

HIGHLIGHTS

Rainfall Prediction



• Moderate rainfall is predicted for Jaffna, Ratnapura, Galle and Matara districts; The rest of the country is expected to have less rainfall during 15th - 19th July.

Monitored Rainfalls



• During the last week, the average daily rainfall over Sri Lanka was 0.6 mm and hydro catchment areas have received 5.8 mm on average.

Monitored Wind



• From 4th - 10th July, up to 20 m/s of westerly to south-westerly winds were experienced over the island.

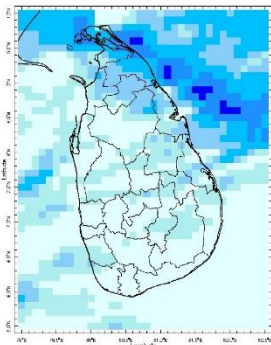
Monitored Sea & Land Temp



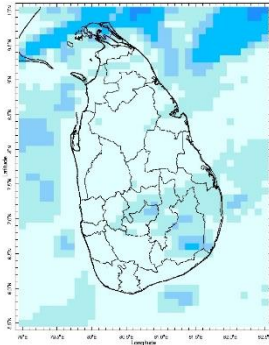
• Sea surface temperature was above 0.5 °C to the north of Sri Lanka. Land surface temperature remained near normal.

Monitoring Rainfall

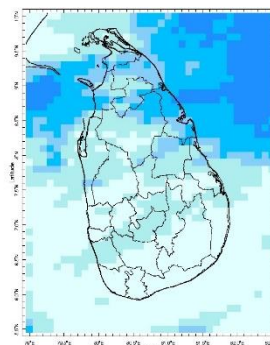
Daily Estimates for Rainfall from 5th July – 12th July 2022



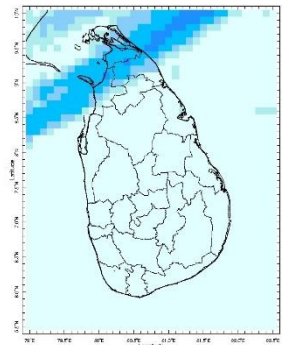
5 July



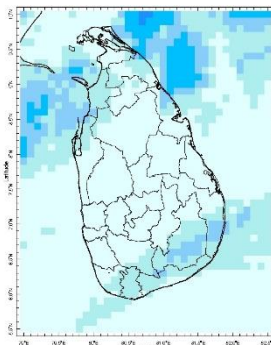
6 July



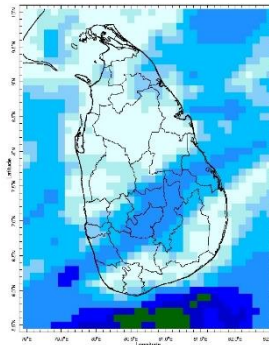
7 July



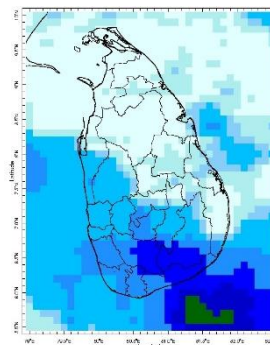
8 July



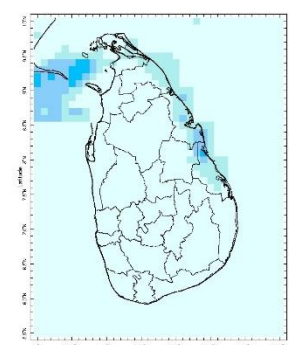
9 July



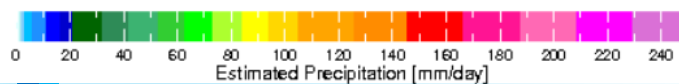
10 July



11 July



12 July



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Ocean State *(Text Courtesy IRI)*

Pacific sea state: July 6, 2022

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

Indian Ocean State

Sea surface temperature was above 0.5°C to the north of Sri Lanka.

Predictions

Rainfall

14-day prediction: NOAA NCEP models

From 13th – 19th July:

Total rainfall by Provinces:

Rainfall	Provinces
25 mm	Northern, Southern, Sabaragamuwa
<15 mm	Remaining Provinces

From 20th – 26th July:

Total rainfall by Provinces:

Rainfall	Provinces
55 mm	Northern
45 mm	Southern, Sabaragamuwa
35 mm	Uva, Central, Eastern, Western
25 mm	North-central, North-western

MJO based OLR predictions

For the next 15 days:

MJO shall near neutral for the country during 13th - 27th July.

Interpretation

Monitoring

Rainfall: During the last two weeks, there had been heavy rainfall over the following area: Nuwara-Eliya

Daily Average Rainfall in the Met stations for previous week of (5th July - 12th July) = 0.6 mm
Rmax: 33.7 mm & Rmin: 0.0 mm.

Region	Average rainfall for the Last 8 days
Northern Plains	0.0 mm
Eastern	0.2 mm
Western	1.3 mm
Southern Plains	0.0 mm

The Hydro Catchment Areas recorded 5.8 mm of average rainfall for the last week

Rmax: 56.5 mm & Rmin: 0.0 mm.

Wind: Westerly to south-westerly prevailed in the sea area surrounding the island last week.

Temperatures: The temperature anomalies were above normal for southern province, driven by the warm SST's.

Predictions

Rainfall: During the next week (15th - 19th July) moderate rainfall is predicted for Jaffna, Ratnapura, Galle and Matara districts. The rest of the country is expected to have less rainfall.

Temperatures: The temperature remains above normal in the Northern, North-central, Uva and Eastern provinces during 15th – 20th July.

Teleconnections:

La Niña - Though La Niña is favored to continue through the end of the year, the odds for La Niña decrease into the Northern Hemisphere late summer (July-September 2022) before slightly increasing through the Northern Hemisphere fall and early winter 2022.

MJO shall near neutral for the country during 13th - 27th July.

Seasonal Precipitation:

The precipitation forecast for the July-August-September season shows a higher tendency for above-normal precipitation for the Jaffna district, and for the rest of the districts there is a tendency to the neutral tercile.

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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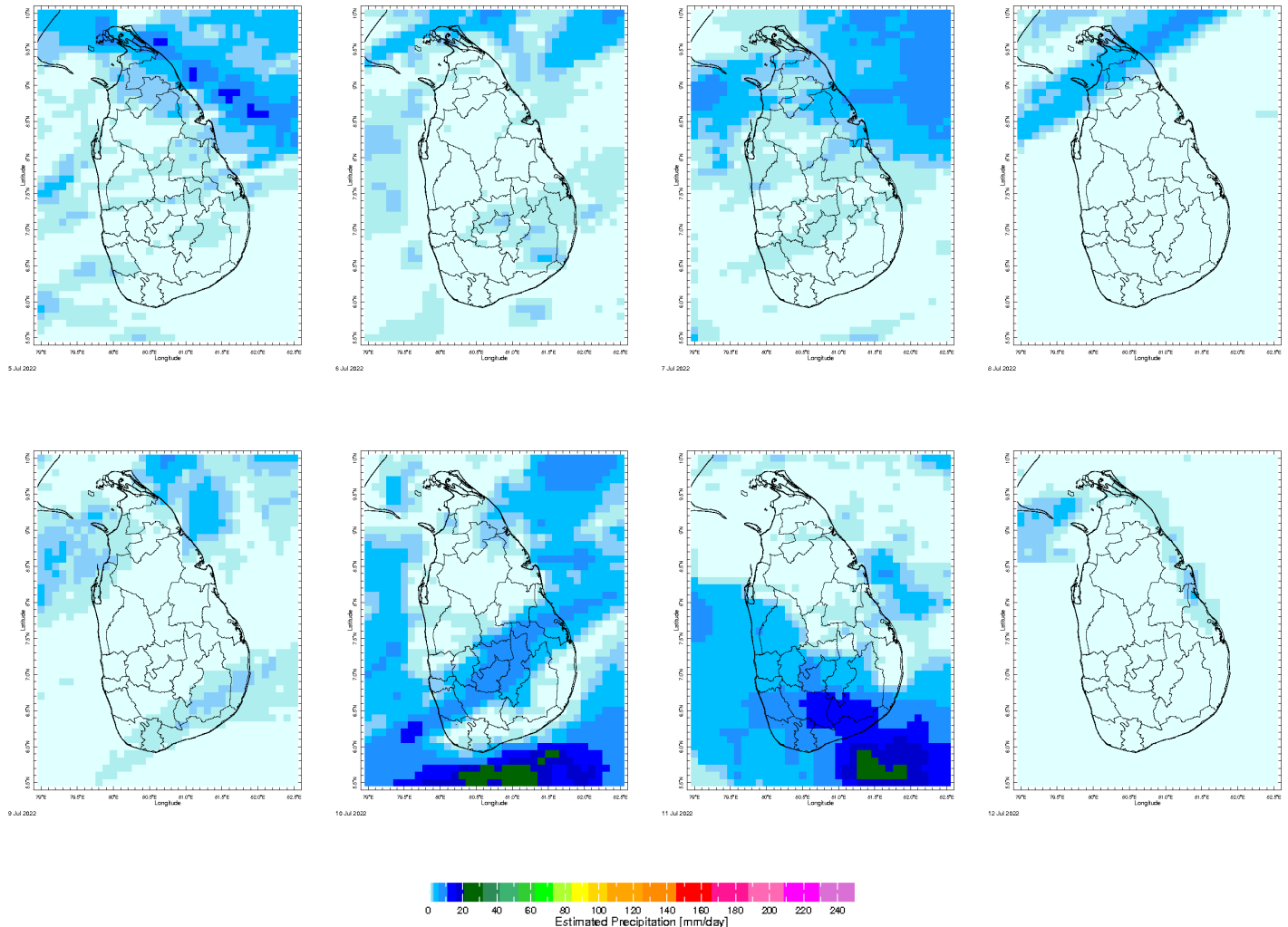
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MONITORING

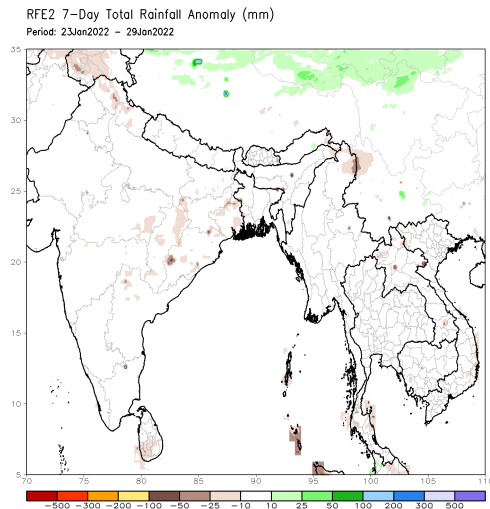
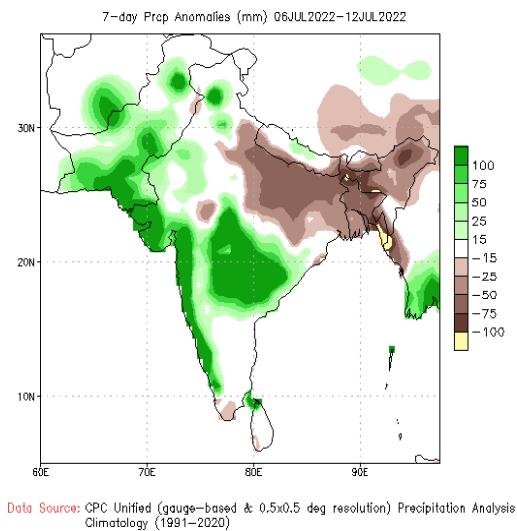
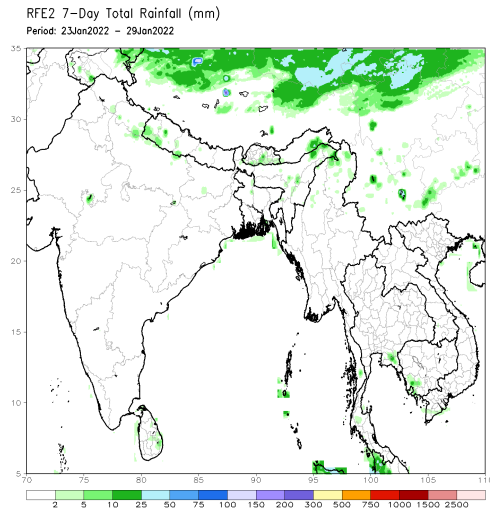
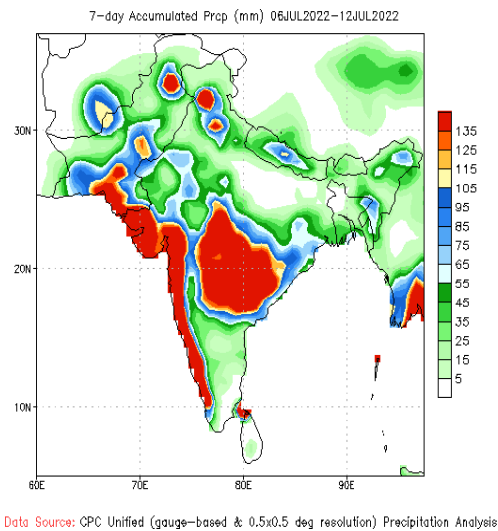
Daily Rainfall Monitoring

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



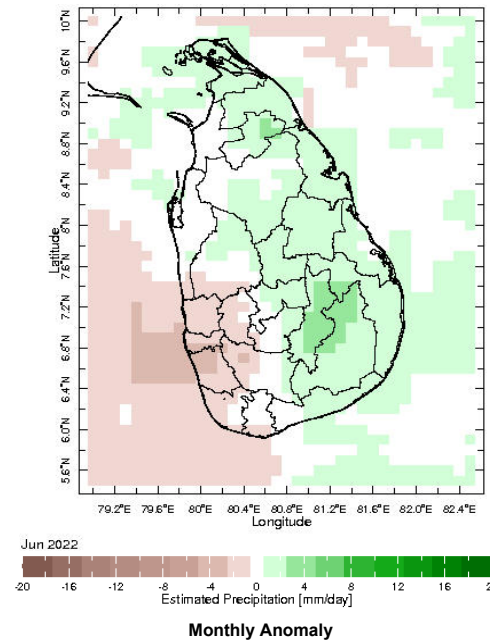
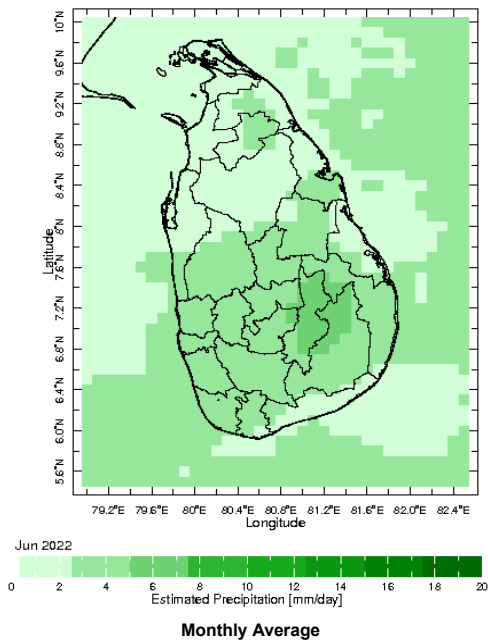
Weekly Rainfall Monitoring

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.

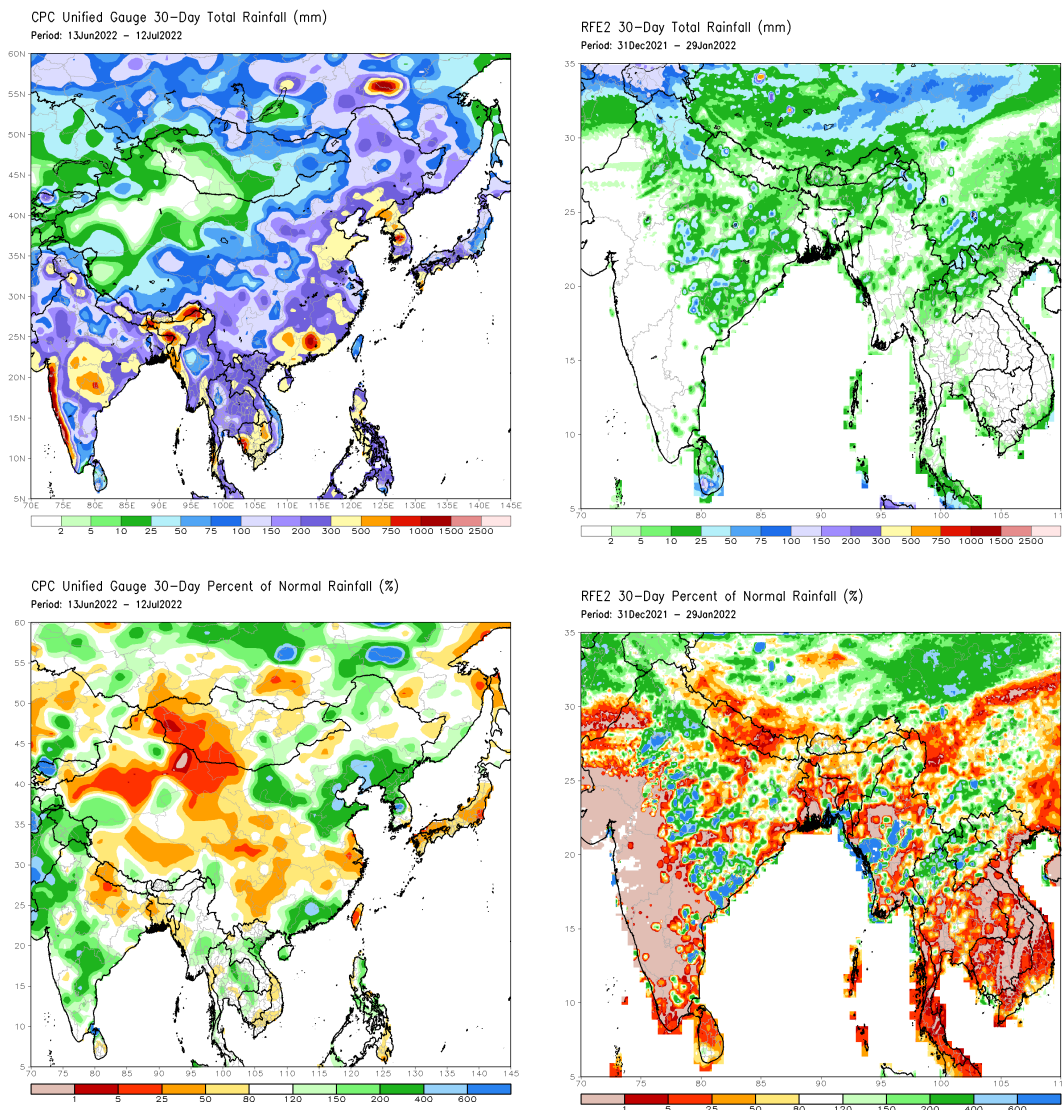


Monthly Rainfall Monitoring

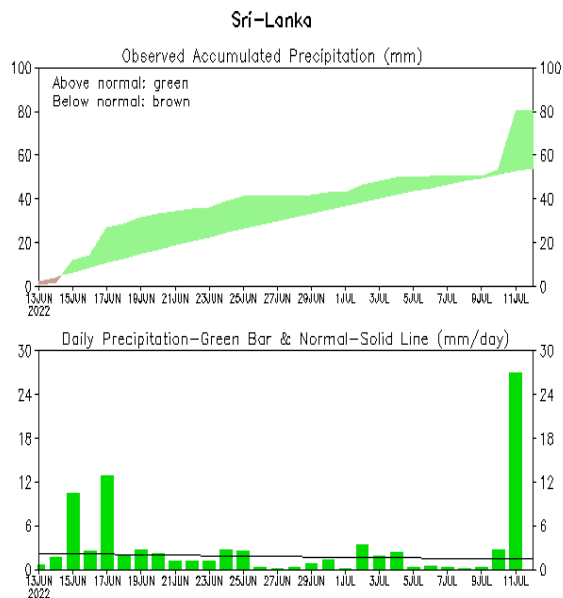
The figure in the left shows the average observed rainfall in the previous month. The rainfall anomaly in the previous month is shown in the figure to the right. The brown color in the anomaly figure shows places which received less rainfall than the historical average while the green color shows places 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.

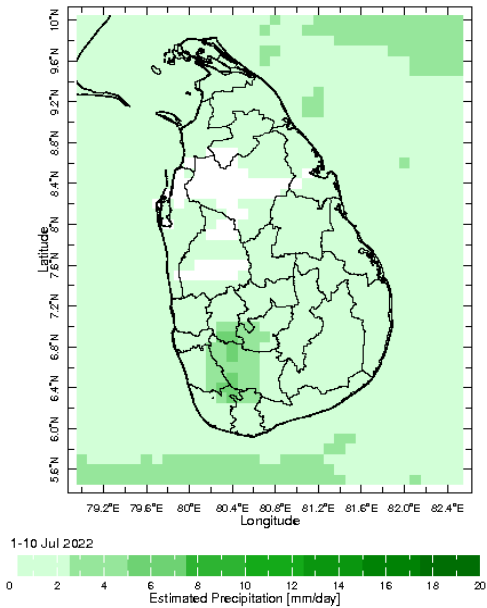
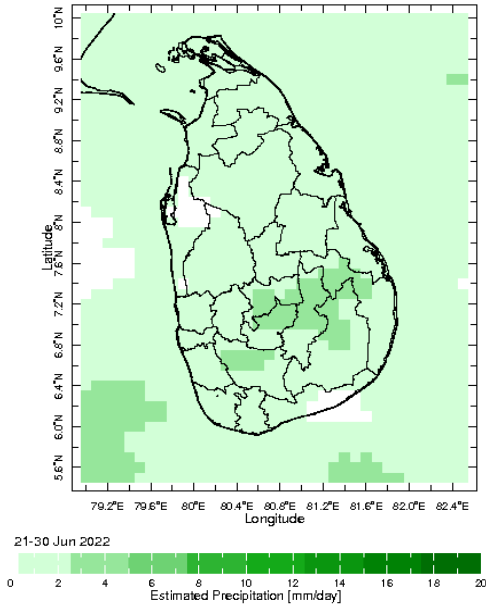


The following figure shows the observed accumulated rainfall (top) and daily observed rainfall (bottom) in Sri Lanka in the last 30 days.

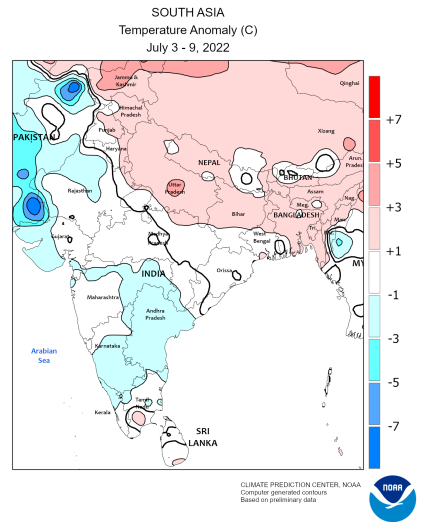
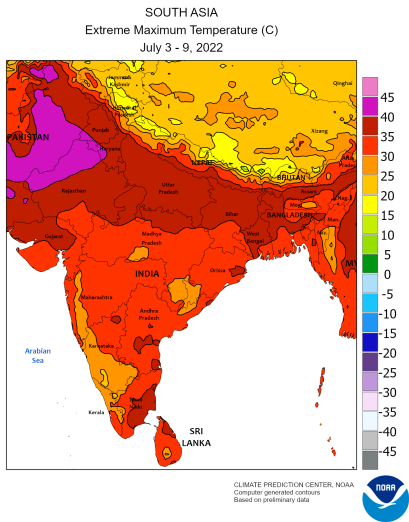
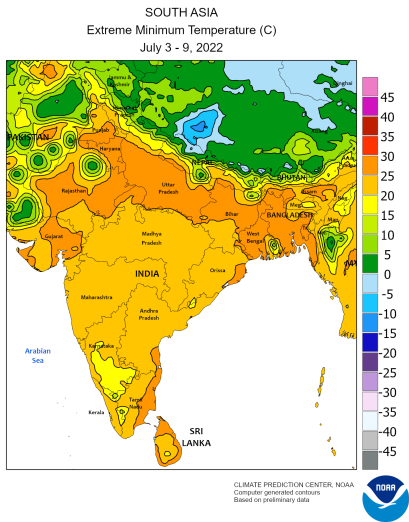


Data Source: CPC (Gauge-Based) Unified Precipitation (Climatology 1981-2010)
(updated on 00Z12JUL2022)

Dekadal (10 Day) Satellite Derived Rainfall Estimates

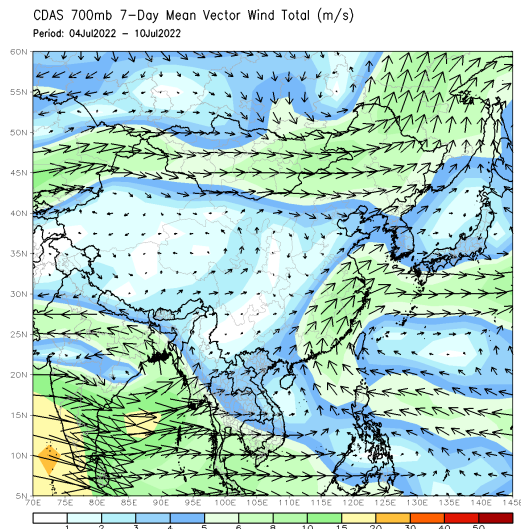
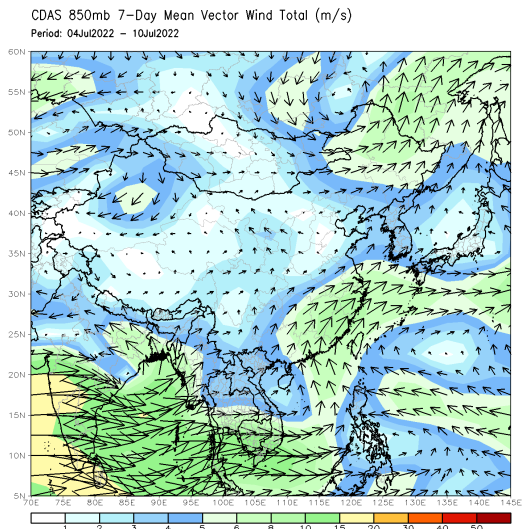


Weekly Temperature Monitoring



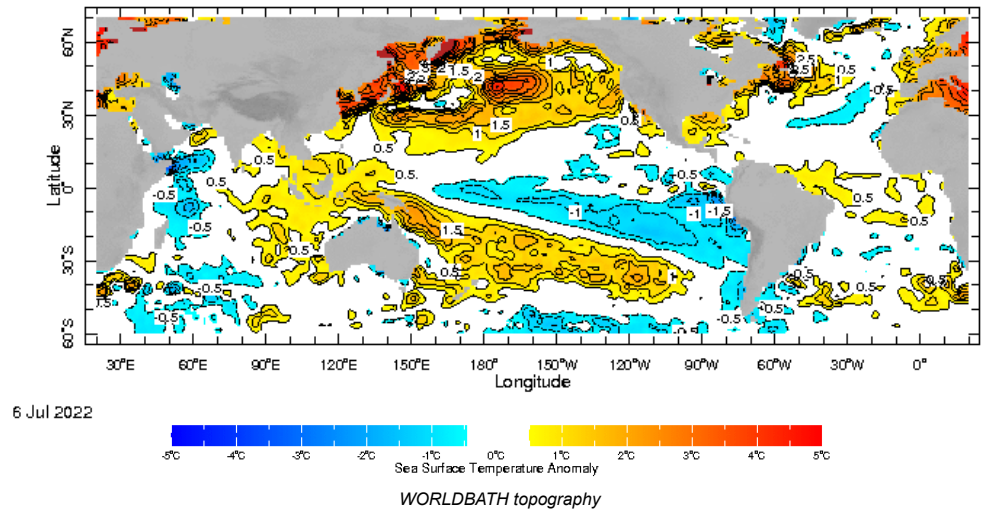
Weekly Wind Monitoring

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.

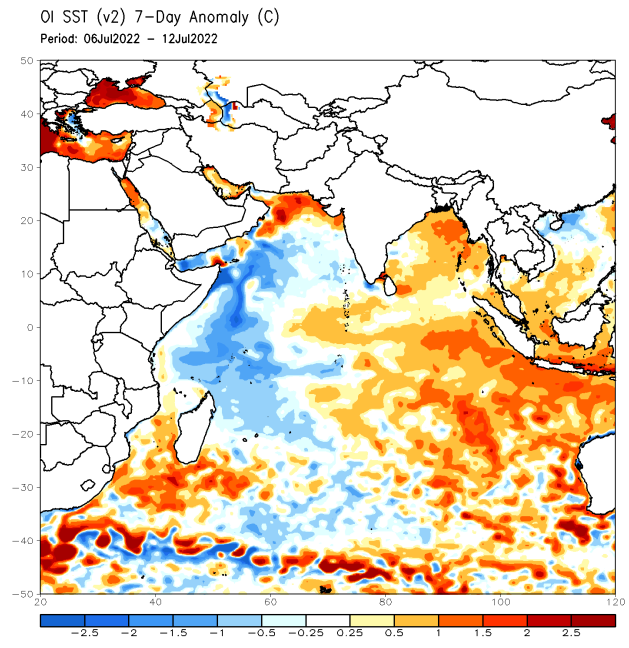


Weekly Average SST Anomalies

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

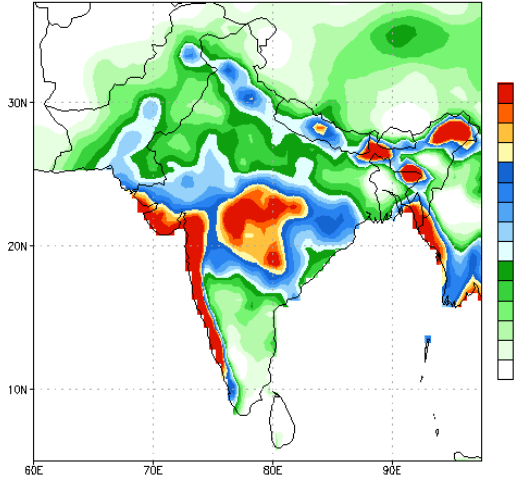


Optimum Interpolated Sea Surface Temperature Anomaly in the Indian Ocean from NOAA CPC



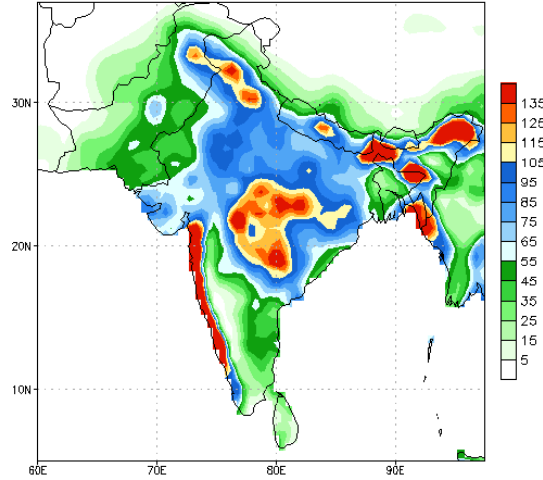
NCEP GFS 1- 14 Day prediction

NCEP GFS Ensemble Forecast 1-7 Day Precipitation (mm)
from: 13Jul2022
13Jul2022-19Jul2022 Accumulation



Bias correction based on last 30-day forecast error

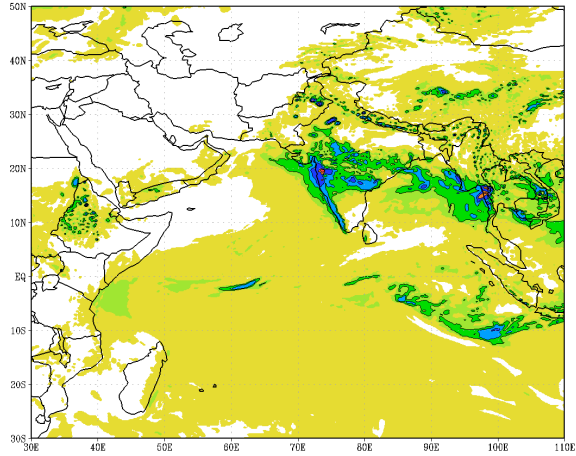
NCEP GFS Ensemble Forecast 8-14 Day Precipitation (mm)
from: 13Jul2022
20Jul2022-26Jul2022 Accumulation



Bias correction based on last 30-day forecast error

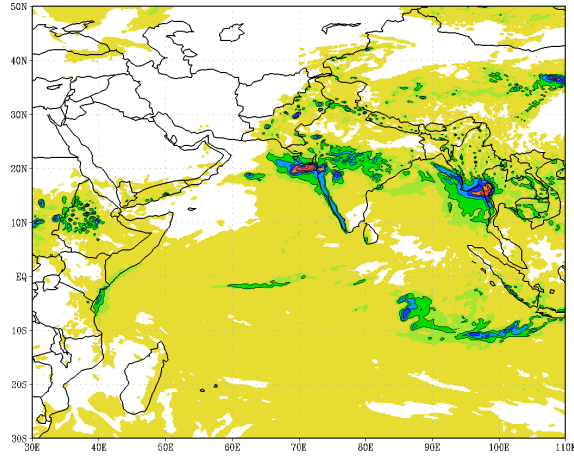
IMD GFS (T574) Model Rainfall Forecast from RMSC New Delhi, India

IMD :GFS MODEL(12 Km) RAINFALL (mm) FORECAST (24 HR)
based on 00 UTC of 13-07-2022 valid for 03 UTC of 14-07-2022



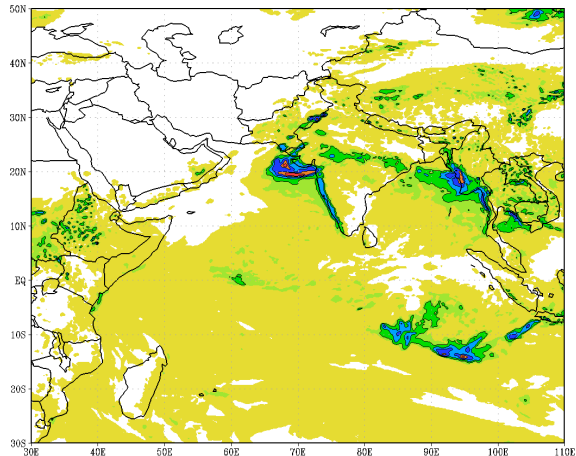
(Background does not depict political boundary)

IMD :GFS MODEL(12 Km) RAINFALL (mm) FORECAST (48 HR)
based on 00 UTC of 13-07-2022 valid for 03 UTC of 15-07-2022



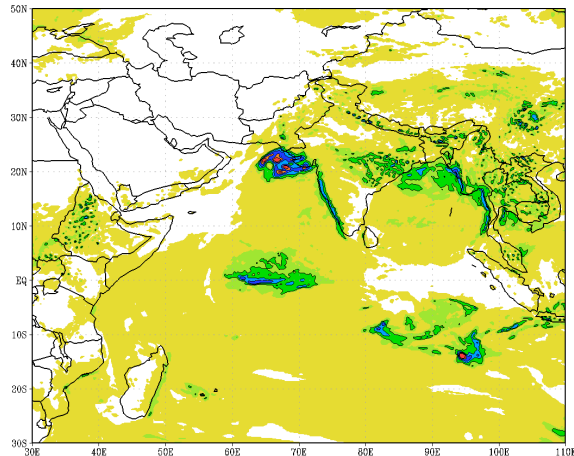
(Background does not depict political boundary)

IMD :GFS MODEL(12 Km) RAINFALL (mm) FORECAST (72 HR)
based on 00 UTC of 13-07-2022 valid for 03 UTC of 16-07-2022

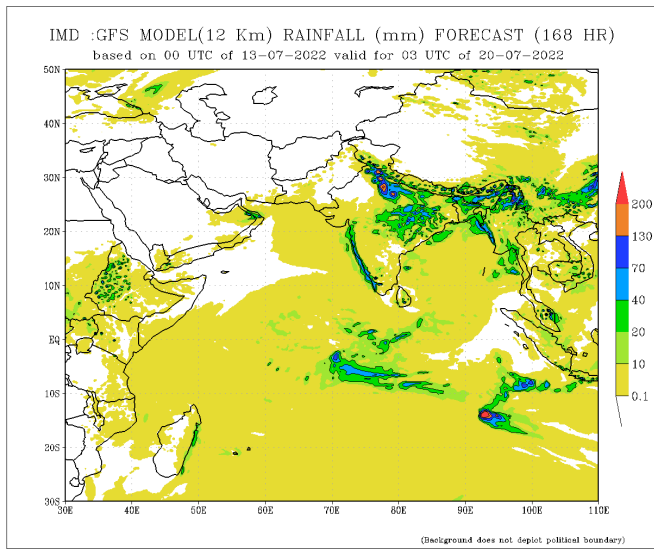
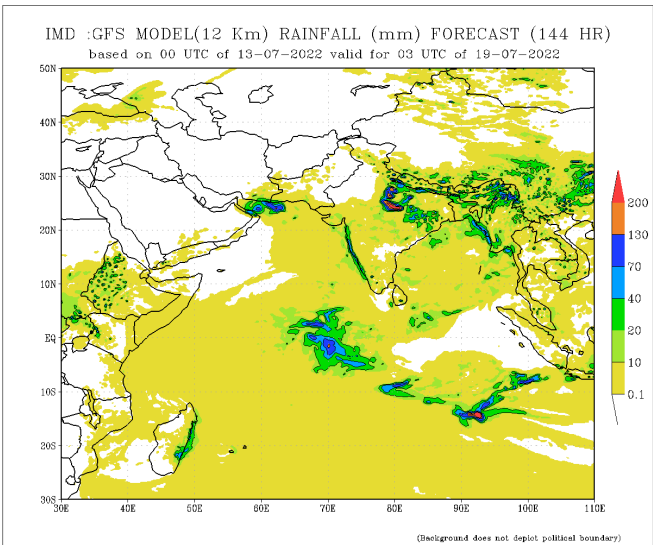
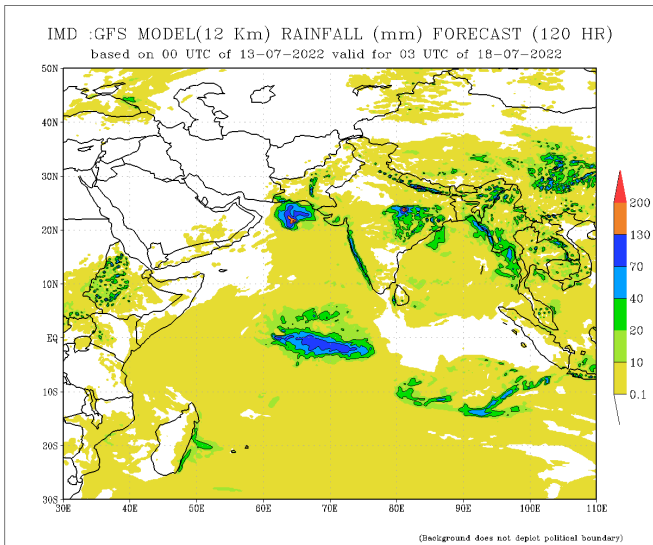


(Background does not depict political boundary)

IMD :GFS MODEL(12 Km) RAINFALL (mm) FORECAST (96 HR)
based on 00 UTC of 13-07-2022 valid for 03 UTC of 17-07-2022

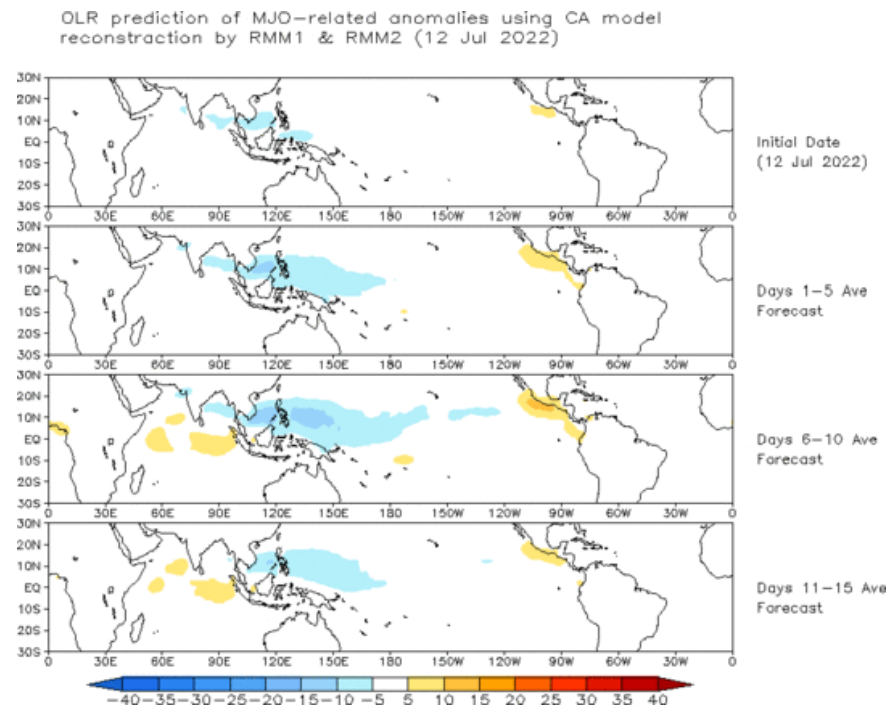


(Background does not depict political boundary)



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 anomalous OLR for the next 15 days from the Constructed Analogue (CA) model forecasts.

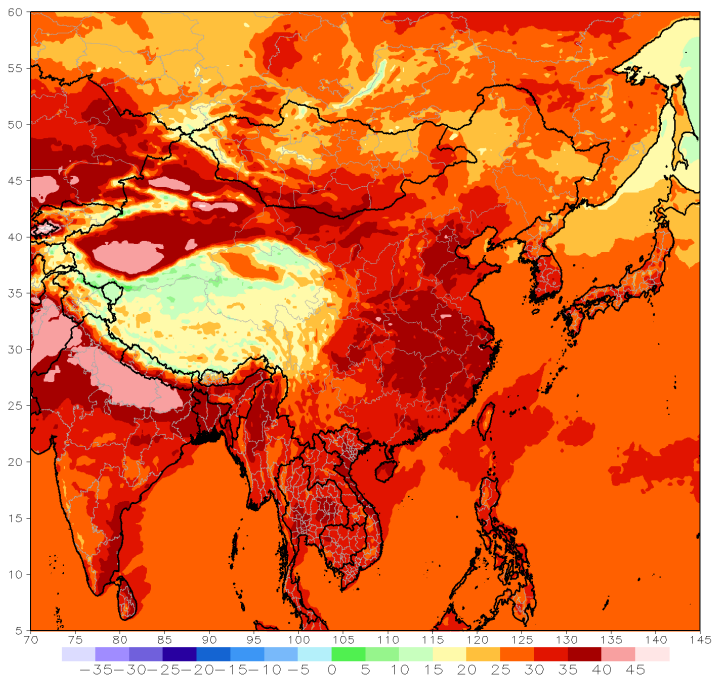


Weekly Temperature Forecast

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

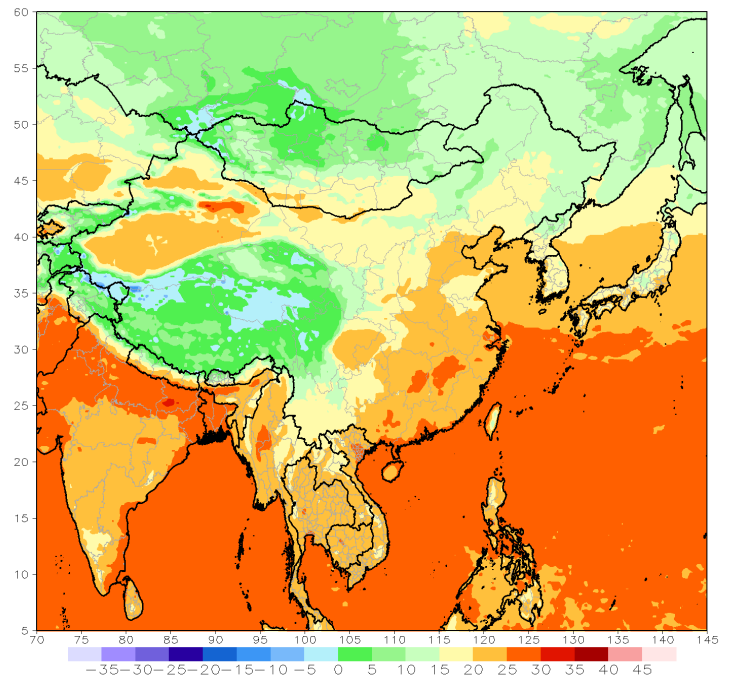
GFS week1 Temperature Max (C)

Period: 18z14Jul2022 - 18z20Jul2022



GFS week1 Temperature Min (C)

Period: 18z14Jul2022 - 18z20Jul2022

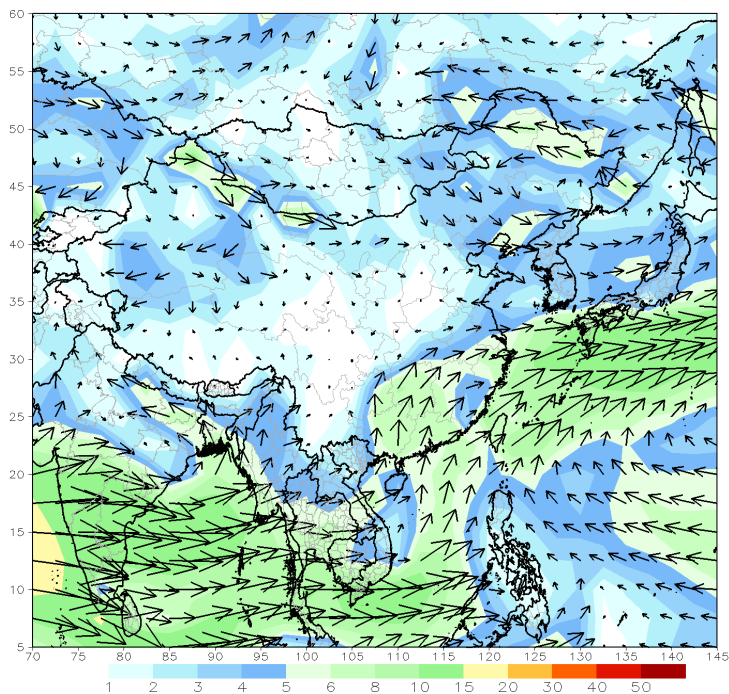


Weekly Wind Forecast

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

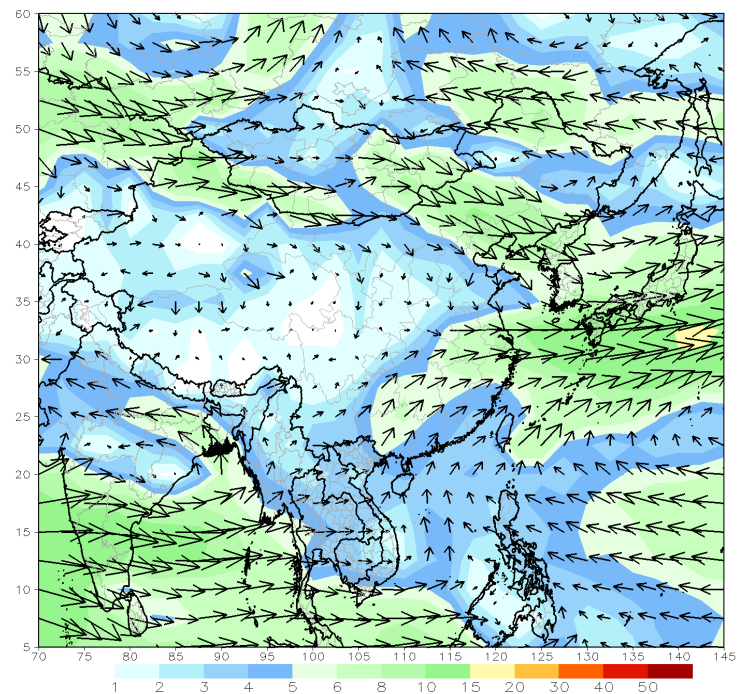
GFS 850mb week1 Mean Vector Wind Total (m/s)

Period: 18z14Jul2022 - 18z20Jul2022



GFS 700mb week1 Mean Vector Wind Total (m/s)

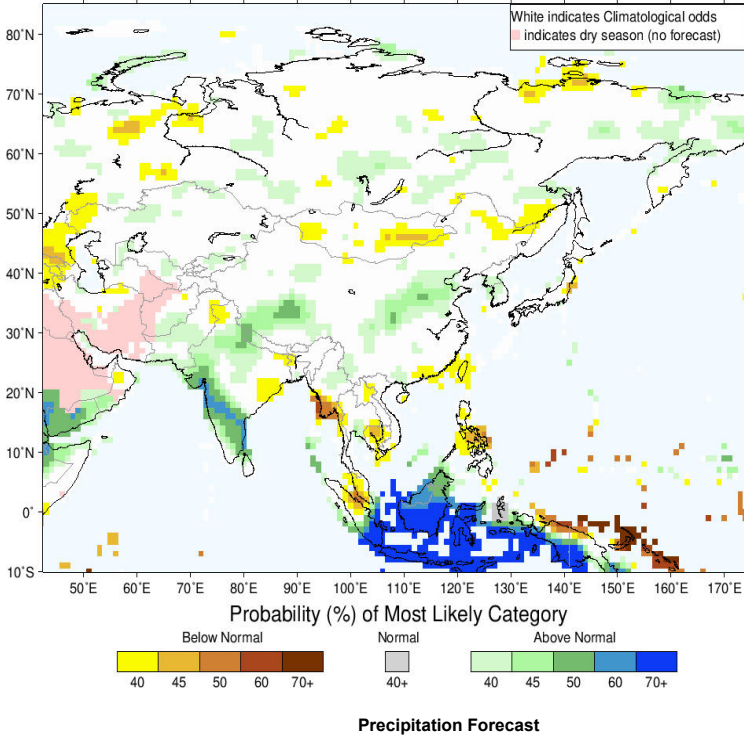
Period: 18z14Jul2022 - 18z20Jul2022



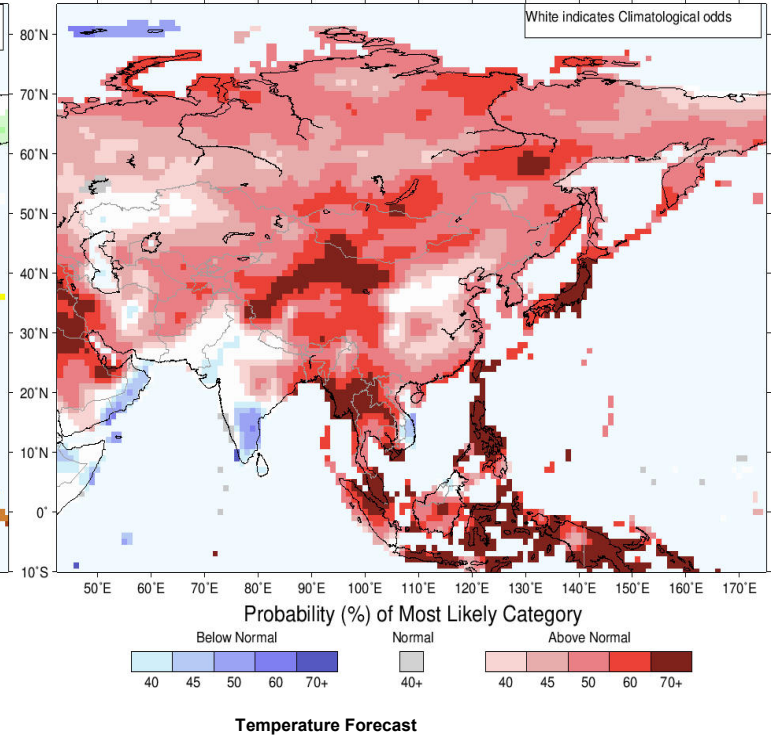
Seasonal Rainfall and Temperature Forecast

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 July-August-September 2022, Issued June 2022



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

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