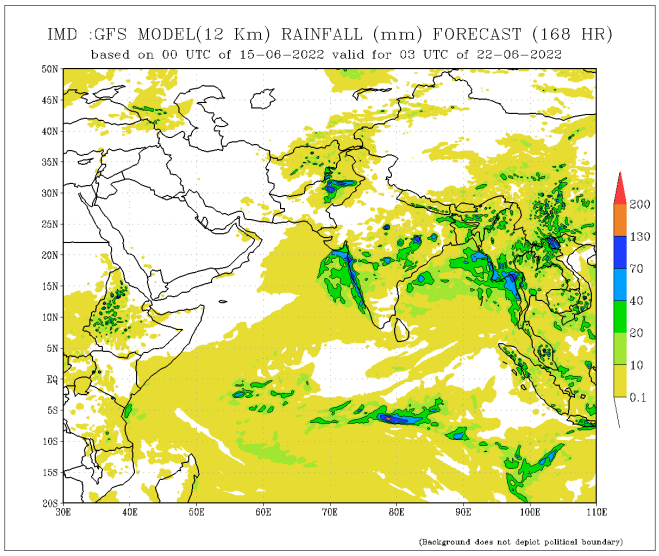






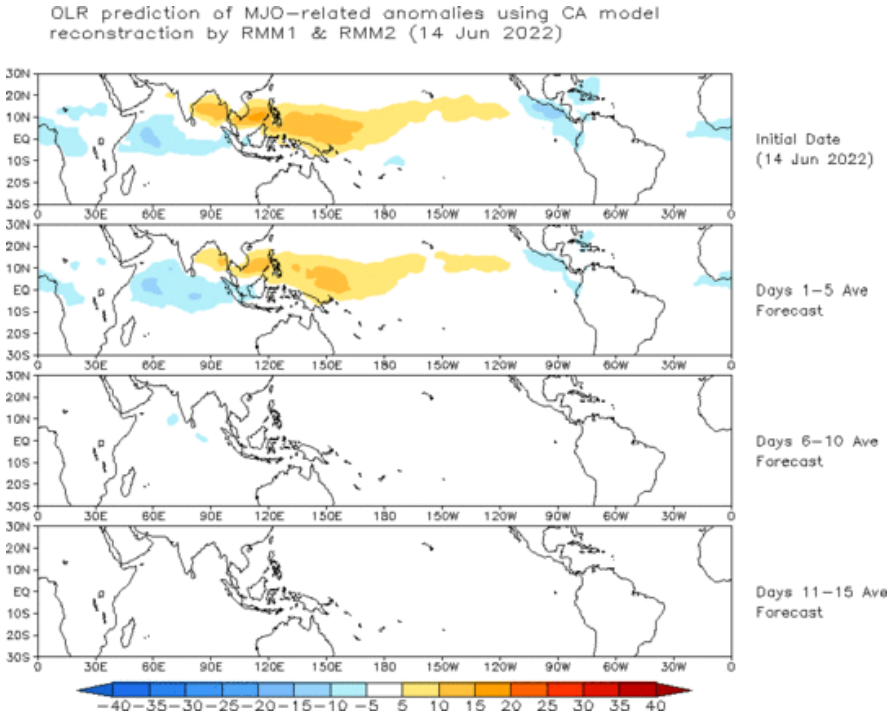






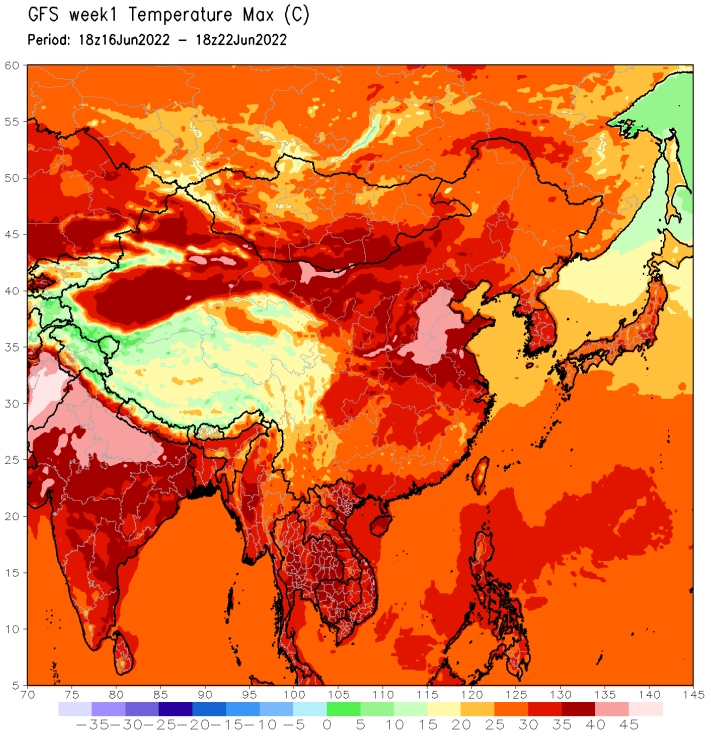
Madden Julian Oscillation (MJO) related Outgoing Longwave Radiation (OLR) Forecast

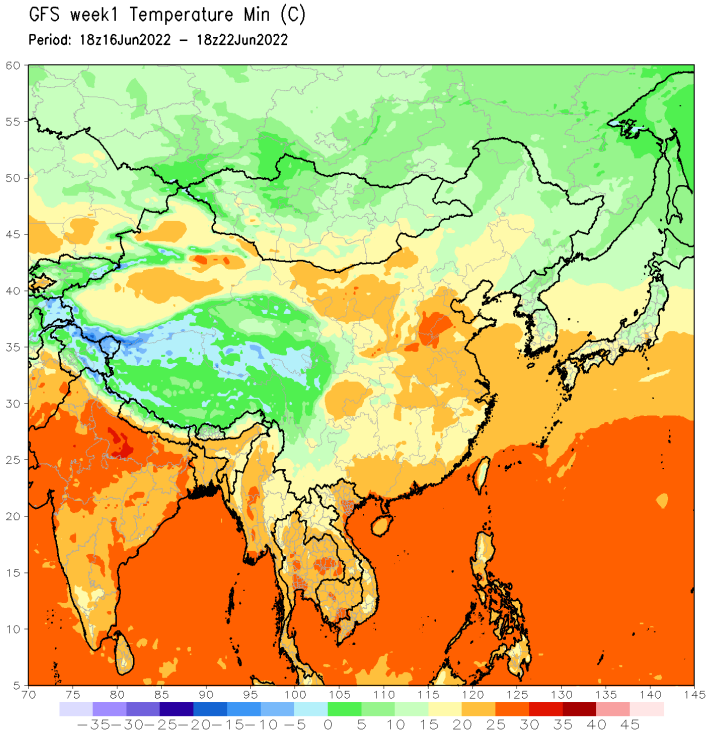
The Outgoing Longwave Radiation (OLR) is a proxy for rainfall. This can be used to identify convective rain clouds based on the MJO phase. Violet and Blue shading indicates enhanced tropical weather and Orange shading indicates suppressed conditions. The following figure shows the forecasts of MJO associated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



Weekly Temperature Forecast

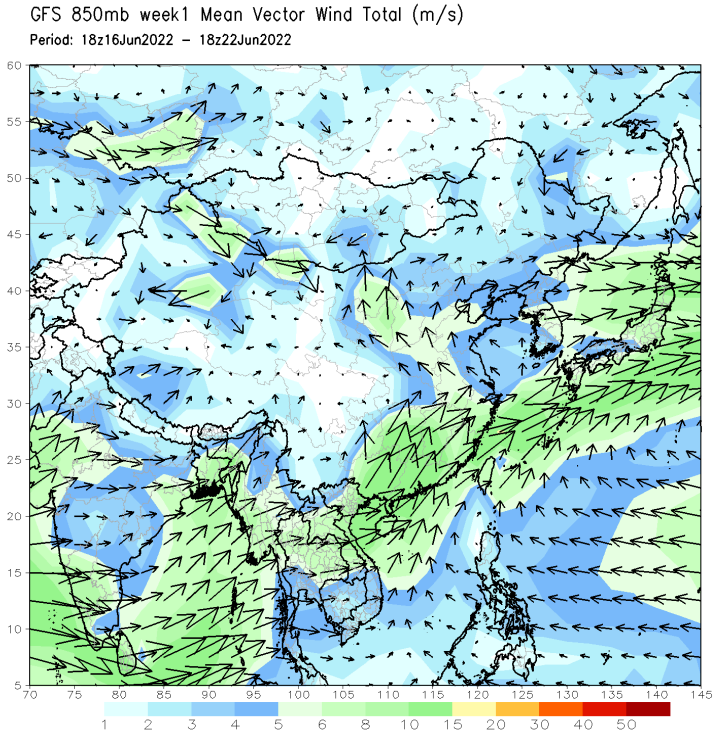
Weekly Minimum and Maximum Temperature prediction from the GFS model (from NOAA CPC)

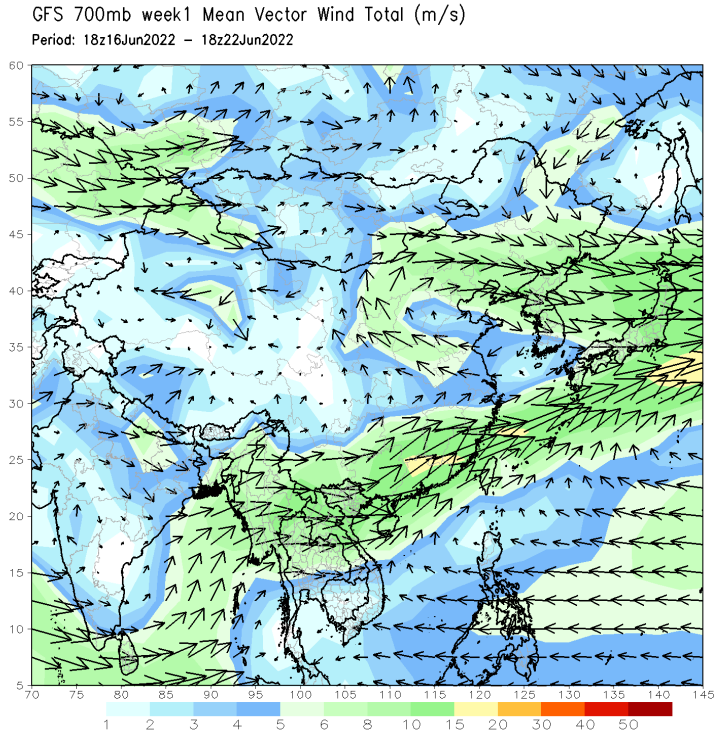




Weekly Wind Forecast

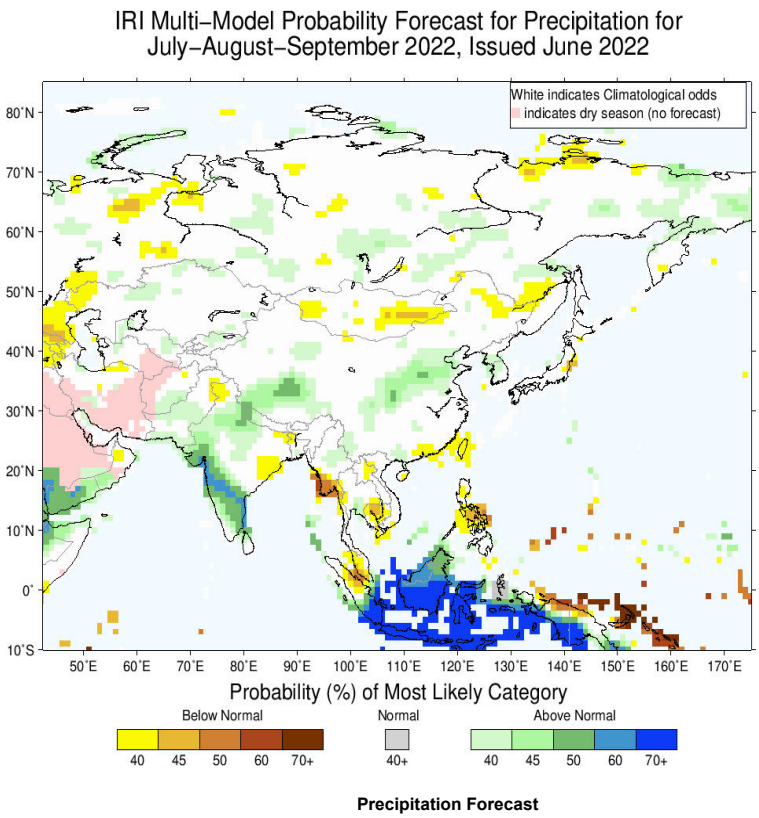
Weekly mean vector wind total prediction from the GFS model at 850 mb (left) and 700 mb (right) levels. (from NOAA CPC)



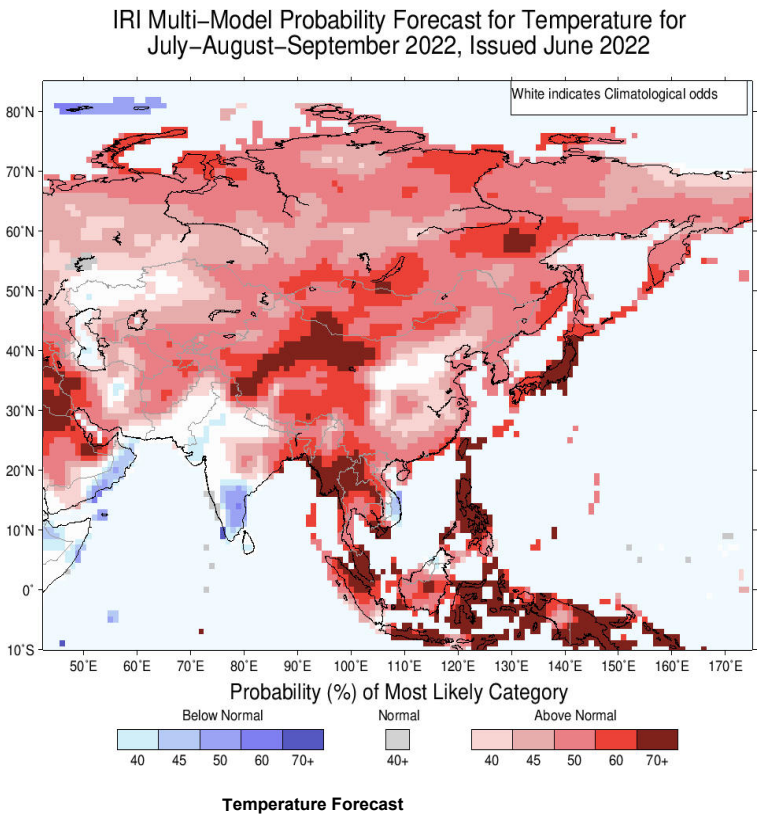


Seasonal Rainfall and Temperature Forecast

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%).



Precipitation Forecast



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.

Contact us

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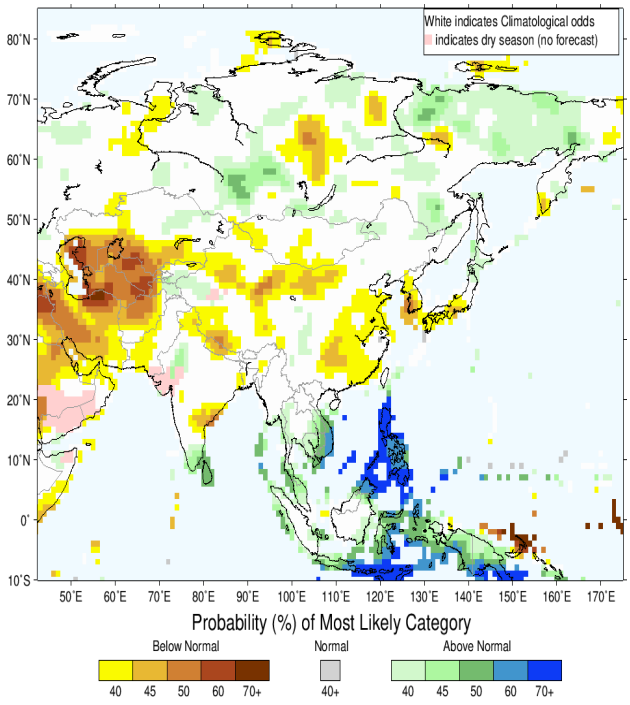
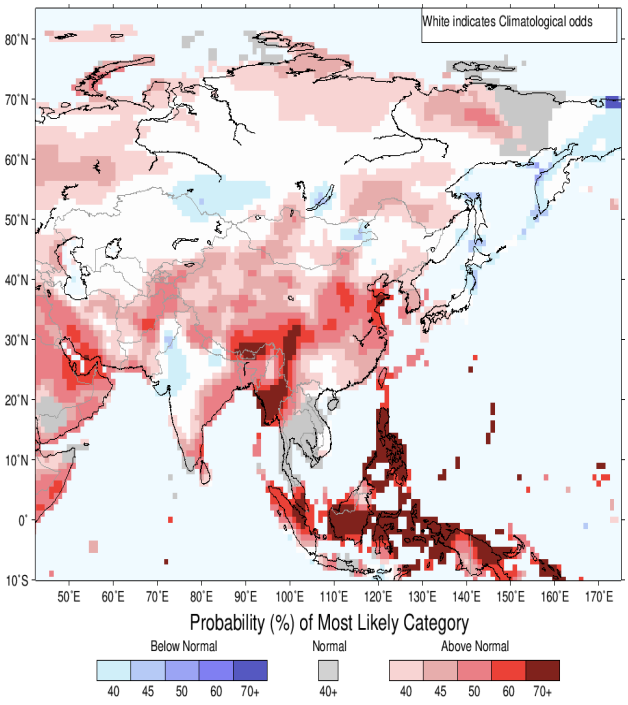
IRI Multi–Model Probability Forecast for Precipitation for November–December–January 2022, Issued October 2021



Precipitation Forecast

IRI Multi–Model Probability Forecast for Temperature for November–December–January 2022, Issued October 2021



Temperature Forecast

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